



PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)

(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)

SYLLABI

FOR

**B.A./B.Sc. (Honours) Course
THIRD YEAR
(SEMESTER : FIFTH AND SIXTH)
Examination, 2019-2020**

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**OUTLINES OF TESTS, SYLLABI AND COURSES OF READING IN THE
HONOURS SUBJECTS OF THE B.A./B.Sc. THIRD YEAR FOR THE
EXAMINATION, 2019-2020**

**ENGLISH
SEMESTER V**

PAPER : 20th Century Literature

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

Texts :

1. G.B. Shaw : *Arms and the Man.*
2. George Orwell : *Nineteen Eighty Four.*
3. D. H. Lawrence : *The Rainbow.*
4. W.B. Yeats : (i) *Among school Children*
(ii) *The Second coming*
(iii) *Lake of Isle Innisfree*

Testing :

There will be **Two Units.**

Unit I will consist of two compulsory questions.

Unit II will consist of four questions (with internal choice). The students will attempt any three

Unit I

There will be one question on the literary movement of 20th Century with internal choice

(15 marks)

There will be one question with reference to the context from writers at Serial No. 1 and 4. Two passages will be set from each writer with internal choice. Students will attempt one passage from each writer.

(15 Marks)

Unit II

There will be two essay type questions with internal choice on each of the four writers' texts. Students will attempt three questions from three different writers.

(20 × 3 = 60 marks)

ENGLISH
SEMESTER VI

PAPER : INDIAN WRITING IN ENGLISH

Max. Marks	: 100
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Texts :

- | | | | | | |
|----|----------------|---|--|-------------|----------------------------------|
| 1. | Tagore | : | (i) <i>The Joureny</i>
(ii) <i>Sea Shore.</i>
(iii) <i>Maya</i> | }
}
} | <i>Selection from Geetanjali</i> |
| 2. | Mulk Raj Anand | : | <i>Coolie.</i> | | |
| 3. | R.K. Narayan | : | <i>The Vender of Sweets</i> | | |
| 4. | Kamla Dass | : | (i) <i>An Introduction</i>
(ii) <i>Forest Fire</i>
(iii) <i>The Freaks</i>
(iv) <i>My Grandmother's House</i> | | |

Testing :

1. There will be one question with reference to context. Two stanzas with internal choice will be set from Tagore and Kamla Dass. Students will attempt one stanza from each Poet.. (10 marks)
2. Four questions (one on each author) of 20 marks each will internal choice. (20 × 4 = 80 marks)

B.A./B.Sc. (Sanskrit Honours) Third Year Syllabus
बी.ए. (संस्कृत आनर्स) तृतीय वर्ष परीक्षा 2019-20
SEMESTER-V

तृतीय पत्र :

पूर्णांक: 90+10 = 100 अंक

(आन्तरिक परीक्षा- 10

लिखित परीक्षा- 90)

समय : 3 घण्टे

उद्देश्य:-

विद्यार्थियों को काव्य के स्वरूप, प्रयोजन इत्यादि से अवगत करना । इसी के साथ ही पाणिनीय सूत्रों के माध्यम से कारक तथा स्त्री प्रत्ययों के अध्ययनोपरान्त संस्कृत लेखन के प्रति उत्साहित करना ।

UNIT-I

(क) साहित्यदर्पण-प्रथम परिच्छेद

40 अंक

UNIT-II

(ख) लघुसिद्धान्तकौमुदी-

30 अंक

(i) विभक्त्यर्थ (कारक-प्रकरण) 15 अंक

(ii) स्त्री-प्रत्यय 15 अंक

UNIT-III

(ग) संस्कृत में निबन्ध (इन विषयों पर- संस्कृतभाषा, परोपकारः, गीता, वेदानां महत्त्वम्, आदर्श-छात्रः)। 20 अंक

नोट - पत्र का अध्यापन समय-नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा ।

B.A./B.Sc. (Sanskrit Honours) Third Year Syllabus**बी.ए. (संस्कृत आनर्स) तृतीय वर्ष परीक्षा 2019-20****SEMESTER-VI****चतुर्थ प्रश्न -पत्र:**

पूर्णांक: 90+10 = 100 अंक

(आन्तरिक परीक्षा- 10

लिखित परीक्षा- 90)

समय : 3 घण्टे

उद्देश्य:-

उपनिषद् प्रतिपादित नचिकेता एवं यम के संवाद द्वारा विद्यार्थियों को रहस्यमय परमतत्त्व से परिचित कराना, इसके अतिरिक्त चतुर्वेद, ब्राह्मण तथा उपनिषद् ग्रन्थों के विषय-वस्तु का अध्ययन करवाना।

UNIT-I**(क)** उपनिषद्-साहित्य

60 अंक

(i) कठोपनिषद्-(प्रथम अध्याय) अनुवाद एवं व्याख्या (6 में से 4 सन्दर्भ) $4 \times 10 = 40$ अंक(ii) कठोपनिषद् से सम्बद्ध प्रश्न (2 में से 1 का उत्तर) $1 \times 20 = 20$ अंक**UNIT-II****(ख)** वैदिक साहित्य का इतिहास

30 अंक

1. सहिताएँ 2. ब्राह्मणग्रन्थ 3. उपनिषद् $2 \times 15 = 30$ अंक

(विषय वस्तु से सम्बन्धित चार में से दो के उत्तर पूछे जायेंगे) ।

नोट - पत्र का अध्यापन समय नौ पीरियड (प्रति घण्टा) प्रति सप्ताह होगा ।

Books Recommended :

1. Sanskrit Drama : A.B. Keith.
2. Classical Sanskrit literature : A.B. Keith.
3. A History of Sanskrit Literature : A.A. Macdone.
4. A History of Indian Literature, Vol. I : M. Vintenitz
5. History of Sanskrit Literature by V. Varadachari.
6. संस्कृत साहित्य का इतिहास : बलदेव उपाध्याय
7. वैदिक साहित्य और संस्कृति : बलदेव उपाध्याय
8. संस्कृत वाङ्मय का इतिहास : वाचस्पति गैरोला
9. संस्कृत साहित्य की रूपरेखा : चन्द्रशेखर पाण्डेय

Note : All books are available at the Chaukhamba Sanskrit Series, Chaukhamba, Varanasi and Motilal Banarasidas, Jawahar Nagar, Bungalow Road, Delhi.

PERSIAN

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-2020

SEMESTER V

PAPER-III : HISTORY OF PERSIAN LITERATURE

SAFIVID PERIOD

100 Marks

Time : 3 Hrs.

Books Recommended:

1. History of Persian Literature by Dr. Razazadeh Shafaq.
2. History of Persian Literature by Dr. Brown Vol. III.

PERSIAN
B.A.(HONOURS) THIRD YEAR EXAMINATION, 2019-2020
SEMESTER-VI

Paper-IV MODERN PERSIAN

100 Marks
 Time : 3 Hrs

1. PROSE:

- (i) The following three short stories of Saeed-Nafisi
- (a) Azan-E-Maghrib
 - (b) Khana-Ye-Pidari.
 - (c) Janayat-E-Man
- (ii) The following three short stories of Mohammed Heijazi:
- (a) Khud Khusi.
 - (b) Eedi.
 - (c) Mah-e-man

Book Prescribed:

Nasib-Jadid-e-farsi, jayyed Press, Ballimaran, Delhi-6

2. POETRY:

Quasidan

1. Namund Namah by Bahar.
 "Dar Sher Band Mehro-Wafa Dilbari Namund."
2. Ghazalliyat-E-Parveen Etisami by Mehdi Hameedi.
3. Qataat by Mehdi Hameedi.

Books Recommended:

1. Barguzida-Ye-She'r-e-Farsi-Ye-Mu' aasir Part-I by Dr. Muneeb-al-Rehaman.
2. Edara-ye-Ulam-e-Islami, Danish gah-e-Islami, Aligarh.

ARABIC

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2019-2020
(Kept in Abeyance)

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FRENCH**B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-2020****SEMESTER V****5th Semester: FRENCH LITERATURE**

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

INTRODUCTION TO HISTORY OF FRENCH LITERATURE FROM 17th – 18th CENTURY

Questions should be asked strictly from the prescribed text book.

- | | |
|---|----------|
| 1. Five questions of 8 marks each based on History of French Literature | 40 Marks |
| 2. Fill in the blanks or multiple choice questions on History of literature with maximum of 2 marks each. | 20 Marks |

Poetry: Explanation, central idea, critical appreciation of poems 30 Marks

1. L'amour et la folie (La Fontaine)
2. Le laboureur et ses enfants (La Fontaine)
3. Le lion et le rat (La Fontaine)
4. Le chêne et le Roseau (La Fontaine)
5. La Jeune veuve (La Fontaine)

Courses of Reading :

Memento de Littérature française, by Hélène, Publication Hatier, Profil Littérature. Only from 17-18 centuries to be studied.

- Note :*
1. The latest syllabus should be followed.
 2. Choice should be given in questions.

Reference Books :

1. Collection littéraire—Moyen age – 20eme siècle -Lagarde et Michard, Bordas.
2. Recueil de Textes littéraires français. Moyen Age -20eme siècle-Chassang et Senninger.
3. Moyen age -20eme siècle – Castex et. P. Surer, Hachette.

For the information of private candidates:

1. The theory paper would be proportionately marked out of 100 as there is no internal assessment.

FRENCH**SEMESTER VI****6th SEMESTER-: HISTORY OF LITERATURE, POETRY & VIVA-VOCE**

Max. Marks	: 100
Theory	: 70 Marks
Internal Assessment	: 10 Marks
Time	: 3Hours
Viva-Voce	: 20 Marks

History of literature 19th-20thCentury:

Introduction to the History of French Literature 19th – 20th century.

Five questions of 8 marks each based on History of French Literature

40 Marks

Poetry:

30 Marks

Explanation, resume, central idea, critical appreciation of the poems

1. Les feuilles mortes (Jacques Prévert)
2. Chant d'automne (Baudelaire)
3. L'homme et la mer (Baudelaire)
4. Paysage(Baudelaire)
5. L'albatros (Baudelaire)

Viva-Voce

20 Marks

1. Dictation of an unseen passage of about 200 words. 10 Marks
2. Oral questions based on the dictation passage and also general questions 10 Marks

Note: Questions in all the papers shall be asked and answered in French only.

For the information of private candidates:

1 Viva is compulsory

2.The theory paper would be proportionately marked out of 80 as there is no internal assessment.

HINDI
(B.A. HONS. 3rd YEAR 5th SEMESTER 2019)

PAPER-III (A)

तृतीय पाठ्यचर्या

पूर्णांक - 90 + 10 = 100

समय - तीन घंटे

1. कहानियाँ : आधार चयन-भीष्म साहनी, आधार पब्लिकेशन, पंचकूला ।
2. संस्मरण : अतीत के चलचित्र - महादेवी वर्मा, राधकृष्ण प्रकाशन, नई दिल्ली ।
 - (क) प्रस्तुत दोनों कृतियों में से 10/10 अंकों के 4 व्याख्यांश पूछे जाएंगे ।
छात्रों को केवल दो की संदर्भ एवं काव्य-सौन्दर्य सहित व्याख्या करनी होगी ।
10+10=20
 - (ख) दोनों कृतियों में से 4 समीक्षात्मक प्रश्न पूछे जाएंगे । जिनमें से छात्रों को
15-15 अंको के दो प्रश्नों के उत्तर देने होंगे ।
15+15=30

(प्रत्येक कृति में से एक प्रश्न अवश्य करना होगा)
(चरित्र, मूल संवेदना, तात्पिक समीक्षा, उद्देश्य, भाषा-शैली)
3. काव्यशास्त्र अंक-30
 - (क) शब्द शक्तियाँ - परिभाषा और उदाहरण
 - (ख) बिम्ब - परिभाषा एवं स्वरूप
 - (ग) रस - परिचय, प्रकार, लक्षण और उदाहरण
 - (घ) प्रतीक - परिभाषा एवं स्वरूप

खंड तीन से संबंधित चारों उपखंडों (क ख ग घ) में से कुल मिलाकर 20-20 अंकों के चार प्रश्न पूछे जाएंगे जिनमें से छात्रों को किन्हीं दो के उत्तर देने होंगे ।

4. दो-दो अंकों के 5 वस्तुनिष्ठ प्रश्न करने होंगे ।
8 प्रश्न पूछे जाएंगे । 5x2=10
5. आंतरिक मूल्यांकन - अंक-10

सहायक पुस्तकें :

- 1 अन्धा युग : एक विवेचन, डॉ० हरीशचन्द्र वर्मा. नव भारती शंकर प्रतिष्ठान, नई दिल्ली
 - 2 हिन्दी कहानी अन्तरंग परिचय : रामदरश मिश्र, नेशनल पब्लिकेशन, नई दिल्ली ।
 - 3 हिन्दी कहानी अपनी जुबानी : डॉ० इन्द्रनाथ मदान, संभावना पब्लिकेशन, हापुड ।
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HINDI
(B.A. HONS. 3rd YEAR 6th SEMESTER 2020)

PAPER-IV (B)

चतुर्थ पाठ्यचर्या

पूर्णांक-90+10=100

समय - तीन घंटे

1. काव्य-नाटक : एक कण्ठ विषयायी-दुष्यंत कुमार, लोकभारती
 (क) इस कृति में से 10-10 अंकों के दो व्याख्यांश पूछे जाएंगे,
 इनमें से एक करना होगा ।
 (ख) इस कृति में से 16-16 अंकों के दो समीक्षात्मक प्रश्न पूछे जाएंगे,
 इनमें से एक करना होगा । अंक-26
2. छंद : भुजंगप्रयात, मालिनी, मंदाक्रान्ता, शिखरिणी, अहीर
 मनव, बरवै । अंक-20
3. अंलकार : अन्योक्ति, तुल्योगिता, उल्लेख, व्याजस्तुति,
 अनन्वय, विभावना अंक-20
 (छात्रों को पाँच-पाँच अंकों के 4 छंदो और पाँच-पाँच अंकों के चार अलंकारों के लक्षण तथा उदाहरण लिखने होंगे । प्राश्निक को दुगना विकल्प देना होगा)
4. भाषा : अंक-24
 (i) हिन्दी की प्रमुख बोलियां-क्षेत्र और विशेषताएं
 विशेषतः ब्रज, अवधी का परिचय

(ii) मानक हिन्दी की संरचना-शब्द संरचना, रूप-संरचना
वाक्य संरचना

(iii) क. राजभाषा हिन्दी का परिचय तथा वर्तमानस्थिति ।
ख. देवनागरी लिपि का अनुमोदित मानक रूप ।

विशेष : खंड 4 में से 15-15 अंकों के कुल चार प्रश्न पूछे जाएंगे । जिनमें से छात्रों को दो के उत्तर देने होंगे ।

5. आंतरिक मूल्यांकन :

अंक-10

सहायक पुस्तकें :-

1. अन्धा युग : पथ और प्रदर्शन, जयदेव तनेजा, वाणी प्रकाशन, नई दिल्ली ।
2. अन्धा युग और भारती के अन्य नाट्य प्रयोग : जयदेव तनेजा, नचिकेता प्रकाशन, नई दिल्ली ।
3. काव्य के तत्त्व : आचार्य देवेन्द्रनाथ शर्मा, लोकभारती प्रकाशन, इलाहाबाद ।

ਪੰਜਾਬੀ (ਆਨਰਜ਼)
ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2019-20) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੇਸਟਰ ਪੰਜਵਾਂ
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਪੰਜਵਾਂ
ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ - ਕਾਵਿ ਦੀ ਪਰਿਭਾਸ਼ਾ ਤੇ ਪ੍ਰਯੋਜਨ
2. ਕਾਵਿ ਦੀ ਆਤਮਾ : ਪਰਿਭਾਸ਼ਾ ਤੇ ਨਿਰਧਾਰਨ
3. ਕਾਵਿ ਦੇ ਤੱਤ
(ਤਿੰਨਾਂ ਵਿਚੋਂ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

1. ਧੁਨੀ ਸੰਪ੍ਰਦਾਇ
2. ਰਸ ਸੰਪ੍ਰਦਾਇ
3. ਔਚਿਤਯ ਸੰਪ੍ਰਦਾਇ
(ਦੋ ਵਿਚੋਂ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

- ਭਾਰਤੀ ਕਾਵਿ ਸ਼ਾਸਤਰ - ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼ ਸਿੰਘ (ਚੋਣਵੇਂ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋਂ ਦੋ)
1. ਸਮਾਲੋਚਨਾ ਦਾ ਆਰੰਭ
 2. ਨਾਮਕਰਣ
 3. ਕਾਵਿ ਦਾ ਲੱਛਣ ਤੇ ਸਰੂਪ
 4. ਕਾਵਿ ਤੇ ਸਾਹਿਤ
 5. ਕਾਵਿ ਦੇ ਪ੍ਰਯੋਜਨ (ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)
ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2019-20) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਦਸੰਬਰ 2019 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੇਸਟਰ ਪੰਜਵਾਂ
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਛੇਵਾਂ
ਪੰਜਾਬੀ ਆਲੋਚਨਾ ਤੇ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਆਲੋਚਨਾ ਦੀ ਪਰਿਭਾਸ਼ਾ, ਉਦੇਸ਼ ਅਤੇ ਖੇਤਰ
2. ਪੰਜਾਬੀ ਆਲੋਚਨਾ - ਆਰੰਭ ਤੇ ਵਿਕਾਸ
3. ਕਾਵਿ ਟਿੱਪਣੀਆਂ ਤੇ ਟੀਕਾਕਾਰੀ
(ਤਿੰਨਾਂ ਵਿਚੋਂ ਦੋ)

(ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਬਾਵਾ ਬੁੱਧ ਸਿੰਘ, ਕਿਸ਼ਨ ਸਿੰਘ, ਅਤਰ ਸਿੰਘ, ਹਰਿਭਜਨ ਸਿੰਘ।
(ਦੋ ਵਿਚੋਂ ਇਕ)

(ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਸਾਹਿਤਿਆਰਥ - ਸੰਤ ਸਿੰਘ ਸੇਖੋ (ਪੰਜ ਚੋਣਵੇਂ ਨਿਬੰਧ)

(ਤਿੰਨਾਂ ਵਿਚੋਂ ਦੋ)

1. ਪੁਰਾਤਨ ਕਾਵਿ ਵਿੱਚ ਅਨੁਭਵ
2. ਆਧੁਨਿਕ ਕਾਵਿ ਵਿੱਚ ਅਨੁਭਵ
3. ਅਧਿਆਤਮਿਕ ਕਵਿਤਾ
4. ਕਵਿਤਾ ਤੇ ਸਮਾਜਕ ਆਲੋਚਨਾ
5. ਕਵਿਤਾ ਤੇ ਵਿਗਿਆਨ

(ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)
ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2019-20) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਅਪ੍ਰੈਲ - ਮਈ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੇਸਟਰ ਛੇਵਾਂ
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਸੱਤਵਾਂ
ਯੂਨਾਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਯੂਨਾਨੀ ਕਾਵਿ ਸ਼ਾਸਤਰ : ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਪ੍ਰਯੋਜਨ
2. ਅਨੁਕਰਨ, ਵਿਰੋਚਨ ਅਤੇ ਉੱਦਾਤ
3. ਤ੍ਰਾਸਦੀ/ਦੁਖਾਂਤ : ਮੁੱਢਲੀ ਜਾਣਕਾਰੀ
(ਤਿੰਨਾਂ ਵਿਚੋਂ ਦੋ)

(ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਪਲੈਟੋ, ਅਰਸਤੂ, ਲੌਜਾਈਨਸ : ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ
(ਦੋ ਵਿਚੋਂ ਇਕ)

(ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਰੋਸ਼ਨ ਲਾਲ ਆਹੂਜਾ ਦੀ ਪੁਸਤਕ ਸਾਹਿਤ ਸ਼ਾਸਤ੍ਰ ਵਿਚੋਂ ਪੰਜ ਨਿਬੰਧ)

(ਤਿੰਨਾਂ ਵਿਚੋਂ ਦੋ)

1. ਸਾਹਿਤ ਤੇ ਜੀਵਨ
2. ਸਾਹਿਤ ਤੇ ਸਮਾਜ
3. ਸਾਹਿਤ ਤੇ ਵਿਅਕਤੀ
4. ਵਾਰਤਕ ਕਲਾ
5. ਨਿਬੰਧ ਤੇ ਸੈਲੀ

(ਅੰਕ : 15)

ਪੰਜਾਬੀ (ਆਨਰਜ਼)
ਬੀ ਏ (ਆਨਰਜ਼) ਭਾਗ ਤੀਜਾ (2019-20) ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਅਪ੍ਰੈਲ-ਮਈ 2020 ਦੇ ਇਮਤਿਹਾਨ ਲਈ
ਸਮੇਸਟਰ ਛੇਵਾਂ
ਪਾਠਕ੍ਰਮ ਅਤੇ ਕੋਰਸ
ਪੇਪਰ ਅੱਠਵਾਂ
ਪੱਛਮੀ ਆਲੋਚਨਾ ਤੇ ਕਾਵਿ ਸ਼ਾਸਤਰ

ਕੁੱਲ ਅੰਕ : 50
ਇੰਟਰਨਲ ਅਸੈਸਮੈਂਟ : 05
ਪ੍ਰਾਪਤ ਅੰਕ : 45
ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਭਾਗ ਪਹਿਲਾ

1. ਆਲੋਚਨਾ ਦੀ ਪਰਿਭਾਸ਼ਾ : ਉਦੇਸ਼ ਤੇ ਖੇਤਰ
2. ਪੱਛਮੀ ਆਲੋਚਨਾ : ਪ੍ਰਮੁੱਖ ਸਥਾਪਨਾਵਾਂ
3. ਵਿਚਾਰਧਾਰਾ ਤੇ ਸਾਹਿਤ, ਅਜਨਬੀਕਰਨ ਤੇ ਸਾਹਿਤਕ ਪਾਠ
(ਤਿੰਨਾਂ ਵਿਚੋਂ ਦੋ) (ਅੰਕ : 20)

ਭਾਗ ਦੂਜਾ

ਮਾਰਕਸਵਾਦ, ਰੂਪਵਾਦ, ਮਨੋਵਿਸ਼ਲੇਸ਼ਣ, ਸੰਰਚਨਾਵਾਦ : ਮੁੱਢਲੀ ਜਾਣ ਪਛਾਣ
(ਦੋ ਵਿਚੋਂ ਇਕ) (ਅੰਕ : 10)

ਭਾਗ ਤੀਜਾ

ਟੀ ਆਰ ਵਿਨੋਦ ਦੀ ਪੁਸਤਕ ਸਾਹਿਤ ਆਲੋਚਨਾ ਵਿਚੋਂ ਪੰਜ ਨਿਬੰਧ) (ਤਿੰਨਾਂ ਵਿਚੋਂ ਦੋ)

1. ਸਾਹਿਤ (ਪਰਿਭਾਸ਼ਾ, ਪ੍ਰਕਾਰਜ ਤੇ ਕਰਤੱਵ)
 2. ਸਾਹਿਤ ਅਤੇ ਪ੍ਰਚਾਰ
 3. ਸਾਹਿਤ ਅਤੇ ਪ੍ਰਤਿਬੱਧਤਾ
 4. ਸਾਹਿਤ ਅਤੇ ਸੁਤੰਤਰਤਾ
 5. ਸਾਹਿਤ ਅਤੇ ਚਿੰਤਨ
- (ਅੰਕ : 15)

URDU
SEMESTER V

Theory : 90 Marks
Internal Assesment : 10 Marks
Time : 3 Hours

Paper- I Novelette

Unit-I

Novelette-‘ Dilruba’ Ka tanqidi Jayeza 25 marks

Unit-II

Plot aur Character 20 marks

Unit-III

‘Agle Janam Mohe Bitiya na Kijo’ ka tanqidi jayeza 25 marks

Unit –IV

Plot aur character 20 marks

Books Prescribed:-

1. ‘ Char Novelette’by Qurrat-ul-ain Hyder,Educational Book House,Aligarh.
2. ‘Beesveen Sadi mein Urdu Novel’ by Dr. Usuf Sarmast, Education Book House, Aligarh.

URDU
SEMESTER VI

Theory : 90 Marks
Internal Assesment : 10 Marks
Time : 3 Hours

Paper- II Novelette

Unit-I

Ismat Chughtai Ka Novelette 'Ziddi' Ka Plot 25 marks

Unit-II

Character 20 marks

Unit-III

Critical notes on Ismat Chughtai ki novel nigari ki khususiaat 25 marks

Unit –IV

Ismat Chughtai ki life history 20 marks

Books Prescribed:-

1. Novelette 'Ziddi' by Ismat Chughtai, Education Book House, Aligarh
2. 'Beesveen Sadi mein Urdu Novel' by Dr. Usuf Sarmast, Education Book House, Aligarh.

GERMAN
SEMESTER V

Summary

Max. Marks: 100 marks (Total)
Paper-1 (Theory): 90 marks
Internal Assessment: 10 marks

Paper – 1 (Theory): 90 marks (Total)

Time: 3 hours

Note: Use of dictionary is allowed

- i. Three out of five questions to be attempted on the history of German literature (Literaturgeschichte) : 90 marks
Following movements in literature are to be studied:

- i. Aufklärung
- ii. Sturm und Drang.

Internal Assessment : 10 marks (Total)

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:

- i. Geschichte der deutschen Dichtung, Fricke/Klotz.
- ii. Wege der deutschen Literatur - Eine geschichtliche Darstellung by Arno Lubos, Jakob Lehmann, Hermann Glaser.

Supplementary book:

- i. Deutsche Literaturgeschichte - Von Anfängen bis zur Gegenwart (J.B. Metzler Verlag Stuttgart)

GERMAN

Summary

Max. Marks: 100 marks (Total)
Paper-2 (Theory): 90 marks
Internal Assessment: 10 marks

Paper - 2 Essay and Translation (Theory): 90 marks

Time: 3 hours

Note: Use of dictionary is allowed

- i. Translation of an unseen text/s from German into English : 50 marks
- ii. Translation of an unseen text/s from English into German : 20 marks
- iii. Essay writing in German (about 250 words) : 20 marks
 - i. Länder und Leute
 - ii. Ausbildung und Berufswege (Indien / Deutschland)
 - iii. Politik (Indien / Deutschland / Europa / Welt)
 - iv. Umzug und Einrichtung

Internal Assessment : 10 marks (Total)

- Continuous Evaluation
- Attendance

Note:

1. The mode of evaluation for internal assessment is to be followed as per University guidelines.
2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:

- i. Deutsche Texte zum Übersetzen (Hueber Verlag)

Supplementary book:

- i. "Lagune-2" Kursbuch by Hartmut Aufderstraße a.o.

GERMAN SEMESTER VI

Summary

Max. Marks: 100 marks (Total)
Written Paper (Theory): 90 marks
Internal Assessment: 10 marks

Written Paper (Theory): 90 marks (Total)

Time: 3 hours

Note: Use of dictionary is allowed

Three out of five questions to be attempted on the history of German literature (Literaturgeschichte) : 90 marks

Following movements in literature are to be studied:

- i. Klassik
- ii. Romantik

Internal Assessment : 10 marks (Total)

- Continuous Evaluation
- Attendance

Note: 1. The mode of evaluation for internal assessment is to be followed as per University guidelines.

2. For private candidates, Internal Assessment will be calculated proportionately to the marks obtained by the candidate in written examination

Prescribed Textbooks:

- i. Geschichte der deutschen Dichtung, Fricke/Klotz.
- ii. Wege der deutschen Literatur - Eine geschichtliche Darstellung by Arno Lubos, Jakob Lehmann, Hermann Glaser.

Supplementary book:

- i. Deutsche Literaturgeschichte - Von Anfängen bis zur Gegenwart (J.B. Metzler Verlag Stuttgart)

Viva-voce (Oral exam)

Max. Marks

: 100 marks (Total)

- i. Reading, comprehension (question/answers) of an unseen text : 40 marks
- ii. To speak on one of the given topics : 30 marks
- iii. General conversation in German : 30 marks

Suggestions for preparation:

- i. Magazine (Der Spiegel), Internet websites, Information on German-speaking countries etc.

DEFENCE & STRATEGIC STUDIES
SEMESTER - V
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-20

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 question of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the questions paper. The candidate will be required to attempt one question from each of these carrying 17 ½ marks each.

Paper : Area Studies China-I

Max. Marks	:	100
Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hrs.

Total Teaching Periods: 75

SECTION-I

1. Military Geography of China : Location, size and strategic importance.
2. Economic and Industrial resources (in brief).
3. Population, composition and characteristics of major ethnic groups.

SECTION-II

1. History of China in brief from the CH'IN to Manchus Dynasty.
2. Nationalist Revolution in China under Dr. Sun Yet Sen : Events and effects.

SECTION-III

1. Rise of Chiang Kai Shek.
2. The Nanking Government of China, long march in China.
3. The Civil War in brief.

SECTION-IV

1. Party-Army Relationship.
2. Communist party and its relationship with the Armed Forces.
3. Higher Defence Organisation.
4. Cultural Revolution.

BOOKS RECOMMENDED :

1. Balance, Edger O. : The Red Army of China, Russell Square, London.
 2. Chatterji, B.R. : Modern China –A Short History, Meenakshi Printing, Meerut.
 3. Encyclopaedia of Britannica.
 4. Gupta, R.S. : History of Modern China, Sterling Pub.
 5. Kapur, Harish : China in World Politics, Div. Pub., N.D.
 6. Liu, F.F. : A Military History of Modern China, Princeton Uni. Press.
 7. Mao Tse Tung : Communist Rule in China.
 8. Mc. Aleavy, Henry : The Modern History of China.
 9. Mitchison : Chinese Revolution.
 10. Nung Chen Li : The Political History of China, Princeton Uni. Press.
 11. Pelissier Roger : The Awakening of China, Secker and Warturg, London.
 12. Tregear, T.R. : A Geography of China, University of London.
 13. Wilson Dick : A Quarter of Mankind, Weidenfeld and Micholson Olson, London.
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DEFENCE & STRATEGIC STUDIES
SEMESTER - VI
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-20

Outlines of Tests, Syllabi and Courses of Reading

Note : There will be one theory paper of 90 marks. The internal assessment will be of 10 marks. The theory paper will have one compulsory short answer type question containing 15 question of 2 marks each covering the entire syllabus. The candidates will be required to attempt any 10 short answer type questions. In addition, there will be four sections of the questions paper. The candidate will be required to attempt one question from each of these carrying 17 ½ marks each.

Max. Marks : 100
 Theory : 90 Marks
 Int. Ass. : 10 Marks
 Time : 3hrs

Total Teaching Periods: 75

Paper : Area Studies China-II

SECTION- I

SINO-INDIAN WAR (1962)

1. Events Leading to the war.
2. Operation in brief.
3. Lessons learnt

SECTION- II

1. Determinants of Chinese Foreign Policy.
2. China's Relations with India.
3. China's Relations with Pakistan and its impact on India.

SECTION-III

1. China's Relations with other neighbouring countries.
2. China's Relations with the U.S.A.
3. China's Relations with Russia.

SECTION-IV

1. Defence Potential of China.
2. China's Modernization Program.
3. China's Nuclear Weapon Development.

Books Recommended:

1. Dalvi, J.P. : Himalyan Blunder, Thackei' and Co., Bombay.
2. Griffith Samoul, B. : The Chinese People's Liberation Anny, Army Pub., N.D.
3. Kapur, Harish : China in World Politics, Div. Pub., N.D.
4. Mao TsiTung : CoIn;m~ist Rule ~Chin~. .
5. Sharma, B.L. : The Paklstan-'-Chma AXIS, Asia Pub., B~mbay.
6. Sinh~; K.K. : Problems of Defence of South and East Asia, Rawat Pub., Jaipur.
7. Tr~er N. Frank and : Twentieth Appraisal Year, Weidenfeld and Nicolson, London, William Genderson
8. Cassell & Company : Guerilla Warfare-Mac Tse- Tung & Guevera, Red Lion Sq.,London.

Journals: -

1. RAUSEN DATA : Problem of Communism.
2. Institute of Defence Studies & Analysis (India)
 - i. Strategic Analysis.
 - ii. Strategic Digest.
3. The China Quarterly.
4. The Institute of Strategic Studies, London. : Military Balance, IISS London.

HISTORY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-20

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

SEMESTER V

Any one paper from the following:

- (i) **History of China**
- OR**
- (ii) **History of Russia**

(i) **HISTORY OF CHINA:**

Max. Marks:	100
Theory:	90 Marks
Internal Assessment:	10 Marks
Time	3 hours

General Instruction:

1. In all *nine* questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt *nine* out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory**.
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt *one* question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, economy, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT-I

CHINA IN THE 18TH CENTURY

1. Political and Economic Institutions
2. Social and Intellectual Conditions
3. Foreign Relations

UNIT-II

‘OPENING’ OF CHINA AND REBELLIONS

4. Canton Trade System, Opium Wars, Treaty Settlements
5. Taiping Revolution
6. Reform Movement of 1898

UNIT-III**REVOLUTION AND REFORM**

7. Boxer Rebellion 1900
8. Intellectual, Social and Economic Change
9. Rise of Sun Yat Sen and Revolution

UNIT-IV**RISE OF THE REPUBLIC**

10. Intellectual Revolution and National Unification
11. National Government 1928-37
12. Chinese People's Republic 1945-49

Recommended Readings:

1. Chesneaux, Jean Francoise Le : *China : From the Opium Wars to 1911 Revolution Vol.I.* Delhi : Khosla, 1978.
2. Hsu Immanuel : *C.Y., The Rise of Modern China*, New York : Oxford University Press, 1970.
3. Vinacke, Harold M. : *A History of the Far East in Modern Times*, New York : Appleton Century Crafts, 1961 (6th edn.).
4. Clyde, Paul Hibbert, : *The Far East : A History of the Impact of the West on Eastern Asia*, Englewood Cliffs, N.J. Prentice Hall : 1958 (3rd edn.).

(ii) HISTORY OF RUSSIA:

Max. Marks:	100
Theory:	90 Marks
Internal Assessment:	10 Marks
Time	3 hours

General Instruction:

1. In all *nine* questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt *nine* out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory**.
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt *one* question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, economy, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT-I

1. *Liberalism and Reaction* : Alexander I; Nicholas I.
2. *Modernisation of Russia* : Alexander II; Alexander III & Nicholas II.

UNIT-II

3. *Russia and the Far East* : Interventions in China, Mongolia and Manchuria.
4. *Background of Russian Revolution 1905-1917* : Revolution of 1905; Russia on the eve of the Revolution of 1917 – Polity, Society, Economy; Lenin’s Contribution to the Revolution.

UNIT-III

5. *Causes of the Russian Revolution and its Aftermath* : The February Revolution and the Provisional Government, the Bolshevik (October Revolution), its impact on Russia and the World.
6. *Civil War* : Russian withdrawal from First World War; Peace of Brest Litovisk; Allied Intervention.

UNIT-IV

7. *The Soviet Economy* : War Communism; New Economic Policy and its impact.
8. *Planned Economy* : Weaning from the New Economic Policy and the First Five Year Plan.

Recommended Readings :

1. Barrington Moore (Jr.) : *The Social Origins of Dictatorship and Democracy.*
2. Paul Kennedy : *The Rise & Fall of Great Powers*, Fontana Press London, 1988.
3. Lionel Kochan : *The Making of Modern Russia*, Penguin Books, 1962.
4. Basil, Dymtrystyn : *History of Russia*, Prentice Hall, New Delhi, 1977.
5. E.H. Carr : *The Bolshevik Revolution*, Penguin Books Ltd., Victoria, 1971 (Reprint).
6. M.T. Florinsky : *Russia : A Short History*, Macmillan, London, 1971 (2nd ed.)

HISTORY

SEMESTER VI

Any one paper from the following :

- (iii) **Social Origins of Right And Left Wing Dictatorship Of Modern Times**
OR
 (iv) **USA and the World c.1800-1960's**

(iii) **SOCIAL ORIGINS OF RIGHT AND LEFT WING DICTATORSHIP IN MODERN TIMES:**

Max. Marks:	100
Theory:	90 Marks
Internal Assessment:	10 Marks
Time	3 hours

General Instruction:

1. In all *nine* questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt *nine* out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory**.
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt *one* question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of polity, society and culture in broad periods and significant epochs in World History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT I: China

1. The Collapse of Imperial System, the emergence of War lords; the Kuomintang interlude; efforts at democracy and Capitalism.
2. The Peasant rebellions; Communist Revolutions; success against the Kuomintang

UNIT II: Russia

3. The Internal Collapse of the Tsarist Regime; Revolution of 1917- Feb/ March and October
4. The Establishment of a Communist Government; Forced industrialization and Collective Agriculture; Stalinist Totalitarianism.

UNIT III: Italy

5. Italy's problems with the Capitalist powers; Failure of Italian Democracy in Economic, Social and Foreign policy
6. The Fascist alternative: Ideology and the corporative state

UNIT IV: Germany

7. Germany's rise as a capitalist powers; Weimar republic and its failure.
8. The fascist stresses with western Europe; Nazi totalitarian programme.

Essential readings:

Barrington Moore : *Social Origins of Dictatorship and Democracy*, Penguin/Peregrine 1977.
(reprint)

Reference Reading

Hannah Arendt : *The Origin of Totalitarianism*, Harcourt Brace, New York. 1951

F. Chabad : *A History of Italian Fascism* (Tr. Muricl Grindard) Weidenfeld and Nicolson, London 1961.

(iv) USA AND THE WORLD c.1800-1960's:

Max. Marks:	100
Theory:	90 Marks
Internal Assessment:	10 Marks
Time	3 hours

General Instruction:

1. In all *nine* questions will be set, Each question will carry 18 marks.
2. First question shall be a Short Answer type containing 15 short questions spread over the whole syllabus. Candidates will attempt *nine* out of the fifteen short answer type questions in about 25-30 words each. It shall carry 18 marks (9x2) and shall be **compulsory**.
3. Rest of the paper shall contain 4 units. Each unit shall have two essay type question and the candidates shall attempt *one* question from each unit -4 in all.
4. Each essay type question will be set on half of the topics and not on a single sub topic.

Note: The Honours programme outlined below is intended to encourage an in depth study of some aspects of society and culture in broad periods and significant epochs in Indian History, and wherever possible, to also provide a comparative perspective. The programme intends to supplement and complement the general course, adding specialized study.

UNIT I

1. US Foreign Policy 1789-97-Response to French; issues with Britain; Jay's Treaty 1799; Pinckney's Treaty 1797; Peace with France
2. Diplomatic Achievements 1800-1820's-Louisiana Purchase; Settlement with Britain; Acquisition of Florida; non colonization of Alaska; liberation of Latin America; Monroe Doctrine
3. Industrial Revolution in America-expansion of transportation; manufacturing; foreign trade and shipping

UNIT II

4. Expansion to the West in the 1830's –Early settlement in the West; Texas question; migration to Oregon
5. Manifest Destiny –Annexation of Texas; Oregon Treaty; Relations with Mexico; conquest of California
6. USA as a World Power-Expansion in Pacific region; Dispute with Venezuela; Results of War with Spain 1898; Policy in Caribbean and Mexico; Open Door Policy in South East Asia

UNIT III

7. USA and World War I-US attitude to war, entry into the war; 14 point programme, role in Paris peace conference 1919
8. Foreign Policy 1920,s-30's- Washington Treaties, Locarno Treaty, Relations with Mexico, Change in 'Big Stick' Policy, Good Neighbour policy, reaction to Chinese situation
9. USA and World War II- US attitude, US aid to War and War Production, Pearl Harbour

UNIT IV

10. New World Order-US Peace Programme and United Nations, Relations with Soviet Union and Containment, Pan, American Conference 1945, post War Europe
11. US in East Asia-American response to China, Japan, Korea, Vietnam
12. US in Europe and West Asia-US and NATO, issues with Egypt, support to Israelis, Eisenhower Doctrine

Recommended readings:

1. Henry Bamford Parkes : *The United States of America: A History*, 1964 (Reprint), Scientific Book Agency, Calcutta, 1976.
2. Richard Current & Others : *History of United States: A Survey*, Alfred A. Knopf, New York,1965.
3. Julius W. Pratt : *A History of United States Foreign Policy*, Prentice Hall (Second Edition), New Jersey, 1965.
4. Allen, G.C., : *Japan's Economic Recovery*, London Oxford University Press, 1958 (Reprint 1960).
5. Beckman, George H : *The Modernization of China and Japan*, New York : Harper and Row, 1962.

POLITICAL SCIENCE**B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2019-2020****Outlines of Tests, Syllabi and Courses of Reading**

V SEMESTER	:	Option (i)	International Relations since 1945.
			OR
		Option (ii)	Modern Indian Political Thought.
			OR
		Option (iii)	Women and Political Process.
VI SEMESTER	:	Option (i)	Research Methods in (Political Science) Social Sciences.
			OR
		Option (ii)	Modern Political Ideologies
			OR
		Option (iii)	Western Political Thought.
V SEMESTER	:	Option (i) — INTERNATIONAL RELATIONS SINCE 1945	
		Max. Marks	: 100
		Theory	: 90 Marks
		Internal Assessment	: 10 Marks
		Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : This paper aims at mapping out some of the major transformations that have occurred in the realm of International Relations since 1945.

UNIT-I Post World War-II International Relations :

- (a) Post War World Order.
- (b) Emergence of Super Powers.

UNIT-II Democracy and Rise of IIIrd World :

- (a) Non-Alignment: Meaning and Relevance.
- (b) SAARC, European Union.

UNIT-III Transformation in Post World War II International Relations :

- (a) Decline of Bipolarity.
- (b) Nature of Emerging World Order.

UNIT-IV New Global Scenario and International Relations:

- (a) Demand for New International Economic Order (NIEO)
- (b) Issue of Global Terrorism.

Suggested Readings :

1. Peter Calvocoressi : *World Politics Since 1945*, London : Longman, 1945.
2. Budhraj, V.S. : *International Relations After Second World War* (in Hindi), Chandigarh, Haryana Sahitya Academy, 2000.
3. Keswani, K. B. : *International Relations in Modern World* (1900-1988), Bombay, Himalaya Publishing House, 1994.
4. Baylis and Steve Smith : *The Globalization of World Politics – An Introduction to International Relations*, Oxford, Oxford University Press, 2001.
5. Alan C. Lamborn and Joseph Leggold : *World Politics into the Twenty First Century : Unique Context, Enduring Patterns*, New Jersey, Prentice Hall, 2003.

References :

1. Paul Kennedy : *The Rise and Fall of Great Power*, Fontana Press.
2. Henry Kissinger : *Diplomacy*, London, Simon & Soluster, 1994.
3. Paul R. Viotti & Mark V. Kauppi : *International Relations and World Politics : Security, Economy*, Identity Third Edition Pearson Education, 2007.
4. John Baylis and Steve Smith : *The Globalisation of World Politics : An Introduction to International Relations*, Second Edition, OUP, 2001.

OR**V SEMESTER : Option (ii) — MODERN INDIAN POLITICAL THOUGHT**

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory

question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper aims at creating understanding about the evolution of political thought in modern India with special reference to the stated philosophers.

- UNIT-I** **Sir Syed Ahmed Khan :**
 (a) As a Nationalist.
 (b) Education.
 (c) Muslim Nationalism-As a Communalist.
- UNIT-II** **M.K. Gandhi :**
 (a) Satyagraha.
 (b) Swaraj.
 (c) Non-Violence.
- UNIT-III** **M.N. Roy :**
 (a) Radical Humanism - critique of Marxism
 (b) New Humanism
- UNIT-IV** **B.R. Ambedkar :**
 (a) Annihilation of Caste
 (b) Social Justice
 (c) Democracy : Political and Social

Recommended Readings:-

1. Thomas Pantham & Deutsch (ed.) : *Political Thought in Modern India*, New Delhi, Sage, 1986.
2. Majumdar, B.B. : *History of Indian Social and Political Ideas*, Calcutta: Bookland, 1967.

References :

1. Parekh, Bhikhu : *Colonialism, Tradition, Reform : Analysis of Gandhi's Political Discourse*, New Delhi, Sage, 1989.
2. Iyer, Raghvan (ed.) : *Moral and Political Thought of Mahatma Gandhi*, New York, Oxford, 1973.
3. Appadorai, A : *Indian Political Thinkers in the Twentieth Century*, Delhi, Oxford, 1972.
4. Jatava, D.R. : *The Political Philosophy of B.R. Ambedkar*, Delhi; Arya Phoenix, 1965.
5. Hussain, M. Hadi, Syed Ahmed Khan : *Pioneer of Indian Resurgence Lahore*, Institute of Islamic Culture, 1970.
6. Imam, Zafar, : *Muslims in India*, New Delhi : Orient Longman, 1975.

7. Chattarjee, Partha : *Nationalist Thought and the Colonial World, Delhi : OUP, 1986.*
8. Lyer, Raghavan : *The Moral and Political Thought of Mahatma Gandhi, Delhi : OUP, 1973.*
9. Pantham, Thomas, Parekh, : *Gandhi's Political Philosophy, London, Macmillan, 1989, Bhikhu.*
10. Ghatak, B.K. (ed.) : *Dr. Ambedkar's Thought, New Delhi : APH, 1997.*
11. Keer, Dhanajayay, Dr. Ambedkar : *Life and Mission, Bombay : Popular Parkashan, 1964.*
12. Zelliott, Eleanor : *The Social and Political Thought of B.R. Ambedkar in Pantham and Deutsch, 1986.*
13. Roy, M.N. : *New Humanism, Calcutta : Renaissance, 1953.*
14. Roy, M.N. : *The Philosophy and Practice of Radical Humanism, New Delhi : Radical Humanist Association, 1970.*
15. Roy, Samaren, M.N. Roy : *A Political Biography, Hyderabad : Orient Longman, 1997.*
16. Ray, Sibnarayan (ed.), M.N. Roy : *Philosopher Revolutionary, Delhi, Ajanta, 1995.*
17. Seth, Sanjay : *Marxist Theory and Nationalist Politics, The Case of Colonial India, New Delhi : Sage, 1995.*
18. B.R. Ambedkar (Author) and Arundhati Roy (Introduction) : *Annihilation of Caste: The Annotated Critical Edition, Navayana, Delhi, 2014.*
19. Chitkara, MG : *Dr. Ambedkar and Social Justice, APH Publishing Corporation, 2002.*
20. Christophe Jaffrelot : *Dr. Ambedkar and Untouchability: Analysing and Fighting Caste, Columbia University Press, 2015.*
21. Gail Omvedt : *Ambedkar: Towards An Enlightened India, Penguin India, 2008.*

OR

V SEMESTER: Option (iii) — WOMEN AND POLITICAL PROCESS

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper aims to introduce students to the key approaches of Feminist thought contemporary debates concerning women and politics in India. It will include an analysis of the Indian State, the role of women's movement and the major feminist issues in contemporary Indian politics.

UNIT-I Theoretical Approaches to Women Studies :

- (a) Liberal Feminism.
- (b) Marxist / Socialist Feminism .

UNIT-II Rise of Women's Movement, its role in Contemporary Societies :

Historical Legacy :

- (a) French Revolution, Civil Rights and Suffrage Movements in the West.
- (b) Role and Contribution of Women in Indian National Movement.

UNIT-III Women and Society in India :

- (a) Evolution of Women's position in India – an historical overview-
 - (i) Vedic period
 - (ii) Medieval Period (Post Vedic Period)
 - (iii) Modern Period
- (b) Social Position:
 - (i) Demographic pattern- Sex Ratio.
 - (ii) Legal, Political and Property Rights.
 - (iii) Access to Education.

UNIT-IV Women's Movement in Contemporary India:

- (a) Women Movement in India- Women Movements against Dowry & Rape
- (b) Women and Political Participation in India-Status & Barriers, 73rd & 74th Amendment.

Recommended Readings :

1. Millet, Kate, *Sexual Politics*, New York, Doubleday, 1970.
2. Michele Barrett, *Women's Oppression Today*, London, Verso, 1980.
3. Lenin, V.I., *On the Emancipation of Women*, Moscow, Progress, 1981.
4. Eisenstein, Zillah, *Capitalist Patriarchy and the Case for Socialist Feminism*, New York, Longman, 1981 (also New York, Monthly Review Press, 1979).
5. Boserup, Easter, *Women's Role in Economic Development*, London, George Allen & Unwin, 1975.
6. Altback, E.M. (Ed.), *From Feminism to Liberation*, Cambridge, Massachusetts, Schenkman Hare Revised Ed., 1980.
7. Jayawardhane, Kumari (Ed.), *Feminism and Nationalism in the Third World*, New Delhi, 1987.

8. Phadnis, Urmilla and Malani Indira eds., *Women of the World : Illusion and Reality*, New Delhi, Vikas, 1978.
9. Desai, N., *Women in Modern India*, Bombay, Vora & Co., 1977.
10. Nanda, B.R. ed., *Indian Women from Purdah to Modernity*, New Delhi, Vikas, 1976.
11. I.C.S.S.R., *Status of Women's Committee Report*, New Delhi, ICSSR, 1975.
12. Mazumdar, Vina, *Towards Equality*, ICSSR, Delhi.
13. Desai, Neera and Krishanaraj, M., *Women and Society in India*, Delhi, Ajanta, 1987.
14. Chakaravarty, Shanti, *Rural Women's Claim to Priority*, New Delhi, C.W.D.S., 1986.
15. "Women's Struggles and Movement", Paper of Third National Conference, Chandigarh, IAWS.
16. Kaushik, S. (ed.), *Women's Oppression, Patterns and Perspective*, Vikas, New Delhi, 1984.
17. Kumar, Radha, *A History of Doing*, Kali Publications, New Delhi, 2006.
18. Gandhi, Nandita & Shah, Nandita, *The Issues at State*, New Delhi, Kali Publication, 1992.
19. Menon, Nivedita (ed.), *Gender & Politics in India*, New Delhi, Oxford University Press, 1999.
20. Rao, Anupama (ed.), *Gender & Caste*, Delhi, Sage Publications, 2005.

POLITICAL SCIENCE

B.A. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2019-2020

SEMESTER- VI

**VI SEMESTER : Option (i) — RESEARCH METHODS IN (POLITICAL SCIENCE)
SOCIAL SCIENCES**

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper endeavors to introduce the students about the tools of research methodology into social sciences. The paper would enable the students to take up research after Master’s degree.

- UNIT-I** Research in Social Science with reference to Political Science—Definition, Nature and Limitations.
- UNIT-II** Methods – Traditional and Scientific, Survey Research Methods : Observation, Interviews, Questionnaire, Content–Analysis.
- UNIT-III** (a) Sample and Sampling Techniques.
(b) Measures of Central Tendency—Mean, Mode and Median.
(c) Data Processing—Coding Tabulation and Analysis.
- UNIT-IV** Research Design : Formulation of Research problem, Hypotheses, Objective, relevance of study, Literature Review, Methodology Report Writing.

Suggested Readings :

1. Goode and Hatt, *Methods in Social Research*, Auddond (McGraw - Hill), New York, 1952.
2. Pauline Yong, *Scientific Survey and Research*, New Delhi, 1968.
3. Arnold Brecht, *Political Theory*, Times of India Press, 1970.
4. Michael S. Lewis-Beck, ed., *The Encyclopedia of Social Science Research Methods*, New Delhi, Sage, 2004.
5. Keith F. Punch, *Introduction to Social Research*, London, Sage, 2005.

6. Shapiro, Ian, Rogers M. Smith and Tarek E. Masoud, *Problems and Methods in the Study of Politics*, Cambridge : Cambridge University Press, 2004.
7. Van Evera, Stephen, *Guide to Methods for Students of Political Science*, Ithaca : Cornell University Press, 1997.
8. Goertz, Gary, *Social Science Concepts : A User's Guide*, Princeton : Princeton University Press, 2006.
9. Creswell, John W., *Research Design : Qualitative, Quantitative, and Mixed Method Approaches* : Thousand Oaks, Calif : Sage Publications, 2003.

OR

VI SEMESTER : Option (ii) : MODERN POLITICAL IDEOLOGIES

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : The paper refers to the basic tenets of modern political ideologies.

- UNIT-I Liberalism :**
- a) Classical and Modern Liberalism.
 - b) Neo Liberalism.

- UNIT-II Socialism :**
- a) Marxian Socialism.
 - b) Democratic Socialism

- UNIT-III**
- a) Anarchism.
 - b) Fascism

- UNIT-IV Gandhism**
- a) Gandhi's Idea of State:
 - b) Social and Political Ideas of Gandhi.

Suggested Readings :

1. Bandhyopadhyaya, J., *Political and Social Thought of Gandhi*, Bombay, 1969.
2. George Lichtheim, *Marxism : An Historical and Critical Study*, Routledge and Kegan Paul, London, 1962.
3. Noel O' Sullivan, *Conservation*, St. Martin's Press, New York, 1976.
4. Manning, D.J., *Liberalism*, St. Martin's Press, New York, 1976.

OR**VI SEMESTER : Option (iii) — WESTERN POLITICAL THOUGHT**

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hrs.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 10 to 20 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks each. It shall carry 18 marks and shall be a compulsory question. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all, of 18 marks each.

Objectives : This paper aims to introduce to the students the major themes of Western Political Thought. This will be done by taking an in-depth study of the key thinkers of this tradition.

- UNIT-I** Hobbes.
- a) Nature of Man, State of Nature, Natural Laws.
 - b) Social Contract.
 - c) Individualism Vs. Absolutism.
- UNIT-II** Locke.
- a) Nature of Man, State of Nature, Natural Rights.
 - b) Social Contract.
 - c) Contribution of Locke to Liberalism.
- UNIT-III** Rousseau.
- a) State of Nature, Natural Man.
 - b) Social Contract.
 - c) Theory of General Will.
- UNIT-IV** Karl Marx.
- a) Historical Materialism, Economic Determinism.
 - b) Theory of Surplus Value.
 - c) Class Struggle.

Recommended Readings :

1. Sabine, G.H., *A History of Political Theory*, Bombay : Oxford & IBH, 1973.
2. Dunning, W.A., *A History of Political Theories*, 3 Vols., Allahabad : Central, 1973.
3. Sait, E.M. (ed.), *Masters of Political Thought*, 3 Vols., London : George and Harap, 1947.
4. William Ebenstien, *Great Political Thinkers—Plato to the Present*, OUP : New Delhi, 1966.
5. Jen Pike, Nigel Waaburton & Derek Matravers, *Reading Political Philosophy, Machiavelli to Mill*, London, Routledge, Open University, 2000.
6. Andrew Hacker, *Political Theory*, London, OUP, 1961.
7. David Boucher & Paul Kelly, *Political Thinkers, From Socrates to the Present*, Paperback U.K., 2003.
8. David Boucher & Paul Kelly, *The Social Contract—from Hobbes to Rawls*, Paperback, U.K., 1994.

References :

1. Rapheal, D.D., Hobbes, *Morals and Politics*, London, George Allen, 1978.
2. David Macdellan, *Marx*, London, Fontana Modern Masters Series, 1983.
3. Plamenatz, J., *Man and Society*, 2 Vols., New York, Longman, 1984.
4. Hall, J.C., *Rousseau : An Introduction to His Political Philosophy*, London, MacMillan, 1973.
5. John, Dunn, *The Political Thought of John Locke*, Cambridge, Cambridge University Press, 1969.
6. Roger, D. Masters, *The Political Philosophy of Rousseau*, Princeton, Princeton University Press, 1968.
7. Shlomo, Avineri, *The Social and Political Thought of Karl Marx*, New Delhi, S. Chand, 1968.
8. Jon Elster, *Making Sense of Marx*, Cambridge, Cambridge University Press, 1985.
9. Ernest Cassirer, *The Question of Jean Jacques Rousseau*, New Haven and London, Yale University Press, 1989.

ECONOMICS

SEMESTER V

The candidates are required to study **one of the** following papers:

- I Money and Banking.
- II International Economics.
- III Introduction to Econometrics.

Paper-I : MONEY AND BANKING

Max. Marks	: 100 Marks
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

Objective: Money and Banking constitute important components towards understanding of economics. A clear understanding of the operations of money and banking and their interaction with the rest of the economy is essential to realize how monetary forces operate through a multitude channels- market, non market, institutes and among others, the state. The operation of financial markets and their regulations are to be studied to appreciate their key-role in an economy, especially after the far reaching banking and financial sector reforms in India and elsewhere. The present course is designed to acquaint the students fully with the changing role of financial institutes in the process of growth and development. Accordingly, the paper on 'Economics of Money and banking' is an optimal interaction of monetary theory, banking and non- banking financial institutes, which combines with itself a systematic discussion of the theory, institutions and policy with special reference to India.

The students would be evaluated at the end of each semester through subjective type questions/ answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

- (i) *The syllabus has been divided into four units.*

There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.

- (ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

Definition of Money, Money and Near Money Assets.

Supply of Money: Components, Determinants- High Powered Money and Money Multiplier, Measures of Supply of Money in India.

UNIT-II

Demand for Money: Classical Theory, Keynes Liquidity Preference Theory, Friedman's Restatement of Quantity Theory of Money.

Central Banking: Main Functions, Techniques of Monetary Management, Monetary Policy of Reserve Bank of India.

UNIT-III

Commercial Banking: Main Functions, Major Developments and Reforms in Indian Banking System since 1991.

Non-Banking Financial Institutions (NBFIs) – Role and Structure NBFIs in India.

UNIT-IV

International Monetary Fund- Features and Role.

World Bank: Features and Role.

Asian Development Bank: Features and Role.

Recommended Readings:

1. Diulio A. Eugene : Theory and Problems of Money and Banking, International Edition (latest Edition) (Schaum's Outline Series)
2. Gupta, S. B : Monetary Planning in India, S. Chand, New Delhi. (2004)
3. Khanna, Perminder : Advanced Study in Money and Policy : Relevance in the Indian Economy, Atlantic Publishers, New Delhi (2005)
4. Kulkarni, G (1999) : Modern Monetary Theory, McMillan, New Delhi
5. Laidler, D. E. W : The Demand for Money : Theories and Evidence, Allied Publishers, New Delhi. (1977)
6. Bofinger Peter (2001) : Monetary Policy: Goals, Institutions, Strategy and Instrument, Oxford University Press.

Supplementary Readings:

1. Reserve Bank of India Publications- (Latest).
2. Government of India: Economic Survey (latest)

Paper-II: INTERNATIONAL ECONOMICS

Max. Marks	: 100 Marks
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

Objectives: - The course intends to provide a deep understanding about the broad principles and theories, which tend to govern the free flow of trade in goods, services and capital- both short-term and long-term- at the global level. The contents of the paper spread over the different modules, lay stress on the theory and nature of the subject which, in turn, will greatly help them to examine the impact of the trade policies followed both as the national and international levels as also their welfare implications at macro level and the distribution of gains from trade.

The time-tested method of imparting verbal instructions through lectures would be used. Examples, in so far as possible, would be selected from everyday life/experience. The feedback would be sought the students writing assignments, tutorials and seminars.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

- (i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.
- (ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

The Pure Theory of International Trade: Theories of Absolute Advantage, Comparative Advantage and Opportunity Costs. Heckscher-Ohlin Theory. Factor Price Equalisation. Gains from Trade, their Measurement and Distribution. Terms of Trade, Secular Deterioration Hypothesis.

UNIT-II

Commercial Policy: The Theory of Tariffs, Optimum and Effective Rate of Tariff, Inter-relationship between Trade, Aid and Economic Development. The Theory of Economic Integration among Nations; Forms of Economic Integration. The Theory of Customs Union.

UNIT-III

Balance of Payments, Exchange Rate and Trade Structures: The Process of Adjustment in the Balance of Payments. The Concept of Foreign Trade Multiplier. Fixed Vs. Flexible Exchange Rates and their Relative Merits and Demerits. Structure of Trade, Trade between Developing and Developed Countries. Unequal Exchange and its Impact on Balance of Payments. Current Problems of Trade and Finance of Developing Countries. Role of Multinational Corporations in the Developing Countries.

UNIT-IV

International Monetary System:IMF and International Monetary System, Present International Monetary System, problems of International Liquidity. Proposals for International Monetary Reforms. New International Economic Order.

Recommended Readings :

1. Soderston , B. O. : International Economics, 2nd Edition, Macmillan Press, London, (1994)
2. Salvatore, Dominick : International Economics, John Wiley & Sons. (latest edition)
3. Krugman P R & Obstfeld Maurice (latest edition) : International Economics – Theory and Policy, Addison- wesley.
4. Ghuman , Ranjit Singh : Antar-Rashtriya Arth Vigyan, (Punjabi Medium) Punjabi University, Patiala. (latest edition)

Supplementary Readings :

1. Kindleberger, C. P. : International Economics, Richard Irwin, Homes wood, Illinois, (1987) Indian Edition.
2. Sir Rai Harrod (Trans. Pritam Singh Gill) : Antar-Rashtriya Arth Shastar, Punjabi University, Patiala.

Paper-III: - INTRODUCTION TO ECONOMETRICS

Max. Marks	: 100 Marks
Theory	: 90Marks
Internal Assessment:	10Marks
Time	: 3Hours

Objectives: Application of economic theory need a reasonable understanding of economic relationship and statistical methods. The econometric theory thus becomes a very powerful tool for understanding of applied economic relationships and for meaningful research in economics. This paper accordingly is devoted to equip the students with basic theory of econometrics and relevant application of the methods. The topics covered in the course include various problems faced in estimation of both single equations and simultaneous models.

Besides the time-tested method of imparting verbal instructions through lectures, description and derivation of econometric models would be demonstrated by extensive use of blackboard. Examples, is so far as possible, would be selected from everyday life/experience. The feedback would be sought through the students writing assignments and written examinations.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

- (i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.
- (ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

Definition and Scope of Econometrics. The Methodology of Economic Research. Specification and Estimation of an Econometric Model.
Single Equation Models: Ordinary Least Squares: Estimation and Properties of the Estimators

UNIT-II

Testing of Hypothesis: Basic Concepts; Type I and Type II errors. Simple and Composite Hypothesis. t and F tests. Maximum Likelihood Estimation.

UNIT-III

The General Linear Regression Model in Matrix Form: Estimation and Properties of the Estimators. Tests of Significance of Coefficients. Partial Correlation Coefficients.
Multicollinearity: Its Detection and Solution.
Heteroscedasticity: Its Detection and Solution.

UNIT-IV

Dummy Variables: The dummy Variable Trap. Interpretation of Slope and Intercept.

Lagged Variables: Uses in Economics. Estimation Problems, Koyck Transformation, Partial and Stock Adjustment Models.

Recommended Readings :

1. Gujarati, Damodar : Basic Econometrics, McGraw Hill, New Delhi.
(2007)
2. Ohnson, J. : Econometrics Methods, 2nd Edition, McGraw Hill, New
(1977)

Supplementary Readings :

1. Intrilligator, M. D. : Econometric Models and Applications, Prentice Hall
(1978)
2. Kendall, M. G. & : Advanced Theory of Statistics, Vols. I & II, Griffin and Co.,
A. Sturat (eds.) London.
3. Maddala, G. S. : Econometrics, New Delhi, McGraw Hill.
(1977)
4. Wallis, K. F. : Topics in Applied Econometrics, London, Bray Hills
(1973)

ECONOMICS SEMESTER VI

The candidates are required to study **one of the** following papers:

- IV Environmental Economics
- V Economics of Labour
- VI Public Finance

Paper-IV : Environmental Economics

Max. Marks	: 100 Marks
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

Objectives: - This paper aims to make aware students about the importance of environment in economics and vice-versa. It helps them to know the ways of sustaining our resources by optimally allocating them for future use.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

- (i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.
- (ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

Introduction to Environmental Economics: Introduction; the Economy and the Environment: Inter-Linkages; First Two Laws of Thermodynamics.

Economic Efficiency and Market Failures: Market Solution and Efficiency; Market Failures; Problem of Externalities; Public goods and Public bads; Common Property Recourse; Non-convexities; Asymmetric Information.

UNIT-II

Economic of Pollution: Damage Functions and Abatement Cost Functions; Marginal Decision; Optimal Level of Pollution; Market Solutions and Government Actions; Economic Incentives and least-Cost Solution; Command and Control Policies.

UNIT-III

Valuing the Environment: Economic valuation of Environment Goods: Types of Environmental Values; Monetary Valuation Techniques; Non-Monetary Valuation Techniques; Comparing Methodologies. The Environmental Kuznets Curve

UNIT-IV

Cost-Benefit Analysis and the Environment: The Theory of Cost Benefit Analysis; Idea of Discounting and Choice of Discount Rate; Framework for Cost – Benefit Analysis; Discounting and Future Generation.

International Environmental Issue: Economics of Climate Change: Trade & Environment.

Economic Growth and Sustainable Development: Economic Growth and Development; the Environmental Kuznets Curve; Economics of Sustainable Development.

International Environmental Issues: Economics of Climate Change; Trade and the Environment.

Recommended Readings :

1. Goodstein, E.S. : Economics and the Environment (3rded.) Prentice Hall. (2002)
2. Hanley, N., Shogern, J.F and White, B : Environmental Economics in Theory and Practice, Macmillan (1977)
3. Sankar, U. (ed) : Environmental Economics, Oxford University Press, New Delhi. James, A.J., M.N.
4. Murty and Smita : Murty and Smita Mishra (1999), Economics of Water Pollution- The Mishra (2006) Indian Experience, Oxford University Press, New Delhi
5. Varian. Hal R., : Intermediate Micro-Economics- A Modern Approach, 7th ed., East-West Press. (2006)
6. Cherry, S.N. and : Environmental Management- an Indian Perspectives, Macmillan, Vyasual, Vinod New Delhi. (2000)

PAPER- V: ECONOMICS OF LABOUR

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

COURSE OBJECTIVE: Issues pertaining to the labour market, wage theories, employment policies, trade unions and collective bargaining in the globalized economy have become vitally important for developing countries. In a country like India where the bulk of the labour force is in the unorganized sector and the organized sector is witnessing “joblessness”, the importance of issues such as employment and social security for the growing millions continues to assume significance. This paper exposes students to theoretical as well as empirical issues relating to the labour market with special reference to India. The time-tested method of imparting verbal instructions through lectures would be used

The objective of the course is to provide students with the basic economic tools needed to understand and analyze how earnings are determined, how labour markets work and how various government policies may affect labour market.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

- (i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.
- (ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

Unit I

Nature and Scope of Labour Economics, Nature and Characteristics of Labour Markets in Developing Countries like India.

Theories of Wages, Concept of Minimum Wage, Living Wage and Fair Wage in Theories and Practice.

Unit II

Wage Determination in various Sectors- Rural, Urban, Organized, Unorganized and Informal Sectors.

Poverty and Unemployment in Developing Countries, Unemployment: Concept, Types and Employment Policy particularly in India.

Unit III

Impact of Rationalization, Technological Change and Modernization on Employment in Organized Private Industry and Public Sector; Employment in Agriculture Sector; Women and Child labour.

Unit IV

Role and Functions of Trade Unions, Growth, Pattern and Structure of Trade Unions in India, Achievements of Labour Unions, Collective Bargaining.

Industrial Disputes: Causes of Industrial Disputes, Their Settlement and Prevention Mechanism.

BOOKS RECOMMENDED:

1. Binswanger, H. P. & M. R. Rosenzweig (eds.) (1984) : Contractual Arrangements, Employment, and Wages in Rural Labour Markets in Asia, Yale University Press, New Haven.
2. Datt, G. (1996) : Bargaining Power, Wages and Employment; An Analysis of Agricultural Labour Markets in India, Sage Publications, New Delhi.
3. Deshpande, L. K., P. R. Brahmananda and EAG Robinson (eds.) (1983) : Employment Policy in a Developing Economy, Vols. I & II, Macmillan, London.
4. Deshpande, L. K. and J. C. Sandesara (eds.) (1970) : Wage Policy and Wages Determination in India, Bombay University Press, Bombay.
5. Deshpande, S. G. Standing and L. K. Deshpande (1998) : Labour Flexibility in a Third World Metropolis, Commonwealth Publishers, New Delhi.
6. Foster, A. D. & M. R. Rosenberg (1993) : Information Flows and Discrimination in Labour Markets in Rural Areas in Developing Countries, Annual Conference on Development Economics, World Bank, Washington D C.
7. Campbell, R. McConnell and Stanley, L. A. Brue and D. A. Macpherson (2010) : Contemporary Labour Economics, 8th Ed. McGraw Hill Book

SUPPLEMENTARY READINGS:

1. Hauseman, S. (1991) : Industrial Restructuring with Job Security: The Case of European Steel Harvard University Press, Cambridge, Mass.
2. Hicks, J. R. (1932) : The Theory of Wages, Clarendon Press, Oxford.
3. Lester, R. A. (1964) : Economics of Labour (2nd edition), Macmillan, New York
4. McConnell, C. R. & S. L. Brue (1986) : Contemporary Labour Economics, McGraw- Hill, New York.
5. McCormick, B. & Smith (eds.) (1968) : The Labour Market, Penguin, Harmondsworth
6. Tyagi, B.P : Labour Economics and Social Welfare, Jai Parkash Nath and Co. (Latest edition)
7. Pant, S C(1965) : Indian Labour Problems,Chaitanya Publishing House, Allahabad

Paper-VI: PUBLIC FINANCE

Max. Marks	: 100 marks
Theory	: 90 marks
Internal Assessment	: 10 marks
Time	: 3 Hours

Objectives: Role and function of the Government in an economy have been changing with the passage of time. The term 'Public Finance' has traditionally been applied to the package of those policies and operations which involve the use of tax and expenditure measures while budgetary policy is an important part to understand the basic problems of use of resources, distribution of income etc. there are vast array of fiscal institutions- tax system, expenditure programmes, budgetary procedures, stabilization instruments, debt issues, levels of government etc., which raise a spectrum of issues arising from the operation of these institutions. Further, the existing of externalities, concern for adjustment in the distribution of income and wealth, etc. require political processes for their solution in a manner which combines individual freedom and justice. This paper combines a thorough understanding of fiscal institutions with a careful analysis of the issues which underline budgetary policies in general and Indian experience in particular.

The student would be evaluated at the end of each semester through subjective type questions/answer (both short and essay type). The scripts would be evaluated by the examiners having adequate graduate teaching experience in the paper/option concern.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

- (i) There shall be **9** questions in all. The first question is **compulsory** and shall be short answer type containing 12 short questions spread over the whole syllabus to be of answered in about 25 to 30 words each. The candidates are required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice of attempting one question from each Unit – 4 in all. Each question will carry 18 marks.
- (ii) For private candidates, who have not been assessed earlier for internal assessment, the marks secured by them in theory paper will proportionately be increased to maximum marks of the paper in lieu of internal assessment.

The paper setter must put note (ii) in the question paper.

UNIT-I

The Principle of Public Finance – Subjective and Objective Criteria.

Theory of Public Expenditure:Maximum Social Advantage, Theory of Social Goods: Distinction between

Public, Private and Merit Goods. Public Expenditure and Economic Growth. Effects of Public Expenditure on Production, Distribution, Social Over-head Capital, Stability and Innovation. Criteria of Public Expenditure.

UNIT-II

Public Revenue:Approaches of Equity in Taxation:Benefits principle Cost of Service Principle, Ability toPay Theory. Effects of Taxation. Analysis of Major Taxes – Income Tax, Expenditure Tax, Corporation Tax, Wealth Tax, Excise Duties, Sales Tax, and Custom Duties. The concept of Taxable Capacity. Taxation in a Developing Economy. Fiscal Incidence: Theories of Tax Shifting, Concepts of Incidence, Measurement of Incidence.

UNIT-III

Public Debt:Role of Public Debt. Different Forms of Public Debt. Burden of Public Debt, Redemption of Public Debt. Debt Management.

Budgetary Policy:Functional and Economic Classification of budgets and their Uses. PerformanceBudgets. Budget as an Instrument of Mobilization and Chanalization of Resources and Redistribution of Income and Wealth.

UNIT-IV

Balance and Unbalanced Budgets.

Fiscal Federalism:Principles of Federal Finance.

Development Finance:Functional Finance vs. Development Finance.

Mobilisation of Financial Resources for Planned Developments.

Suggested Readings:

1. Buchanan J.M. : Public Finance in the Demostic Process (Collected works of James M Buchanan), Library Fund, USA.
2. Musgrave, R. A. : Theory of Public Finance, McGraw- Hill Publishers.
(1959)
3. Musgrave R A. & : Public Finance in Theory and Practice, Mc Hill Publishers
Musgrave P B
(5th edition)
4. Taylor P.E : The Economics of Public Finance, Macmillan Publishers, New York.
(1949)

SOCIOLOGY

SEMESTER V

Methods and Techniques of Social Research

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.
2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).
3. On an average, 15 hours are to be devoted to each unit.
4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective :

The students will be introduced with basic methods and techniques in social research. The objective of this course is to familiarize the students with the basic elements of scientific method, various methods of data collection and social measurement.

Course Content :

UNIT-I

Scientific Method : Features; Concepts; Stages of social research; Hypothesis.

UNIT-II

Sampling Technique: Meaning Population and Census, Sampling frame
Types of Sampling: Probability: Simple random/stratified random/cluster/multi-stage. Non-Probability: Accidental/Quota/Purposive; Sampling Error.

UNIT-III

Techniques of Data Collection : Observation, Participant and Non-Participant Observation, Interview Schedule and Questionnaire (Structured/Unstructured); Case study method.

UNIT-IV

Measurement : Levels and Problems, Measures of Central Tendency: Mean, Mode, Median.

Essential Readings :

1. *Sellitz, Claire et.al* : *Research Methods in Social Relations (Revised ed.), New York: Henry Hold & Co. (latest edition).*
2. *Goode, W.J. & Hatt, P.K. (2006)* : *Methods in Social Research, Delhi, Surjeet Publications*
3. *Young, P.V.* : *Scientific Social Surveys and Research, New Delhi: Prentice Hall of India Private Ltd., (1988)*
4. *Mukerjee, P.N.* : *Methodology on Social Research: Dilemmas and Perspectives, New Delhi: Sage, 2000.*

Further Readings :

1. *Festinger, L. & Katz, D.* : *Research Methods in Behavioural Science, New York: Dryden Press, (1953)*
2. *Lindzey, Gardner & Aronson* : *The Handbook of Social Psychology (2nd ed.), Addison: Wesley Pub. Comp.,(1968)*
3. *Robson, Colin* : *Real World Research, Oxford: Blackwell, (2000)*
4. *Bryman Alman, (2014)* : *Social Research Methods, New Delhi, Oxford University Press*
5. *Neuman, W.L.,(2007)* : *Social Research Methods : Qualitative and Quantitative Approaches, Delhi, Pearson Education*

SOCIOLOGY SEMESTER VI

Option (i) Social Demography

OR

Option (ii) Social Deviance

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Option (i) Social Demography

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.
2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions ($9 \times 2 = 18$ marks).
3. On an average, 15 hours are to be devoted to each unit.
4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each ($4 \times 18 = 72$ marks).

Objective :

The course exposes students to various components of population growth, data sources and basic theoretical problems of population. Concepts of mortality and fertility are discussed in general and with reference to India in particular. Students are apprised of the latest Population Policy in India.

Course Content :

UNIT-I

Population : Definition, Scope, Nature, Sources of Population Data-Census and Vital Registration.

UNIT-II

Population Theories : Malthusian theory of Population; Biological: Theory of Density Principle and Diet Theory; Social Theories: Social Capillarity and Theory of Diffusion: Theory of Demographic Transition.

UNIT-III

Concepts of Mortality : Causes of Mortality, Infant Mortality, Mortality Rate in India.

Fertility : Concept of Fertility, Factors affecting Fertility—Biological, Socio-Cultural and Psychological Fertility in India.

UNIT-IV

Population Policy in India, Female Foeticide (reference to PNDT Act).

Essential Readings :

1. *Bhende, Asha & Kanitkar, Tara,(2014)* : *Principles of Population (revised ed.), Mumbai Himalaya Publishing House.*
2. *Bogue, Donald, J.* : *Principles of Demography, New York: John Willey,(1969)*
3. *Nam, Charles, P.* : *Population and Society,(1968)*
4. *Premi, M.K.* : *An Introduction to Social Demography, Delhi: Vikas Publishing House, (1983)*
5. *Weeks, J.R.* : *Population: An Introduction to Concepts & Issues, London: Wardworth Publishing Co., (1988)*
6. *Raj Hans(2010)* : *Fundamentals of Demography, Delhi, Surjeet Publications*

Further Readings :

1. *Bose, Ashish* : *India & The Asian Perspective, New Delhi: B.R. Publishing Corporation, (1993)*
2. *Matras, Juda* : *A Sociological Approach, New Jersey: Prentice Hall, (1977)*
3. *Government of India* : *National Population Policy (2000), Ministry of Health & Family Welfare, GOI.*
(Latest Census Reports and Sample Registration Bulletins of the Government of India.)
4. *Premi, M.K.* : *India's Population: Heading towards a Billion, Delhi: B.R. Publications, (1991)*
5. *Dyson Tim,(2011)* : *Population and Development, The Demographic Transition,Jaipur, Rawat Publications*

OR

Option (ii) Social Deviance

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hrs.

Note :

1. For written paper the students will be required to attempt five questions in all. Question No. I will be compulsory and cover the entire syllabus. In addition, students will attempt **four** essay type questions, one from each of the four units.
2. Question No. I will be compulsory comprising of short answer questions. It will consist of 12 short answer type questions of 2 marks each, out of which the students are required to attempt 9 short answer type questions (9 × 2 = 18 marks).
3. On an average, 15 hours are to be devoted to each unit.
4. Question Nos. II to IX will be long answer questions, two questions from each unit with internal choice, consisting of 18 marks each (4×18 = 72 marks).

Objective :

To understand the contemporary social problems in society, the students are exposed to the basic concept of deviance, its theoretical perspectives and control mechanisms.

Course Content:**UNIT-I**

Deviance : Definition, Concept (Relative and Absolute) Distinction between deviant behaviour and deviant role. Pathological theories (Biological and Psychological).

UNIT-II

Sociological Theories : Theories of social disorganization (C.H. Cooley, W.I. Thomas and Florian Znaniecki, W.F. Ogburn).

Structural-Functional Theories : Theory of Anomie (Emile Durkheim, Robert K. Merton), Differential Association (E. Sutherland and D.R. Cressey).

Interactionist Theories : Theory of Labelling (Edwin M. Lemert and Howard S. Becker).

UNIT-III

Controlling Deviance : Socialization - means and agencies, Social Control: means and agencies, Social codes and customs; Sympathy: passive and active.

UNIT-IV

Selected Problems of Deviance: Sex Deviance, Delinquency, White Collar Crimes, Cyber Crime.

Essential Readings :

1. Becker, Howard S. : *Outsiders: Studies in the Sociology of Deviance, Glenco, Free Press, (1987)*
2. Ferrell, R. & V.L. Swigert [ed.] : *Social Deviance, New York: J.B. Lippincott Co. (1975).*
3. Haralambos, M. : *Sociology – Themes & Perspectives, Delhi, Oxford University Press,(1984)*
4. Kelly, Delos H. : *Deviant Behaviour: Readings in Sociology of Deviance, New York: Martin's Press, (1979)*
5. Lawson, T & T. Heaton : *Crime & Deviance, New Delhi : Macmillan, (1999)*
6. Metta, Spencer : *Foundations of Modern Sociology, New Jersey: Prentice Hall Inc., Englewood Cliff, (1979)*
7. Michael Mc Kee and Ian Robertson : *Social Problems, Toronto: Random House Inc., (1976)*
8. Thio, Alex : *Deviant Behaviour, London : Houghton Mifflin, (1978)*
9. Ahuja, Ram,(2012) : *Criminology, Jaipur Rawat Publications*
10. Ahuja, Ram,(2015) : *Social Problems in India, Jaipur, Rawat Publications*

Further Readings :

1. Erdwin. H. Pfuhl : *The Deviance Process*, New York: D.Van Nostrand Co., (1980)
2. Ian Robertson : *Sociology*, New York: Publisher Inc. (1977)
3. John, J. Grant : *Social Problems as Human Concern*, San Francisco: Body & Fraser Publishing Company, (1976)
4. Rubington, Weinberg : *Studies of Social Problems*, New York: Oxford University Press, (1977)
5. Rushing, William A. [ed.] : *Deviant Behavior & Social Process*: Rand McNally College Pub. Co., (1985)
6. Bansal,S.K.(2013) : *Cyber Crime, New Delhi, APH Publications*
7. Sharma,Rajendra K,(1988) : *Social Disorganization, New Delhi :Attantic Publications*
8. Byrne, David,(2009) : *Social Exclusion, Jaipur, Rawat Publications*

PHILOSOPHY
B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-20
SEMESTER – V

Paper-A, Option (i) : PHILOSOPHY OF SCIENCE

OR

Paper-A, Option (ii) : SOCIAL AND POLITICAL PHILOSOPHY

Paper-A Option (i) : PHILOSOPHY OF SCIENCE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The aim of this paper is to analyse the concepts of philosophy and science, Einstein's Theory of Relativity i.e. space, time and relativity; Nature of observational language and theoretical language; causality, prediction and probability; Principle of Complimentarity.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain 4 units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents:

UNIT-I

- The Nature and Scope of Philosophy of Science. Relation between Philosophy and Science.
- Einstein's Theory of Relativity : Space, time, reality.
- Methodological character of theoretical concepts. Observational language, theoretical language, a criterion of significance of theoretical terms. Dispositional concepts, Difference between theoretical terms and pure dispositional terms.

UNIT-II

- Causality, Prediction and Probability.
- Principle of Causality.
- Causality as the existence of Laws.

UNIT-III

- Causal Law and Statistical Laws.
- Induction and Probability.
- Theories of Probability.

UNIT-IV

- Rationality Debate & Theory Choice.
- Popper & Kuhn

Essential Readings :

Bridgman, P.W.(1958), *The Logic of Modern Physics*, Macmillan : New York
 Earnest Nagel (1979), *Structure of Science* : Hackett Pub. Co.
 Hans Reichenbac (1994), *Rise of Scientific Philosophy* :California University Press

Suggested Readings :

Minnesota Studies in the Philosophy of Science, Minnesota Centre for Philosophy of Science, 1958.
 Phillip Frank (1957), *Philosophy of Science: The Link between Science and Philosophy* (Englewood Cliff : Prentice Hall)

OR**Paper – A, Option (ii) : SOCIAL AND POLITICAL PHILOSOPHY**

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The paper aims at understanding the nature of social and political philosophy and some of its fundamental concepts; its major social and political theories and Indian political thought.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

The syllabus has been divided into four units.

There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain 4 units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents:**UNIT-I**

- Nature and Scope of Social and Political Philosophy :
 - Relation between Social and Political Philosophy and Social Sciences such as Sociology and Political Science with special emphasis on the distinction between Philosophy and Science.
 - Empirical and Scientific study of society and politics as distinct from philosophical study of society and politics.

UNIT-II

- Some Fundamental Concepts of Social and Political Philosophy :
 - Distinction between Natural Facts and Social Facts.
 - Normative Aspects of Socio-Political Reality.
 - State and Civil Society.
 - Liberty, Equality and Fraternity.
 - Social Change and Social Progress.
 - Tradition and Modernisation.
 - Power and Authority.
 - Reform and Revolution.
 - Justice.

UNIT-III

- Major Social and Political Theories
- Liberalism.
- Egalitarianism.
- Anarchism.

UNIT-IV

- Indian Political Thought : Chanakya, Vivekananda, Gandhi, Ambedkar.

Essential Readings :

Ambedkar, B.R. (2003), *Writings and Speeches*, Government of Maharashtra, Bombay., Vol. 18, 19 & 20

Bhattacharyya, K.C. (1983), *Studies in Philosophy*, Motilala (U.K.) Books of India, New Delhi

Gautam, S.P. (1991), *Samaj Darshan*, Haryana Sahitya Akademy, Chandigarh

Tagore (2002), *Religion of Man*, Rupa Publications, Paperback, New Delhi

Will Kymlica Kamal Nayan Chaubey (2010), *Samkalin Rajniti – Darshan Ek Parichay*, 2nd Ed. Pearson Delhi

Complete Works of Swami Vivekananda (relevant portions) Advaita Ashram, Calcutta, 1957.

Suggested Readings :

Menon, Nivedita (2013), *Seeing like a Feminist*, Zubaan: New Delhi

Miller, David (2003), *Political Philosophy, A very short introduction*, Oxford University Press, New York

PHILOSOPHY
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SEMESTER – VI

Paper -B, Option (i) : LOGIC

OR

Paper-B Option (ii) : PHILOSOPHY OF CULTURE

OR

Paper -B, Option (iii) : AESTHETICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

The paper aims at training the students in skills of critical reasoning by introducing laws of thought, criteria for validity of arguments, deductive and inductive reasoning.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain 4 units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :

UNIT-I

- Nature and Scope of Logic.
- Deductive Inference.
- Laws of Thought.

UNIT-II

- Aristotelian Classification of Propositions.
- Immediate and Mediate Inference.
- Syllogism.

UNIT-III

- Truth Tables.
- Propositional Calculus.
- Quantifiers and Propositional Functions.
- Predicate Calculus.

UNIT-IV

- Inductive Logic.
- Probability.
- Scientific Method.
- Law and Explanation

Essential Readings :

Irving Copi (2004), *Introduction to Logic*, Prentice Hall

Irving Copi (1979), Nagel and *Symbolic Logic*, Prentice Hall

Cohen (2002), *Introduction to Logic and Scientific Method*, Simon Publications

Suggested Readings :

Russell (1970), *Principles of Mathematics* (Allen & Unwin London)

Jean Necod (1970), *Foundations of Geometry and Induction* (kegan Paul)

OR

Paper- B Option (ii) : PHILOSOPHY OF CULTURE

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

This paper aims to introduce the problems like origin and meaning of culture, civilization, tradition, the role of ideology and Utopia, Indian cultural tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain 4 units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :**UNIT – I**

- Origin and meaning of Culture.
- Culture, Civilization and the Individual.

UNIT – II

- Religion as an Apex of Culture.
- Culture and Language.

UNIT – III

- Culture, Tradition and Modernity. The metaphysical loss of Human.
- Sources of Indian Culture Tradition.

UNIT – IV

- Role of Science and Technology in Cultural Evolution.
- Inter – Cultural understanding and Hermeneutic Tradition.

Essential Readings:

Eliot (1962), Notes towards definition of Culture, Faber & Faber, London

Gadamer (2005), Truth and method. Continuum International

G.C. Pandey (1972), Meaning and Process of Culture. Shivalal Aggarwal & Co. Agra

Sneh Pandit Ed. (1980), Perspectives on Philosophy of Culture, Delhi, S. Chand

Vellassery Sebastian & Geeta Manaktala (2008), Foundations of Indian Social Life: Cultural, Religious and Aesthetics. Booksurge Publishing U.S.

Wittgenstein (1980), Culture and Value. translated by Peter Winch, Oxford Blackwell

Suggested Readings :

A.J. Toynbee (1948), Civilization on Trial, Oxford University Press

Paul Ricouer (1984), Time and Narrative published by University of Chicago Press, London

OR

Paper – B, Option (iii) : AESTHETICS

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

AIMS AND OBJECTIVES :

This paper aims at familiarizing the students with the meaning and scope of Aesthetics, art and society, aesthetic experience according to the Western and Indian tradition.

INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. First question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions i.e. 2 marks of each. It shall carry 18 marks and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall *attempt one question* from each Unit – 4 in all, of 18 marks each.

Course Contents :**UNIT-I**

- Aesthetics, its meaning and scope.
- Nature and function of art.

UNIT-II

- The relation of art to society.

UNIT-III

- Meaning and purpose of art in the Indian Tradition.

UNIT-IV

- Nature of Aesthetic experience according to the Western and Indian traditions.

Essential Readings :

Hiriyanna (1954), Art Experience, Karyalaya Publications: Mysore

Susan, L. Feagin and Patrick Maynard (ed.) (1997), *Aesthetics*, Oxford University Press

Suggested Readings :

Meredith (220 &) The Critique of Judgement by Immanuel Kant Tr., J.C., Oxford University, Press

Morris Weitz (ed.) (1970), Problems of Aesthetics : An Introductory Book of Readings, Macmillan, New York

PSYCHOLOGY

B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-2020

SEMESTER V

PAPER: PSYCHOLOGICAL TESTING

Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

OBJECTIVES :

- (I) Its aim is to introduce the students history, importance and classification of psychological testing and provide them with knowledge and procedure of test construction and standardization.
- (II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

INSTRUCTIONS FOR PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25-30 words each. It shall carry 18 marks and shall be compulsory question. Rest of the paper shall contain 4 Units. Each Unit shall have two essay type questions and the candidates shall be given internal choice, i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

- UNIT-I** : *Introduction to Psychological Tests* :History of Psychological Testing; Nature of Psychological Tests. Classification of Tests; Use of Tests.
- UNIT-II** : *Item Writing and Item Analysis* :Characteristics of a Good Item; Various types of Items; Item Difficulty; Item Discrimination.
- UNIT-III** : *Reliability and Validity* :*Reliability* : Concept, Types, Factors Affecting Reliability.
Validity : Concept, Types, Factors Affecting Validity; Relation between Reliability and Validity.
- UNIT-IV** : *Interpretation of Test Scores* :*Criterion Referenced Scores* : Content Referenced and Outcome Referenced Scores; Norms Referenced Scores; Concept of Norms, Types of Norms (Percentile Scale and T. Scale).

Note : The use of non-programmable calculators and statistical tables is allowed in the examination.

Books Recommended

Suggested Readings :

1. Anastasi, A. (1998) : *Psychological Testing*, New York : Macmillan.
2. Gregory, R.J. (1996) : *Psychological Testing*, Singapore : Allyn and Bacon.
3. Guilford, J.P. and Fruchter (1981): *Fundamental Statistics in Psychology and Education*, Singapore: McGraw Hill.
4. Guilford, J.P. (1954) : *Psychometric Methods*, New Delhi : Tata McGraw Hill.

Reference Books :

1. Freeman, F.S. (1962) : *Theory and Practice of Psychological Testing*, New Delhi : Oxford and IBH.
2. Cronbach, L.J. (1990) : *Essentials of Psychological Testing*, New York : Harper and Row.
3. Brown, F.G. (1976) : *Principles of Educational and Psychological Testing*, New York : Holt, Rinehart and Winston.

PSYCHOLOGY**B.A. (HONOURS) THIRD YEAR EXAMINATION, 2019-2020****SEMESTER VI****PAPER: Counselling and Organizational Psychology**

Theory	:	90 marks
Internal Assessment	:	10 marks
Time	:	3 Hours

OBJECTIVES :

- (I) Its aim is to introduce the students history, importance and classification of psychological testing and provide them with knowledge and procedure of test construction and standardization.
- (II) Pedagogy of the Course Work :
80% Lectures (including expert lectures).
20% assignments, discussion and seminars and tests.

INSTRUCTIONS FOR PAPER-SETTER AND THE CANDIDATES :

There shall be 9 questions in all. Five questions in all are required to be attempted. The first question shall be Short Answer type containing 12 short questions spread over the whole syllabus and the students are required to attempt nine short answer type questions in about 25-30 words each. It shall carry 18 marks, and shall be compulsory question. Rest of the paper shall contain 4 Units. Each unit shall have two essay type questions and the candidates shall be given internal choice, i.e. the candidates shall attempt one question from each Unit – 4 in all of 18 marks each.

- UNIT-I** : Concept of Counselling; Approaches to Counselling; Freudian, Experiential Client Centered, Gestalt, Existential, Cognitive Behaviour Therapy.
- UNIT-II** : Work Motivation: Early and Contemporary Theories.Strategies of Organizational Development.
- UNIT-III** : Concept and Nature of Health Protective Behaviour.Concept and types of Health Coronary Behaviour (Special reference to nicotine addiction and alcoholism).
- UNIT-IV** : Psychology of Exceptional Children with special reference to learning disabled and Gifted Children.

Books Recommended :**Suggested Readings :**

1. Luthans, F. (1998) : *Organizational Behaviour*, New York : Irwin McGraw Hill.
2. Moorhead, G. and Griffin, R.W. (1999) : *Organizational Behaviour*, Delhi : AITBS.
1. Parikh, M.R. & Gupta, R. (2010) : *Organizational Behaviour, Tata McGraw Hill Education Private Limited*, New Delhi : West Patel Nagar.
4. Robbins, S.P. (2000) : *Organizational Behaviour*, New York : Prentice Hall of India.
5. Rao, S.N. (1992) : *Counselling and Guidance*, New Delhi : Tata McGraw Hill.
6. Nystul, M.S. (1999) : *Introduction to Counselling – An Art and Science Perspective*, Boston : Allyn and Bacon.
7. Brannon, L. and Feist, J. (2007): *Introduction to Health Psychology*. New Delhi: Thomson – Wadsworth.
8. Mohan, J. and Sehgal, M. (2006): *Health Psychology*. New Delhi: Abhijeet Publications.
9. Narayan, J.(2003) : *Educating Children with Learning Problems in Regular Schools*, Secunderabad : NIMH.
10. Raj, F. (2010) : *Breaking Through: A Hand book for parents and teachers of children with Specific Learning Disabilities*, Secunderabad: Vifa Publishers.

Reference Books :

1. Newstrom, J.W. and Davis K. (1998) : *Organizational Behaviour*, New Delhi : Tata McGraw Hill .
2. Woolfe, R., and Dryden, W. : *Handbook of Counselling Psychology*, New Delhi : Sage (Eds.) (1996) Publications.

GEOGRAPHY**B.A./B.Sc. (HONOURS) THIRD YEAR EXAMINATION, 2019****SEMESTER V****Paper III: APPLIED GEOGRAPHY****Max. Marks: 100**

(Terminal Exam: 90 Marks)

(Internal Assessment: 10 Marks)

Time: 3 Hours

Objectives:

To understand the prevalent issues in environment, society and economy and to provide a geographical interpretation with special reference to India

Course Content:**Unit- I****Applied Geography: Meaning and concepts:**

Meaning, nature and scope and significance of Applied Geography. Concept of planning region.

Regionalisation scheme with reference to economic regionalization. (25 lectures)

Unit- II**Applied Geography: Methods and techniques:**

Cartographic techniques using point, line and area symbols. (10 lectures)

Unit- III**Applied Geography: Contributions:**

Industrial location theory of Weber and its application in industrial planning.

Christaller's Central Place Theory and its application in location of central places.

Von Thunen's Agricultural Location Theory and its application in agricultural location.

Perroux's Growth Pole Theory and its application in regional development planning.

UNIT- IV**Land use studies: Rural and Urban.**

Rural Land Use: Survey and Classification.

Urban Land Use : Survey and Classification.

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.

Books Recommended**Essential Readings:**

1. Carter, H. : The Study of Urban Geography, Arnold-Heinemann, New Delhi, 1979.
2. Chorley, R.J. & P. Haggett (Ed.) : Models in Geography, Methuen & Co., London, 1967.
3. Jones, Alun : Fieldwork in Geography, Longman, Green Co., London, 1968.
4. Stamp, L.D. : Applied Geography, Penguin Books, England, 1960.
5. Singh, R.L. (Ed.) : Applied Geography, National Geographical Society of India, Department of Geography, B.H.U., Varanasi, India.

Further Readings:

1. Dawson, J.A. : Geography, Teach Yourself Books, Hodder and Stoughton, UK 1983.
2. Misra, R.P. and others : Regional Development Planning in India, Vikas, New Delhi.1974
3. Misra, V.C. & others : Essays in Applied Geography, University of Sagar, India.1976

4. Sen Gupta, P. & Sadasyuk Galina : Economic Regionalization of India, Problems and Approaches, Registrar General Census of India.
5. Singh, Jasbir & Dhillon, S.S. : Agricultural Geography, Tata McGraw Hill, New Delhi, 1994.
6. World Report, World Bank & OUP (Annual Report)

Pedagogy:

- Exposure to media.
- National Five Year Plan documents and publications related to planning.
- Field work related to land –use and other socio-economic issues.

GEOGRAPHY**B.A./B.Sc. (HONOURS) THIRD YEAR EXAMINATION, 2020
Semester VI**

Any one of the following options:

- Option (i) : AGRICULTURAL GEOGRAPHY (An Elementary Course)**
Option (ii) : POLITICAL GEOGRAPHY (An Elementary Course)
Option (iii) : ENVIRONMENTAL GEOGRAPHY (An Elementary Course)

Option (i) AGRICULTURAL GEOGRAPHY (An Elementary Course)**Max. Marks: 100**

(Terminal Exam: 90 Marks)

(Internal Assessment: 10 Marks)

Time: 3 Hours

Objectives:

- To familiarise the students with the concepts and development of agriculture;
- To examine the role of agricultural determinants towards changing cropping patterns, intensity, productivity, diversification and specialisation. The course further aims to familiarise the students with the application of various theories, models and classification schemes of cropping patterns and productivity.
- Its objective is also to discuss environmental, technological and social issues in agricultural sector with special reference to India.

Course Content:**Unit- I**

Nature, scope and significance of agricultural geography.

General landuse classification.

Physical determinants of agricultural landuse: Relief, climate, soils.

Unit- II

Social and cultural determinants of agricultural landuse, land tenure, size and fragmentation of holdings and labour.

Economic determinants of agricultural landuse: Marketing facilities, transport facilities, tariff and import restrictions, price incentives, credit.

Unit-III

A critical review of Whittlesey's agricultural classification.

Characteristics and world patterns of the following:

Subsistence types of agriculture: Nomadic herding, shifting cultivation, rudimentary sedentary tillage, intensive subsistence tillage, subsistence crop and livestock farming.

Unit- IV

Commercial types of agriculture: livestock ranching, commercial plantation farming, commercial grain farming, mixed farming, commercial dairy farming.

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each UNIT. The students will be required to attempt one question from each UNIT. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. Alexander, J.W.: *Economic Geography*, Prentice Hall, Englewood Cliffs, latest Edition.
2. Husain, M. : *Systematic Agricultural Geography*, Inter-India Publications, New Delhi, 2000.
3. Singh, J. & Dhillon, S.S. : *Agricultural Geography*, Tata McGraw Hill Publishing New Delhi, 1994.

Further Readings:

1. Morgan, W.B. & Munton, R.J.C. : *Agricultural Geography*, Methuen, London, 1971.
2. Symons, L. : *Agricultural Geography*, G. Bell & Sons, London, 1964.

Pedagogy:

The teacher should impress the students the overall importance of agriculture in the global perspective. The world is fast changing and its impact is felt on agriculture. Population is increasing and demand of agricultural products is also on the increase. Contrary to it, the farm lands are decreasing, that necessitates infusion of technology in agricultural sector. It is causing environmental pollution. The teacher should interact with students on said issues. Examples from neighbouring areas may be given to the students for better perceptions.

Option (ii): POLITICAL GEOGRAPHY (An Elementary Course)**Max. Marks: 100**

(Terminal Exam: 90 Marks)

(Internal Assessment: 10 Marks)

Time: 3 Hours

Objectives:

- To familiarise the students with the geographical factors which have a bearing on the political/ administrative organisation of space.
- To enhance awareness among the students of multi-dimensional nature of geo-political space.

Course Content:**Unit- I**

Nature and scope of political geography, phases in the development of political geography. Physical elements of political geography: Location, size and shape, relief, climate, and seas and oceans.

Unit- II

Economic elements of political geography: Basic natural resources; food and power, minerals, industry, trade and transportation.

Human-cultural elements of political geography: Ethnographic structure of nations, language, religion, population, quantity and quality.

Unit- III

Concepts of frontiers and boundaries: Classification of boundaries.

Global distribution of political power: Views of Mackinder, Mahan and Spykman and their contemporary relevance.

Unit- IV

International tension: Identification of tension areas and factors contributing to tensions in different areas with special examples from Middle East and Indian Ocean.

Political Geography of the Indian Ocean.

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

1. De Blij, H.J. : *Systematic Political Geography*, John Wiley, New York, 1968.
2. Glassner, M. : *Political Geography: A Contemporary Perspective*, Tata McGraw Hill, New Delhi, 1996.

Further Readings:

1. Adhikari, Sudeepa : *Political Geography*, Rawat, Jaipur, 1997
2. Muir, R. : *Modern Political Geography*, Macmillan, London, 1981.
3. Prescott, J.R.V. : *Political Geography*, Methuen, London, 1992.
4. Prescott, J.R.V. : *The Geography of Frontiers & Boundaries*, Aldine Pvt. Ltd., Chicago, 1965.
5. Valkenberg, S.V. : *Elements of Political Geography*, Prentice Hall of India, New & Stotz, Carl, L., Delhi, 1963.

Pedagogy:

- Fieldwork to understand the political/administrative boundary configuration and people's problems and their perceptions.
- Consult political maps (large scale, small scale).
- Atlases and archival records.
- Collect relevant newspaper items for group discussion.
- Prepare pin-up board for display of important events of geopolitical nature.

Option (iii): ENVIRONMENTAL GEOGRAPHY (An Elementary Course)**Max. Marks: 100**

(Terminal Exam: 90 Marks)

(Internal Assessment: 10 Marks)

Time: 3 Hours

Objectives:

- To understand the significance of environment and its interrelationship with man.
- To understand the importance of soil and factors responsible for erosion.
- The importance of energy sources, forest and wildlife and their preservation to be studied.

Course Content:**Unit-I**

Environment and Geography: Relationship between geography and environment; definition and scope of environmental geography; significance of environmental studies.

The Environment: Characteristics, components and functioning; concept of healthy environment.
(6 + 6 = 12 lectures)

Unit- II

The Soil System: Origin and composition; horizons, texture, chemistry, factors influencing soil types; soil erosion, soil conservation; and soil pollution.

Energy: Energy flow in the ecosystem; environmental impact of both conventional and non-conventional energy sources.
(6 + 4 = 10 lectures)

Unit- III

Forests: Significance; world reserves; deforestation; and conservation strategies.

Wildlife: Wildlife and environment relationship, regional distribution; conservation of wildlife; and wildlife in India.
(5 + 5 = 10 lectures)

Unit- IV

Population and Environment: Basic issues, environmental impact of population growth and agenda for action.

Global Environmental Issues: Water contamination; atmospheric pollution; acid rain; noise pollution; and control strategies.

Legislative strategies, environmental issues and the international community; Rio-de-Janeiro Earth Summit of 1992; selected environmental protection laws in India; Environmental Protection Act, National Environmental Tribunal Act, Wildlife Protection Act, Forest Conservation Act, Air Act, Water Act. (6 + 6 + 6 = 18 lectures)

Notes:

1. A compulsory question containing 15 short answer type questions shall be set covering the whole syllabus. The student shall attempt any 10 parts in about 25-30 words each. Each part will carry 2 marks (total 20 marks).
2. The whole syllabus will be divided into 4 Units. Eight questions will be set out of the whole syllabus, 2 from each unit. The students will be required to attempt one question from each unit. These will be in addition to the compulsory question at serial number 1.
3. Internal assessment may include written assignments, snap tests, participation in discussion in the class, term papers, attendance etc.
4. For reappear/improvement candidate(s) who have not been assessed earlier for Internal Assessment, the question paper(s) in their case shall be of Maximum Marks allotted to the paper(s) concerned.

Books Recommended:

Essential Readings:

- | | | | |
|----|---------------|---|---|
| 1. | Adam, W.M. | : | <i>Green Development: Environment & Sustainability in the Third World</i> , Routledge, London, 1990. |
| 2. | Chandna, R.C. | : | <i>Environment Awareness</i> , Kalyani Publishers, New Delhi. Clarendon Press, Oxford, 1998. Also available in Hindi & Punjabi. |
| 3. | Chandna, R.C. | : | <i>Environmental Geography</i> , Kalyani Publishers, New Delhi, 2001. |
| 4. | Goudie, A.S. | : | <i>The Human Impact on Environment</i> , Blackwell, Oxford, 1993. |

Further Readings:

1. Ehrlich, Paul, R. et. al : *Ecoscience – Population, Resources and Environment*, Freeman and Co., San Francisco, 1977.
2. Goudie, A.S. : *Environmental Change, Contemporary Problems in Geography*, Clarendon Press, Oxford, 1992.
3. Pickering, K.T. : *An Introduction to Global Environmental Issues*, Routledge, London, 1994.
4. Singh, Savinder : *Environmental Geography*, Paryag Pustak Bhawan, Allahabad, 1991.
5. Strahler, A.N. & Strahler, L.A. : *Geography and Man's Environment*, John Wiley & Sons, New York.

Pedagogy:

- The interaction of teacher and students is must on issues related to environment, energy resources, forest and soil preservation.
- A field visit to those areas where soil erosion is a serious problem be arranged and methods of conservation be taught.

PUBLIC ADMINISTRATION SEMESTER -V

Paper- III : RESEARCH METHODS AND STATISTICS

Max. Marks: 100
Theory: 90 Marks
Internal Assessment: 10 Marks
Time : 3 Hours

Objective of the Paper :

The objective of the paper is to give the student an in-depth understanding about the nature and scope of Social Research, Methods of Social Research, data collection and data processing. It would also acquaint the students with basics of sampling and statistical methods including measures of central tendency, dispersion, correlation and Chi-Squares Test.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Meaning, Nature and Scope of Social Research.
Concepts; Hypotheses : Meaning, Types and Significance.
Research Design - Meaning, Types and Components.
Methods of Social Research - Experimental–Survey and Case Study.

UNIT-II

Methods of Data Collection—Documents, Observation, Interview and Questionnaire.
Data Processing-Editing, Coding and Tabulation, The Use of Computer.
Report Writing.

UNIT-III

Sampling-Meaning, Types, Merits and Demerits.
Frequency Distribution – Meaning and Steps.
Measures of Central Tendency – Mean, Median and Mode.

UNIT-IV

Measures of Dispersion –Standard Deviation.
Correlation – Karl Pearson.
Chi-Square

Essential Readings :

Goode, W.J., & Hatt, P.K. (1990). *Methods in Social Research*. U.S.A. : McGraw Hill.
Gupta ,S.P. (1987) . *Statistical Methods*. New Delhi : Sultan Chand .
Moser, C.A. & Kalton. G. (1979).*Survey Methods in Social Investigations*. London : ELBS
Seltiz,C.et al. (1964) . *Research Methods in Social Relations* . New York : Rinehart & Winston.

Further Readings :

Bowley, A. (1947). *Elements of Statistics* (6th ed.) . New York : Staples.
Cohen, L. (1968) . *Statistical Method for Social Scientists* .New Delhi : Prentice Hall of India Private Ltd.
Ghosh., and Chowdhry. (2004). *Statistics* (Rev. Enlarg. Ed.) Allahabad : Indian Press.

PUBLIC ADMINISTRATION SEMESTER-VI

PAPER IV : The candidates have to select one out of the following four options :

- Option (i) : Organisation Behaviour**
- Option (ii) : Cooperative Administration in India**
- Option (iii) : Public Enterprise Management (with special reference to India)**
- Option (iv) : Environment Administration in India**
- Option (v) : Emerging Issues in Public Administration**

Paper- IV : OPTION (i) : ORGANISATION BEHAVIOUR

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

Objective of the Paper :

The objective of the paper is to give the student an in-depth insight into the various aspects and factors affecting individual, interpersonal and group behaviors in organisations. The key areas include study of human behavior and concepts like Attitudes, Morale, Leadership, Motivation and Organizational Change.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Organisation Behaviour : Concept and significance

Individual Behaviour : Concept; Nature; Individual Factors

Interpersonal Relations : Meaning; Dimensions; Factors

UNIT-II

Team Development : Importance; Types of Teams

Attitudes : Concept, Types

Morale : Concept; Significance; Building up High Morale

UNIT-III

Groups : Concept; Types
 Leadership : Styles of Leadership
 Motivation : Concept; Determinants

UNIT-IV

Organisational Change : Concept; Resistance to change
 Organisational Development : Concept; Need; Techniques
 Organisational Effectiveness : Concept; Approaches

Essential Readings :

Davis, K. (2001). *Organizational Behaviour* . New York: McGraw Hill.
 Dubin, R. (1968). *Human Relations in Administration*(3rd ed.), New Delhi: Prentice Hall.
 Gupta, S. & Joshi, R. (2007). *Organizational Behaviour* . New Delhi: Kalyani Publishers.
 Kolasa, B.J. (1969). *Introduction to Behavioural Sciences for Business*. New York: Wiley.
 Prasad , L.M.(2000). *Organisational Behaviour*(3rd ed.).New Delhi: Sultan Chand
 Sharma, K.K. & Sahni, P. (1988). *Organisational Behaviour* . New Delhi: Deep & Deep.

Paper- IV: OPTION (ii) : CO-OPERATIVE ADMINISTRATION IN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :

The objective of the paper is to acquaint the students with the evolution of cooperatives in India and its Principles. It will also deal with Legislation on Cooperatives, Registration, structure and Administration at the Union and State level. Further the students will gain an understanding of the forms and Role of Cooperatives, their managerial & personnel aspects.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES :

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Co-operation : Meaning, Significance and Evolution

Co-operative Principles

Co-operative Legislation : Government of India Act, 1912 and Punjab Co-operative Societies Act, 1961(as amended from time to time)

UNIT-II

Registration of a Co-operative Society

General Body, Board of Directors and Committees

Chief-Executive : Appointment, Functions and Role

Co-operative Administration at Union Level – Organisation and Functions

UNIT-III

Co-operative Department at State Level – Organisation and Functions

Registrar Co-operative Societies : Appointment and Role

Forms of Co-operatives : Role of Apex Federations and Primary Co-operatives

Co-operative Education

UNIT-IV

Human Resource Management : Recruitment and Training

Financial Management

Essential Readings :

Dubhashi, P.R. (1970) . *Principles and Philosophy of Cooperation* . Pune: VMNICM.

Goel, B.B. (1988). *Dynamics of Cooperative Administration* . Delhi: Deep and Deep.

Goel , S.L., & Goel, B.B. (1979). *Principles, Problems and Prospects of Co-operative Administration* .Delhi: Sterling.

Kamra, P.K. (1986) .*Cooperative Management* . Delhi: Deep and Deep.

Krishnaswami, O.R. (1978) . *Fundamentals of Cooperatives* .Delhi: S.Chand and Co.

Mathur, B.S.(1971). *Cooperation in India*. Agra: Sahitya Bhawan.

Further Readings :

Bhatia, B.S. (ed.). (1994). *Encyclopaedia of Cooperative Management*. New Delhi: Deep & Deep Publications Pvt. Ltd.

Dwivedi, R.C. (1982).*Democracy in Cooperative Movement*.New Delhi. National Cooperative Union of India.

Gill , M.S. (1983).*Agricultural Cooperatives* .Delhi: Vilas.

I.C.A. (1977).*Readings in Cooperative Management*.Delhi: ICA.

I.C.A. (1980).*Experts Consultation on Cooperative Member Education* . Delhi: ICA.

I.L.O.(n.d.).*Cooperative Management and Administration* .Geneva: I.L.O.

Puri, S.S.(1979). *Ends and Means of Cooperative Development* . Delhi: NCUI

Paper-IV: OPTION (iii): PUBLIC ENTERPRISE MANAGEMENT (WITH SPECIAL REFERENCE TO INDIA)

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3Hours

Objective of the Paper :

The objective of the paper is to give the student a detailed understanding of the concept, evolution, types, role and problems of public enterprises in India. It would also give an insight into legislative and government control over public enterprises, performance and reforms of the public enterprises and the concept of privatization.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES:

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Public Enterprise : Meaning and Evolution
 Public Enterprises in India : Rationale and Role
 Administrative and Managerial Problems of Public Enterprises

UNIT-II

Organisational Patterns: Departmental Undertakings, Public Corporation and Government Company
 Board of Directors: Rationale, Constitution, Types and Functions

UNIT-III

Legislative Control over Public Enterprises
Government Control over Public Enterprises
Performance of Public Enterprises

UNIT-IV

Public Enterprise Reforms since 1991
Memorandum of Understanding
Privatization : Meaning, Rationale, Achievements and Failures

Essential Readings :

Dutt, Ruddra and Sundaram, K.P.M. (2009) *Indian Economy* . New Delhi: S. Chand.
Khera, S.S. (1977) . *Government in Business* . Delhi : National.
Mathur, B.P. (1999) .*Public Enterprise Management* . New Delhi :Macmillan
Narain, Laxmi . (2005). *Public Enterprise Management and Privatisation* . New Delhi :S. Chand.
Parkash, Jagdish . (2002). *Administration of Public Enterprises in India* . Mumbai :Himalaya Publishing House.
Sengupta , N.K. (2007) . *Government and Business* . New Delhi :Vikas.

Further Readings:

Gedam, Ratnakar. (1995) . *Public Sector Management*.
Government of India. *Public Enterprises Survey, India, Ministry of Heavy Industry & Public Enterprises, Vol. 1, 2, 3* .DPE. New Delhi.
Gupta, K.R. (1975) . *Issues in Public Enterprises* . New Delhi: S.Chand.
Hanson , A.H. (1972).*Public Enterprises and Economic Development* . London : Routledge and Kegan.
Ramanadham, V.V.(1988). *The Working of Public Sector* . Bombay : Allied Publishers.
Ramanadham , V.V. *The Structure of Public Enterprises and Economics in India* . Bombay: Asia Publishing House.
United Nations. (1974). *Countries* . New York : V. N.

Paper-IV: OPTION (iv): ENVIRONMENT ADMINISTRATION IN INDIA

Max. Marks	:	100
Theory	:	90 Marks
Internal Assessment	:	10 Marks
Time	:	3 Hours

Objective of the Paper :

The objective of the paper is to give the student an in-depth understanding of the concept and components of environment, environment administration and sustainable development. In addition, the students would be made aware of environment problems, threats and impact of development on environment. The student will also gain knowledge regarding the machinery for environment protection at the Union and State levels, Environmental Policy, priorities, global issues and role of NGOs in environment conservation would be dealt with.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES:

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

UNIT-I

Environment – Concept and Components
 Environment Administration – Meaning, Nature and Scope
 Sustainable Development – Concept, Issues and Strategy

UNIT-II

Environment Problems and Threats–Air, Water, Land, Human Settlements and Forests
 Impact of Development, Urbanization and Industry on Environment
 Organisation and Machinery of the Government at the Union Level for Environment Protection
 Organisation and Machinery of the Government at the State Level for Environment Protection

UNIT-III

Pollution Control Boards—Organisation, Functions and Role

Environmental Policy with special reference to Water, Air and Forest; Constitutional Provisions; Legislative Measures

Environmental Priorities in India—Population Stabilisation; Forest Cover; Deforestation; Wildlife Protection; Recycling of Wastes

UNIT-IV

Environment and Global Issues— Conventions; Depletion of Ozone Layer; Global Warming

Environment Education, Awareness and Ethics; Role of NGOs in Environment Protection and Conservation

Essential Readings :

Chandana, R.C. (1998) .Environment Awareness . New Delhi : Kalyani.

Edmunds, S. and Latey, J. (1973). Environmental administration . New York : McGraw-Hill.

Nanda, V.K. (1997). Environmental Education .New Delhi : Anmol.

Sapru, R.K. (2002) . Development administration . New Delhi : Sterling.

Sapru ,R.K. (2004). Public Policy . New Delhi : Sterling.

Further Readings :

Agnihotri , Sheo Parkash. (1992). *Environment Conservation Management and Planning*.Allahabad : Chugh.

India, Centre for Science and Environment. (1982). *The state of India's Environment : A Citizen's Report* .
New Delhi: Vishal Bhawan.

Kumar, Naresh.(1999) . *Air Pollution and Environment Protection : Legislative Policies, Judicial Trends and Social Perceptions* . New Delhi : Mittal.

Kumar, Naresh.(1999). *Air Pollution and Environment Protection:Legislative Policies,Judicial Trends and Social Perceptions* . New Delhi:Mittal

Monga, G.S. (2004).*Environment and Development* . New Delhi : Deep and Deep.

Radha, S. and Sankhyan, A.S.(2004).*Environmental Challenges of the 21st Century* . New Delhi:
Deep.

PAPER- IV: OPTION (V): Emerging Issues in Public Administration

Max. Marks:	100
Theory:	90 Marks
Internal assessment:	10 Marks
Time:	3 Hours

Objective of the Paper:

The purpose of this course is to familiarize the students with the emerging issues in Indian Administration. At the end of the course the students will have an understanding of the concepts of disaster management, human rights, regulatory administration in India, consumer protection, right to information, new areas of governance in India.

INSTRUCTIONS FOR PAPER-SETTERS AND CANDIDATES

- For Private/University School of Open Learning (USOL) students, who have not been assessed earlier for the internal assessment, the marks secured by them in the paper will proportionately be increased in lieu of the internal assessment.

The Paper-Setter must put a note in question paper in this regard.

- The candidate shall attempt 5 questions in all (one compulsory and one each from four units). The first compulsory question shall comprise of 12 short-answer type questions, covering the whole syllabus, to be answered in 25-30 words each, out of which the candidate would be required to attempt any 9. Each question will carry 2 marks. Rest of the paper shall contain 4 units, each unit having two questions, out of which the candidate would be required to attempt one. Each question will carry 18 marks.

Unit I

Good governance – Concept and significance
 E- governance – Concept and significance
 Regulatory Administration - Concept and significance

Unit II

Transparency and Accountability in Administration – Significance
 Mechanism – Social Audit, Results Framework Document (RFD)
 Ethics and Integrity in Administration

Unit III

Human Rights - Concept and significance
 Women Empowerment with special reference to National Mission for Empowerment of Women (NMEW)
 Youth Empowerment with special reference to Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

Unit IV

Sustainable Development - Concept and significance
 Environment Administration - Concept and significance
 Disaster Management - Concept and significance

Suggested Readings :

- Arora , Ramesh K. (2013). *Ethical Governance in Business and government*. Jaipur : Aalekh Publishers.
- Bhandari, Sunanda (2015).*MahilaSashaktikaranEvamRajkiyaYojanaye*. Jaipur: Ritu Publications.
- Bystydzienski, Jill M. (2008).*Democratization & Women’s Grassroot Movements*. JotiSekhon. Zubaan.
- Centre for Good Governance.Social Audit Tool Kit,”n.d” from www.cgg.gov.in
- Food & Agricultural Organization (F.A.O.).*A handbook for trainers on participatory local development: The Panchayat & Training Module on social Audit*
- Kawadia, Ganesh & Ahuja, Kanhaiya. (2006) .*Environmental Issues of Development*.AmbalaCantt, India: The Associated Publishers.
- Goel, S.L. (2006).*Encyclopedia of Disaster Management*, Deep and Deep Publication Pvt. Ltd.
- Government of India. *Guidelines for Results Framework Document(RFD)*. “n.d” retrieved from www.performance.gov.in
- Government of India. (2006,September). *Second ARC – Third Report (Crises Management: From Despair to Hope)*.
- Government of India.(2006,june) . *Second ARC – First Report (Right to Information- Master Key to Good Governance)*.
- Government of India. (2008,December). *Second ARC – Eleventh Report (Promoting e-governance: The Smart Way Forward)*.
- Government of India.Ministry of Skill Development and Entrepreneurship-“ n.d” retrived from www.skilldevelopment.gov.in/pmkvy.html
- Government of India. *Ministry of Women & Child Development*, “n.d” retrieved from www.nmew.gov.in.
- Government of India. *E-governance for Citizen Empowerment National Information Centre*. ‘n.d’ retrieved from www.nic.in
- Mohanty, Jagannath. (2005). *Human Rights: New Trends and Innovations*. New Delhi: Deep & Deep.
- Verma, J.S. (2006). *The Universe of Human Rights*. Delhi: Universal Law Publishing Company.
- Kumar, Abhishekand Tripathy, Pramod Kumar.*Skill Development in India – An Overview of Initiatives& Schemes*. New Delhi: Kanishka Publishers.
- Mathur, B.P. (2014). *Ethics for Governance: Reinventing Public Services*. India: Routledge.
- Jaswal, P.S.and Jaswal, Nishtha. (2000). *Environmental Law* . Pioneer Publications.
- Palekar, S.A. (2012). *Development Administration*. New Delhi: PHI Learning Private Limited.
- Manisha Priyam; Menon Krishna and Banerjee, Madhulika. (2009). *Human Rights, Gender and the Environment*. Pearson.
- Trivedi, Priya Ranjan. (1999). *Encyclopedia of Ecology and Environment Volume 3 Environmental Education*. New Delhi :Indian Institute of Ecology and Environment.
- Vayunandan, E. and Mathew, Dolly. (2003). *Good Governance Initiatives in India*. New Delhi : Prentice Hall of India.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY

SEMESTER – V

Note : The students shall have to opt for one paper for Semester - V examination out of the following two papers :

Outlines of Test :

Paper V : Archaeology
 Paper VI : Spread of Indian Culture In Central Asia, China And Tibet

Paper-V: ARCHAEOLOGY

Total Marks	: 100
Theory	: 90
Internal assessment	: 10
Time	: 3 Hours

Objectives :

This course is a survey of the pre and proto historic background to Indian history from the earliest times to the early historical period. Excavated sites are studied for an insight into the growth and development of early Indian culture.

Pedagogy of the CourseWork:

The students are made familiar with prehistoric, proto historic and historical sites. Slides, photographs of relevant sites, their significance in establishing chronologies is discussed in the class. Visits to museums is an important aspect through which students are made familiar with the material evidence.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES:

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

The Palaeolithic, Mesolithic and Neolithic cultural sequences in various parts of the Indian subcontinent.

UNIT-II:

- (a) The background and the phenomenon of the Harappan civilization.
- (b) The Chalcolithic cultures of western and southern India

UNIT-III:

The beginning of iron technology and the Painted Grey Ware Culture.

UNIT-IV :

Excavations of early historic cities of :

- (a) Northern India and Gangetic doab : Taxila and Hastinapura.
- (b) Eastern India : Sisupalgarh and Chandraketugarh.
- (c) Southern India : Arikamedu and Brahmagiri.

Essential Readings :

1. Agrawal, D.P. : The Archaeology of India, Select Book Service Syndicate, New Delhi, 1984.
2. Allchin, B. and F.R. : The Rise of Civilization in India and Pakistan, Cambridge University Press, New Delhi, 1989.
3. Fagan, Brian M. : People of the Earth : An Introduction to Longman, Singapore, 2004.
4. Possehl, G. : Ancient Cities of the Indus, Vikas Publishers, New Delhi, 1979.
5. Ratnagar, S. : Understanding Harappa, Tulika, New Delhi, 2001.

Suggested Readings :

1. Roy, T.N. : The Ganges Civilization a critical archaeological study of the painted grey ware and northern black polished ware periods of the ganga plains of India, Ramanand Vidya Bhawan, New Delhi, 1983.
2. Tripathi, V. : The Painted Grey Ware An Iron Age Culture of Northern India Concept, Publisher Corporation, Delhi, 1976.

Paper VI: SPREAD OF INDIAN CULTURE IN CENTRAL ASIA, CHINA AND TIBET

Max. Marks	: 100
Theory	: 90 Marks
Internal Assessment	: 10 Marks
Time	: 3 Hours

Objective :

1. The primary aim of this paper is to make the students study the spread of Indian culture and ideas in Central Asia, China and Tibet, generally termed in history as 'Greater India'. This forms an important phase of India's contribution to the world culture.

2. Pedagogy of the Course Work :

It is expected to acquaint the students with the background of Indian culture's spread and the factors responsible for it. While outlining the spread of Indian culture and religion, the spread of art, architecture and literature should also be taken care of. Visual aids wherever required should be used to familiarize students with Indian art and its influence in these countries.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

Spread of Indian Culture in the Central Asian States.

UNIT-II:

Introduction of Buddhism in China and the early contacts.

UNIT-III:

Chinese pilgrims in India – Fahien, Hiuen Tsang and I-Tsang.

UNIT-IV:

- (a) Spread of Buddhism in Tibet up to 12th century A.D. with special reference to the missions of Padma Sambhava.
- (b) Lamaism.

Essential Readings :

1. Bagchi, P.C. : *India and Central Asia*, National Council of Education Bengal, Calcutta, 1984.
2. Bapat, P.V. : *2500 Years of Buddhism*, South Asian Books, New Delhi, 1977.
3. Dougles, R : *China (The Story of the Nation)*, Hesperidis, London, 1900, 2006.
4. Elliot, C. : *Hinduism and Buddhism*, Vols. II and III, Routledge, London, 1962.
5. Puri, B.N. : *Buddhism in Central Asia*, Motilal Banarsidass, Delhi, 1987.

Suggested Readings :

1. Upasak, C.S. : *History of Buddhism in Afghanistan*, Central Institute of Higher Tibetan Studies, Varanasi, 1990.
2. Waddell, A.L. : *Buddhism and Lamaism of Tibet* rpt., Vimar Publishing House, London, 1979.

ANCIENT INDIAN HISTORY, CULTURE & ARCHAEOLOGY**SEMESTER – VI**

Note : The students shall have to opt for one paper for Semester - VI examination out of the following two papers :

Outlines of Test :

- Paper VII : Epigraphy and Numismatics
 Paper VIII : Spread of Indian Culture in South-East Asia upto 12th Century A.D.

Paper-VII : EPIGRAPHY AND NUMISMATICS

Total Marks	:	100
Theory	:	90
Internal Assessment	:	10
Time	:	3 Hours

Objectives :

The paper is aimed to prepare students to handle the original source material – inscriptions and coins, which make the backbone of Ancient Indian History, as without the knowledge of epigraphy and numismatics, the subject cannot be mastered.

Pedagogy of the CourseWork:

Students should be familiarized with the each topic in detail. Visual aids like the photographs/slides of the coins and inscriptions shall be used regularly. The decipherment of Asokan inscriptions shall be taught with the help of plates and paleographic charts to the students.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be **9** questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain **4** units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

- Origin and antiquity of writing in India with special reference to the origin of Brahmi script.
- Origin and antiquity of coinage in India.

UNIT-I

- Ashokan inscriptions – Pillar Edicts I to IV; Girnar Rock Edicts I, II and XIII. (Both for study and decipherment).
- Besnagar Pillar inscription of Heliodorus; Nasik Cave Inscription of Queen Balasri; Sarnath Buddha Image inscription of Kanishka's year 3; Junagarh Rock inscription of Rudradaman I, Saka year 72. (Study only). Gupta inscriptions—Allahabad Pillar inscription of Samudragupta, Mehrauli Iron Pillar inscription of Chandra, Bhitari Stone Pillar inscription of Skandagupta (Study only).

- (c) Post-Gupta inscriptions : Mandasor Stone inscription of Malava Samvat 589, Banskhera Copper-plate of Harshavardhana, Pehowa inscription of Bhojadeva (Study only).

UNIT-III:

- (a) Coins as source of ancient Indian history.
 (b) Study of Punch marked coins.

UNIT-IV:

- (a) Coins of the Kushanas.
 (b) Coins of the Guptas.

Essential Readings :

1. Allan, John : *Catalogue of the Coins of Ancient India*, Trustees of the British Museum, London, 1967
2. Altekar, A.S. : *Coinage of the Gupta Empire*, Numismatic Society of India, Varanasi, 1957.
3. Buhler, G., : *Indian Paleography*, Munshiram Manoharlal, New Delhi, 2004
4. Dani, A.H., : *Indian Paleography*, Munshiram Manoharlal, New Delhi, 1997

Suggested Readings :

1. Gupta, P.L. : *Coins*, rpt. National Book Trust India, New Delhi, 2006.
2. Hultzsh, E. : *Corpus Inscriptionum Indicarum*, Vol. I, rpt., Archaeological Survey of India, Delhi, 1991.

Paper-VIII : SPREAD OF INDIAN CULTURE IN SOUTH-EAST ASIA UPTO 12TH CENTURY A.D.

Total Marks :	100
Theory :	90
Internal Assessment:	10
Time :	3 Hours

Objectives:

This course enlightens the students about the spread of Indian culture in Burma, Indonesia, Cambodia and Champa. In order to teach the students about the elements of Indian Culture, which made its impact felt in those countries, it is, therefore, necessary to discuss the political history, art, architecture and religion of those regions.

Pedagogy of the CourseWork:

The students are taught with the help of slides, photographs and maps. In addition to it, lectures, workshops, seminars, written assignments, class discussions and term papers are essential component of this course.

INSTRUCTIONS FOR THE PAPER-SETTER AND THE CANDIDATES :

The syllabus has been divided into four units.

There shall be 9 questions in all. All questions carry equal marks. The first question shall be short answer type containing 15 short questions spread over the whole syllabus and each to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions. It shall carry 18 marks i.e. 2 marks of each and shall be **compulsory** question. Rest of the paper shall contain 4 units. Each unit shall have **two** questions and the candidates shall be given internal choice i.e. the candidates shall attempt one question from each Unit – 4 in all.

UNIT-I:

- (a) Beginning of Indianisation in Burma.
- (b) Art and Religion of Burma.

UNIT-II:

- (a) Beginning of Indianisation in Indonesia.
- (b) Study of Indo-Javanese Art.

UNIT-III:

- (a) Beginning of Indianisation in Cambodia.
- (b) Art of Cambodia.

UNIT-IV:

- (a) Beginning of Indianisation in Champa.
- (b) Study of Art and Archaeological remains of Champa.

Essential Readings :

1. Chatterji, B.R. : *Indian Cultural Influence in Cambodia*, University of Calcutta, Calcutta, 1933.
2. Coedes, C. : *The Making of South East Asia*, University of California Press, London, 1966
3. Coomaraswamy, A.K. : *History of Indian and Indonesian Art*, Kessinger Publishing, New Delhi, 1972.
4. Harrison, Brian, : *South East Asia, A Short History*, Macmillan Press, New York, 1966 .
5. Majumdar, R.C. : *Hindu Colonies in the Far East*, K.L. Mukhopadhaya, Calcutta, 1944.

Suggested Readings :

1. Majumdar, R.C. : *Suvarnavdipa, Ancient Indian Colonies in the Far East*, Modern Publication Syndicate, 1937.
2. Majumdar, R.C. : *Kambuja-Desa, or An Ancient Hindu Colony in Cambodia*, Lighting Source Incorporated, Madras, 1944.
3. Singhal, D.P. : *India and World Civilization*, Vols. I & II, Michigan State University Press, Calcutta, 1972.

POLICE ADMINISTRATION

SEMESTER V

Semester V: Police Procedures and Investigation-I

(A) Course Objectives:

The course has been designed to impart students knowledge about the procedures followed and investigation done by the police after the incidence of crime. The students will be taught about the crime scene, its importance, inspection of crime scene and its preservation along with the investigation officer and his/ her role. Further the students would be made aware about investigation, interrogation and interview techniques with a focus on witnesses, women and juvenile offenders.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

- i. Internal Test-5%;
- ii. Academic activities (Seminar, Project, Assignment)-3%;
- iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks)

(D) Course Content:

Unit-I

Investigating Officer: Power of observation and its importance in Investigation; and Qualities of investigating officer.

Unit-II

Crime Scene: importance of crime scene; inspection of crime scene; and preservation of crime scene.

Unit-III

Investigation; interrogation; and interviews.

Unit-IV

Examination of witnesses; interrogation of women accused; and interrogation of juvenile offenders.

Essential Readings:

1. Adams, Thomas F. : Police Field Operations, Prentice Hall, New Jersey, 1998.
2. Petraco, Nicholas & Sherman, Hal : Illustrated Guide to Crime Scene Investigation, C.R.C. Press, Taylor & Francis Group Boca Raton, London, 2006.
3. Williams, J.E. Hall : The Role of the Prosecutor, Avebury, Gower Publishing Company, Ltd., England, 1988.
4. Carter, Robert E. : Arson Investigation, Glencoe Publishing Co., California, 978.
5. International Association: Criminal Investigation: Basic Procedures, Bureau of of Chiefs of Police Operations and Research, Maryland, USA 1975.
6. Fuqua, Paul & Wilson, Jerry V. : Security Investigator's Handbook, Gulf Publishing Company, London, 1979.
7. Vadackumchery, James : Professional Police Witness Interviewing, A.P.H. Publishing Corporation, New Delhi, 1999.

Further Readings

1. Singh, S.P. : Combating Bio- terrorism with Special Reference to Anthrax Bacteria, Reliance Publishing House, New Delhi, 2002.
2. Dutta, K.K. : Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.
3. Ghosh, S.K. and Rustamji, K.F. : Encyclopaedia of Police in India, Volume III Ashish Publishing House, New Delhi, 1997.
4. Vadackumchery, James : Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
5. Vadackumchery, James : Police, the Court and Injustice, A.P.H. Publishing Corporation, New Delhi, 1997.
6. Sharma, R : Human Rights and Bail, A.P.H. Publishing Corporation, New Delhi, 2002.

POLICE ADMINISTRATION**SEMESTER VI****Semester VI: Police Procedures and Investigation-II****(A) Course Objectives:**

The objective of this course is to introduce to the students about the use of scientific techniques in the field of investigation. After providing knowledge in death, types of death and bodily changes after death, the students would be imparted information on how to preserve finger prints, footprints, knowledge about handling of physical evidences, along with their packing and forwarding. In addition knowledge about the modern tools of investigation would also be provided.

(B) Pedagogy of the Course Work:

90 per cent of the Course Content would be delivered through Lecture Method and rest 10 per cent would comprise of :

- i. Internal Test-5%;
- ii. Academic activities (Seminar, Project, Assignment)-3%;
- iii. Attendance-2%

(C) Instructions for Paper Setters and Candidates:

- The maximum marks for the paper will be 100. The question paper will be of 90 marks and internal assessment of 10 marks.
- Time allowed will be 3 hours.
- There shall be 9 questions in all.
- The first question shall be compulsory and be short answer type containing 12 short questions spread over the whole syllabus and to be answered in about 25 to 30 words. The candidate is required to attempt any 9 short answer type questions carrying 2 marks (9x2 = 18 marks).
- Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be given internal choice i.e. the candidates shall have two questions and the candidates shall attempt one question from each unit i.e. four questions in all. Each question will carry 18 marks (4x18 = 72 marks).

(D) Course Content:**Unit-I**

Death; Types of death- death due to suffocation hanging, drowning, accident, suicide and murder.
Bodily changes after death.

Unit-II

Preservation of finger prints, footprints, and blood at the scene of crime.

Unit-III

Physical evidence, handling packing and forwarding of physical evidence, and types of opinion to be obtained from physical evidence.

Unit-IV

Photography and its importance in police work; Polygraph; Brain mapping; and Narco Analysis.

Essential Readings:

1. Adams, Thomas F. : Police Field Operations, Prentice Hall, New Jersey, 1998.
2. Petraco, Nicholas & Sherman, Hal : Illustrated Guide to Crime Scene Investigation, C.R.C. Press, Taylor & Francis Group Boca Raton, London, 2006.
3. Williams, J.E. Hall : The Role of the Prosecutor, Avebury, Gower Publishing Company, Ltd., England, 1988.
4. Carter, Robert E. : Arson Investigation, Glencoe Publishing Co., California, 1978.
5. International Association : Criminal Investigation: Basic Procedures, Bureau of of Chiefs of Police Operations and Research, Maryland, USA, 1975.
6. Fuqua, Paul & Wilson, Jerry V. : Security Investigator's Handbook, Gulf Publishing Company, London, 1979.
7. Vadackumchery, James : Professional Police Witness Interviewing, P.H. Publishing Corporation, New Delhi, 1999.

Further Readings

1. Singh, S.P. : Combating Bio- terrorism with Special Reference to Anthrax Bacteria, Reliance Publishing House, New Delhi, 2002.
2. Dutta, K.K. : Some Aspects of Criminal Law, A.P.H. Publishing Corporation, New Delhi, 1998.
3. Ghosh, S.K. and Rustamji, K.F. : Encyclopaedia of Police in India, Volume III Ashish Publishing House, New Delhi, 1997.
4. Vadackumchery, James : Indian Police and Miscarriage of Justice, A.P.H. Publishing Corporation, New Delhi, 1997.
5. Vadackumchery, James : Police, the Court and Injustice, A.P.H. Publishing Corporation, New Delhi, 1997.
6. Sharma, R : Human Rights and Bail, A.P.H. Publishing Corporation, New Delhi, 2002.

MUSIC (VOCAL AND INSTRUMENTAL) SEMESTER-V

General Instructions:-

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4. There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5. Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6. There should not be more than eight students in a batch for practical examination.
7. There would be upto ten students in one section in practical class.

Paper:- (Theory)

Total Marks	: 50
Theory	: 45 Marks
Internal Assessment	: 05 Marks
Time	: 3 Hours

Note: There will be 10 questions in all and a student will attempt five questions choosing at least one from each unit.

UNIT-I

1. Definition with full explanation of the following :-
Sthai, Antra, Krintan, Badhat, Jod-Alap, Lag Daat, Jugalbandi, Layakaries (Adi, Kaudi, Biadi)
2. Establishment of Swaras on strings of Veena.

UNIT-II

1. Definition of Aesthetics in context of Indian Music
2. Rasa Sidhanta of Bharat

UNIT-III

1. Topics of Essay: - (i) Sangeet Sammelan
2. Knowledge of good qualities of a music performer (Vocalist or an Instrumentalist)
3. Elementary Knowledge of Harmonium, Tabla, Veena

UNIT-IV

1. Description of Detailed & Non-detailed Ragas:-
 1. Detailed Raga :-
 - i) Marwa (ii) Madhmad Sarang
 2. Non-detailed Raga: -
 - (i) Sohni (ii) Megh
 3. Talas:- Tivra, Sultal

UNIT-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each

Paper B: Practical (Choice & Viva)

		: 45 Marks
	Internal Assessment	: 05 Marks
	Time	: 45 Minutes
(a) Choice (Solo performance)	:	22.5 Marks
(b) Practical Test	:	22.5 Marks
(i) Tuning	:	5 Marks
(ii) Capacity to play Talas on Tabla	:	2.5 Marks
(iii) Capacity to play Harmonium	:	2.5 Marks
(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

- (a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

- | | | |
|-----------------------|---|-----------|
| (i) A Vilambit Khayal | : | 7.5 marks |
| (ii) A Drut Khayal | : | 5 marks |

OR

- | | | |
|--------------------|---|-----------|
| (i) A Vilambit Gat | : | 7.5 marks |
| (ii) A Drut Gat | : | 5 marks |

- | | |
|---|-----------|
| (b) One Dhamar in Gayaki Anga and /one drut gat in ektal | 2.5 marks |
| (c) Any one of the following:-
Bhav-Geet, Bhajan, Shabad or Dhun | 2.5 marks |

Part-B: (VIVA)

- (a) List of Detailed Ragas:
 (i) Marwa
 (ii) Madhang Sarang
- (b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
 (i) Sohni
 (ii) Megh
- (c) Talas : Tivara, Sultal on Tabla.
 (i) One slow khayal with extempore Alaps and Tanas in any of the detailed Ragas.

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

- (ii) Two fast khayals or two fast gats with elaboration 2.5 marks
 in each of the prescribed Ragas.
- (iii) Ability to recite Tivra, Jhoomra, and Punjabi talas in single .
- (iv) Tuning of your instrument. 2.5 marks
- (v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks
- (vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

- | | | |
|--|---|--|
| 1. Sangeetanjali | : | Pt. Onkar Nath Thakur |
| 2. Abhinav Geetanjali | : | Pt. Ramashray Jha |
| 3. Saras Sangeet | : | Pradeep Kumar Dixit |
| 4. Aakashvani Evam Hindustani
Shastriya Sangeet | : | Dr. Suchishmita |
| 5. Sangeet Visharad | : | Basant |
| 6. Raag Parichay | : | Harish Chandra Srivastav |
| 7. Sangeet swarit | : | Dr. Ramanand Dwivedi |
| 8. Sangeet Prabodhika | : | Dr. Parmanand Bansal
Dr. Gyan Chand |

MUSIC (VOCAL AND INSTRUMENTAL)**SEMESTER-VI****General Instructions:-**

1. In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
2. Harmonium will not be allowed as accompaniment in vocal music, but harmonium can be used while singing Alankars.
3. While sending the syllabus to paper-setter in theory, the syllabus prescribed for the practical paper also to be sent.
4. There will be ten questions in five units. The candidates will be required to attempt any five questions selecting at least one from each unit.
5. Separate Practical paper shall be set for each session from the syllabus prescribed for Practical Paper- B.
6. There should not be more than eight students in a batch for practical examination.
7. There would be upto ten students in one section in practical class.

Paper--Theory

Total Marks	: 50
Theory	: 45 Marks
Internal Assessment	: 05 Marks
Time	: 3 Hours

UNIT – I

1. Definition with full explanation of the following :-
Kalavant, Vaggeykar, Swarsthan Niyam

UNIT-II

1. Essays:- i Role of Music in National Integration
ii Lok Sangeet
iii Music Appreciation

UNIT-III

1. Impact of Western Music on Indian Music
2. Study of Western Instruments:- Guitar, Keyboard, Octopad

1. Detailed study of Dakshini Music System of the following:-

- i Swara
- ii Raga
- iii Tala

UNIT-IV

1. Description of Detailed & Non-detailed Ragas: -

- 1. Detailed Raga: - (i) Patdeep
(ii) Megh Malhar
- 2. Non-detailed Ragas: - (i) Bhimpalasi
(ii) Bahar
- 3. Talas:- Tilwada, Adachautal

Unit -V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each

Paper B: Practical (Choice & Viva)

45 Marks

Internal Assessment : 05 Marks
Time : 45 Minutes

(a) Choice (Solo performance)	:	22.5 Marks
(b) Practical Test	:	22.5 Marks
(i) Tuning	:	5 Marks
(ii) Capacity to play Talas on Tabla	:	2.5 Marks
(iii) Capacity to play Harmonium	:	2.5 Marks
(iv) Viva	:	12.5 Marks

Part-A: (CHOICE OF THE CANDIDATE)

(a) A candidate has to demonstrate in the Raga of his/her choice from the prescribed ragas with detailed elaborations:

- (i) A Vilambit Khayal : 7.5 marks
- (ii) A Drut Khayal : 5 marks

OR

- (i) A Vilambit Gat : 7.5 marks
- (ii) A Drut Gat : 5 marks

- (b) Tarana or one Fast Gat in Ektal 2.5 marks
- (c) Any one of the following:- 2.5 marks
Bhav-Geet, Bhajan, Shabad or Dhun
- (a) Ability to write notation of the Vilambit and Drut Gat of Ragas prescribed in the course:-
Patdeep, Megh Malhar

Part-B: (VIVA)

- (a) List of Detailed Ragas:
(i) Patdeep
(ii) Megh Malhar
- (b) Non-detailed Ragas, description with Aroh, Avroh and pakad in the following Ragas:
(i) Bhimpalasi
(ii) Bahar
- (c) Talas : Tilwada, Adachartala on Tabla.
(i) One slow khayal with extempore Alaps and Tanas in any of the detailed Ragas. 7.5 marks

OR

One slow Gat with extempore Alaps and Toras in any of the detailed Ragas.

- (d) Geet Ghazal
- (ii) Two fast khayals or two fast gats with elaboration 2.5 marks
in each of the prescribed Ragas.
- (iii) Tuning of your instrument. 2.5 marks
- (v) Capacity to play on Tabla the Talas prescribed in the course. 2.5 marks
- (vi) Capacity to play on the Harmonium any raga from the choice. 2.5 marks

Books Recommended:

- | | | |
|-------------------------------|---|-------------------------|
| 1. Bhatkhande Sangeet Shastra | : | Pt. Bhatkhande |
| 2. Abhinav Geetanjali | : | Pt. Ramashray Jth |
| 3. Sangeetanjali | : | Pt. Onkar Nath Thakur |
| 4. Raag Parichay | : | Harishchandra Srivastav |
| 5. Sangeet Visharad | : | Basant |
| 6. Sawars Sangeet | : | Pradeep Kumar Dixit |
| 7. Sangeet Swarit | : | Dr. Ramanand Dwivedi |
| 8. Sangeet Prabodhika | : | Dr. Parmanand Bansal |
| | | Dr. Gyan Chand |
| 9. Art Education | : | Janardan Prasad |

HOME SCIENCE

The syllabus of Home Science for B.A./B.Sc. (Honours) Third year (SEMESTER SYSTEM) has been **KEPT IN ABEYANCE**.

PHYSICS

B.Sc. (HONOURS) THIRD YEAR (5th and 6th Semester) EXAMINATION, 2019-2020

SEMESTER-V

Paper V: Physics of Semiconductors

Unit I

Crystal Properties and Growth of Semiconductors: Semiconductor materials, Crystal lattices, Ge and Si crystal structure, production of electronic grade Si, Bulk crystal growth, Epitaxial growth.

Bonding forces and energy bands in solids, Metals, semiconductors and insulators, Direct and Indirect semiconductors, intrinsic and extrinsic semiconductors, compensation, Electrons and holes, effective mass, Fermi level, Conductivity and mobility, temperature dependence of Carrier concentration, effect of temperature, doping and field on mobility, Hall effect, Invariance of Fermi level at equilibrium.

Excess carriers in semiconductors: Optical absorption, Photoluminescence, Electroluminescence, Carrier lifetime and photoconductivity, photoconductive devices.

Unit II

Diffusion and drift of carriers: Einstein relation, built-in fields in semiconductors with different doping profiles, energy band diagrams. Steady state carrier injection, diffusion length, Haynes-Shockley experiment (qualitative discussion).

pn junction energy band diagrams, forward and reverse-biased junction, calculation of contact potential and depletion width in abrupt junction, diffusion and drift currents, Reverse-bias breakdown, Zener and Avalanche diode. Diffusion and depletion capacitance of pn junction, varactors.

Metal-semiconductor contacts, energy band diagrams of ohmic and rectifying contacts, Schottky diodes.

Recommended Books:

1. Solid State Electronic Devices: Ben Streetman, Sanjay Banerjee (Prentice Hall India, 2005).

Paper VI: Computational Physics

Note : The Computational Physics paper will consist of two parts (a) written examination of one hour duration and (b) Practical examination of two hours duration. Both the parts carry equal marks.

Unit I

C Programming Language

Types of Computer Systems and Operating Systems.

Introduction to Programming : Algorithms, Structured Programming. Basic idea of Compilers.

Data and Statements : Data Types. Constants and Variables. Mathematical, Relational, Logical and Bitwise Operators. Expressions and Statements. Block, Local and Global variables. Auto, Static and External Variables.

I/O Statements : printf, scanf,getc, getch, getchar, getche, etc.

Manipulators for Data Formatting: setw, width, endl and setprecision etc. ASCII Files I/O.

Preprocessor : #include and #define directives.

Control Statements :- If-statement. If-else Statement. Nested if Structure. Else-if Statement.

Ternary Operator. Goto Statement. Switch Statement. Unconditional and Conditional

Looping. While Loop. Do-while Loop. For Loop. Break and Continue Statements. Nested Loops.

Arrays and Structures :- One and Two Dimensional Arrays. Idea of Structures, Strings and Pointers

Functions : Standard Library Functions and User-defined Functions.

Functions returning Values. Function Prototypes. Function Call by Value and by Reference.

Recursion.

Unit II

Design of algorithm and computer programs based on the numerical techniques read in Paper III “Statistics and Numerical Techniques”.

Programs : (a) Data handling: find standard deviation, mean, variance, moments etc., (b) the least squared fitted curve for a data set, (c) roots of quadratic equations, (d) first order derivative at given x for a data set using Lagrange interpolation, (e) numerical integration on 1-D function using Simpson methods, (f) solving a differential equation using Euler/Runge-Kutta method, (g) Sum, Difference and Product of Matrices, (h) determinant of a matrix - its eigenvalues and eigenvectors.(h)Plotting and evaluation of mathematical functions.

Recommended Books:

1. Schaum's Outline of Programming with C, Byron Gottfried, McGraw-Hill.
2. Computer Programming in C, V. Rajaraman (Prentice Hall of India Pvt. Ltd.) (2006)
3. Computer Applications in Physics: S. Chandra (Narosa) (2008).
4. Computational Physics: R.C.Verma, P.K. Ahluwalia and K.C. Sharma (New Age) (2005).

PHYSICS SEMESTER-VI

Paper VII: Nuclear Radiations and Detection

Unit I

Radiation Sources:

Radioactive decays: Alpha decay, β^- , β^+ and EC decays, Radioactivity units, gamma rays, Internal conversion, X-rays, Auger electron, Bremsstrahlung, Annihilation radiation.

Neutron sources- fission, radioisotope based sources and photoneutron sources, Accelerator based sources.

Radiation Interactions : Interaction of light and heavy Charged Particles, Stopping power, energy and range straggling.

Interaction of Fast Electrons - ionisation and radiative loss, backscattering.

Interaction of Gamma rays, photoelectric absorption, Compton scattering and pair production. Attenuation coefficient.

Interaction of Neutrons, Slowing down power, thermal neutrons.

Sources of Background: Natural radioactivity, Air borne radioactivity, Primary and secondary Cosmic rays.

Unit II

General Properties of Radiation Detectors: Modes of detector operation, Current mode, pulse mode, Pulse Height Spectra, Energy Resolution, Detection Efficiency, Dead Time-paralyzable and non-paralyzable models.

Radiation Detectors:

Ionization process in gases, Ion pair formation, fano factor, diffusion, charge transfer and recombination, Charge Migration and Collection.

Gas-filled detectors: Gas Multiplication, avalanche formation, Regions of detector operation.

Proportional Counters, fill gases and choice of geometry.

Geiger-Mueller counter, Fill Gases and Quenching mechanism, Recovery time and dead time, detection of charged particles, gamma and neutrons rays with G.M. counter.

Scintillation Detectors : Organic and Inorganic Scintillators; Characteristics and parameters associated with Gamma ray spectrum

Semiconductor detectors.

Detection of slow and fast neutrons by neutron-induced reactions.

Recommended Books:

1. Radiation detection and measurement: G.F. Knoll (Wiley, New York) (2000).

Paper VIII: Physics Practical

Note : The students are expected to perform any 6 experiments taking at least 3 from each section.

Unit I

1. Measurement of vacuum using the pirani/thermocouple gauge made using electric bulb filament.
2. To study Poisson and Gaussian distributions using a GM Counter.
3. To study absorption of gamma rays in Pb and Fe absorbers.
4. Strength of Alpha source using Solid state nuclear track detector.
5. To study regulated power supply and voltage multiplier circuits (using breadboard).

Unit II

6. To design an Astable multivibrator of given specifications using 555 Timer IC.
7. To design a monostable multivibrator of given specifications using 555 Timer IC and to measure the pulse-width of its output.
8. To study logic gates and clocked JK Master-Slave flip flops using IC's.
9. Study of photon intensity variation through crossed polaroids and diffraction spectrum from diffraction grating using LDR/Photodiode.
10. To measure resistivity of semiconductor at different temperatures using four probe method and the deduce band gap of the semiconductor.

CHEMISTRY**B.Sc. (HONOURS) THIRD YEAR (SEMESTER SYSTEM) EXAMINATION, 2019****SEMESTER- V****Outlines of Tests**

	<i>Lecture Hours</i>	<i>Marks</i>	
		<i>Theory</i>	<i>Internal Assessment</i>
Paper V : Inorganic Chemistry-A	20	45	05
Paper VI : Physical Chemistry-A	20	45	05

Paper V: INORGANIC CHEMISTRY-A

Total Marks	: 50
Theory	: 45
Internal Assessment	: 5
Total Lectures	: 20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I**Inorganic Chains:**

(5 lectures)

(a) Chains : Catenation including heterocatenation, silicate minerals, intercalation, One dimensional sulphur-nitrogen conductor.

Unit II**Inorganic Rings and Cages :**

(5 lectures)

(a) Rings : Borazines, phosphazenes and phosphazene polymers.

(b) Cages : Simple cage molecules; Phosphorus-oxygen and phosphorus-sulphur cages; introduction to carboranes and metallocarboranes

Unit III**Organometallics-I :**

(5 lectures)

Formation and reactions (i) carbonylate ions (ii) metal-carbonyl hydrides & (iii) metal carbonyl halides.

Unit IV**Organometallics-II :**

(5 lectures)

Transition metal-carbon multiple bonds : Chemistry of :
Alkylidene Complexes.
Alkylidyne complexes including bridged molecules.
Metallocumulenes.

Instructions for paper setters and candidates:

- i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
- ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
- iii. All questions carry equal marks.*

Suggested Books:

1. Cotton, F.A., G. Wilkinson, Advanced Inorganic Chemistry; 6th edition Pubs: John Wiley & Sons, 1999.
2. Basolo, F., Pearson, R.G., Inorganic Reactions; Reprint 2nd edition, Pubs: Wiley-Eastern, 1977.
3. Greenwood, N.N., Earnshaw, A., Chemistry of Elements; 1st edition, Pubs: Pergamon Press, 1984.
4. Hoyer, J.E., Keiter, E.A., Keiter, R.L., Inorganic Chemistry-Principles of Structure and Reactivity; 4th edition, Pubs: Pearson Education India, 1993.

Paper VI: PHYSICAL CHEMISTRY-A

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I**Transport Properties-I :**

(5 Lectures)

Recapitulation of Collision Properties of gases such as collision cross section, collision diameter, collision number, collision frequency and mean free path.

Meaning of transport, Properties of gases, Flux, General equation of transport. Thermal conductivity, kinetic theory of thermal conductivity (derivation of the expression).

Unit-II**Transport Properties-II :**

(5 Lectures)

Viscosity of gases, kinetic theory of gas viscosity, (derivation of the expression). Measurement of gas viscosity, Diffusion Coefficient. Kinetic theory of diffusion in gases. (derivation of the expression).

Diffusion in liquids, theory of diffusion in liquids, diffusion in solutions, laws of diffusion.

Unit-III**Dynamic Electro-Chemistry :**

(5 Lectures)

Processes at electrodes. The electric double layer (Gouy-Chapman, Helmholtz and Stern models-qualitative ideas. The potential difference, Rate of charge transfer, Butler Volmer equation, Tafel plot, Overpotential Polarisation, Polarography, Fuel cells, Corrosion, Inhibition of Corrosion.

Unit-IV**Surface Chemistry :**

(5 Lectures)

Interfacial region, types of interfaces, surface tension, thermodynamics of surfaces, plane interface, curved surfaces, Laplace and Kelvin equations including their derivation.

Gibbs Adsorption Equation and its Thermodynamic derivation, Wetting and adhesion in solid-liquid systems, contact angle, Capillary rise and surface tension. Surface Films on liquids.

Instructions for paper setters and candidates:

- i. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
- ii. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
- iii. All questions carry equal marks.*

Suggested Books:

1. Atkins, P.W., Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
 2. Levine, I.N., Physical Chemistry, 3rd edition, Pubs: Prentice Hall International Inc., 2000.
 3. Pruton, Maron, Principles of Physical Chemistry; 4th edition, Pubs: Oxford & IBH Publishing Co. Pvt. Ltd., 1972.
 4. Chandra, A.K., Introductory Quantum Chemistry; 4th edition, Pubs: Tata McGraw-Hill Publishing Company Ltd.
 5. Moore, W.J., Basic Physical Chemistry; 1st edition, Pubs: Prentice-Hall of India Pvt. Ltd., 1986.
 6. Albert, R.A., Physical Chemistry; 1st edition, Pubs: John-Wiley & Sons, 1992.
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CHEMISTRY**SEMESTER VI****Outlines of Tests**

	<i>Lecture Hours</i>	<i>Marks</i>	
		<i>Theory</i>	<i>Internal Assessment</i>
PaperVII : Inorganic Chemistry -B	20	45	05
PaperVIII : Physical Chemistry -B	20	45	05

Paper VII: INORGANIC CHEMISTRY-B

Total Marks : 50

Theory : 45

Internal Assessment : 5

Total Lectures : 20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

(5lectures)

Complexes of aromatic systems with transition metals. M.O. description of bonding in Ferrocene.

Study of coordinative unsaturation, oxidative addition,

Unit-II

(5 Lectures)

Insertion reactions in Organometallics.

Phenomenon of Fluxionality in Organometallics and its characterization.

Unit-III**Reaction Mechanism :**

(5 lectures)

Nature and classification of ligand substitution reactions, application of V.B. & C.F. theories to predict the substitution reactions. Mechanism of ligand replacement reactions, substitution in octahedral complexes acid hydrolysis, base hydrolysis, acid-catalysed, acid hydrolysis and acid hydrolysis for chelates.

Unit-IV

(5 lectures)

Substitution in square planar complexes. The trans-effect & its Synthetic applications, M.O. theories and trans-effects. Electron transfer reactions & their mechanism. Molecular rearrangements, mechanistic pathways of substitution.

Instructions for paper setters and candidates:

- iv. *Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.*
- v. *The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.*
- vi. *All questions carry equal marks.*

Suggested Books:

5. Cotton, F.A., G. Wilkinson, Advanced Inorganic Chemistry; 6th edition Pubs: John Wiley & Sons, 1999.
6. Basolo, F., Pearson, R.G., Inorganic Reactions; Reprint 2nd edition, Pubs: Wiley-Eastern, 1977.
7. Greenwood, N.N., Earnshaw, A., Chemistry of Elements; 1st edition, Pubs: Pergamon Press, 1984.
8. Hoyer, J.E., Keiter, E.A., Keiter, R.L., Inorganic Chemistry-Principles of Structure and Reactivity; 4th edition, Pubs: Pearson Education India, 1993.

Paper VIII: PHYSICAL CHEMISTRY-B

Total Marks	:	50
Theory	:	45
Internal Assessment	:	5
Total Lectures	:	20

OBJECTIVE OF THE COURSE

To teach the fundamental concept of Chemistry and their applications. The syllabus pertaining to B.Sc. (HONOURS) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills

Unit-I

Colloids-I : (5 Lectures)

The colloidal state; preparation of colloidal solutions, Methods of purification of colloidal systems, dialysis, electro-dialysis, filtration, Ultra-filtration. Classification of colloidal systems, their typical properties with special reference to optical properties (Tyndall effect).

Unit-II

Colloids-II : (5 Lectures)

The Brownian movement. Electrokinetic phenomena, Stabilization of colloidal systems and theories of stability; zeta potential, Coagulation, Flocculation of colloids by electrolytes and its mechanism. Association Colloids, Micellar system, Emulsions and their types, HLB value of emulsifiers, Introduction to microemulsions.

Unit-III

Quantum Chemistry-I :

(5 Lectures)

ATOMS : Schrodinger equation for multi-electron atoms, Need for approximate Solutions. Basic ideas of the Variation theorem and the Perturbation methods. Self-Consistent Field methods (Hertree and Hertree-Fock)- Elementary treatment only. Indistinguishability of Electrons. Pauli exclusion principle, two electron spin functions; Slater determinants and Pauli principle. New Atomic term symbols. Spin-orbit coupling (Total orbital momentum, multiplicity, total angular momentum) vector model of atom, Hund's rules, atomic spectra and Selection rules.

Unit-IV

Quantum Chemistry-II :

(5 Lectures)

Molecules :

Schrodinger equation for molecules, Born-Oppenheimer approximation. Valence bond theory and Molecular Orbital theory as two approaches for approximate solution of Schrodinger equation LCAO-MO treatments of H₂ and Valence bond treatment of H₂ (complete solutions not required. Only wave functions to be discussed) Comparison of MO and VB treatments. Brief Introduction to the electronic structure for polyatomic molecules. Metals, Insulators and Semiconductors. Band Theory of Solids (elementary discussion).

Instructions for paper setters and candidates:

- iv. Examiner will set total of NINE questions comprising TWO questions from each unit and ONE compulsory question of short answer type covering whole syllabi.
- v. The students are required to attempt FIVE questions in all, ONE question from each unit and the Compulsory question.
- vi. All questions carry equal marks.

Suggested Books:

7. Atkins, P.W., Physical Chemistry; 8th edition, Pubs: Oxford University Press, 2008.
8. Levine, I.N., Physical Chemistry, 3rd edition, Pubs: Prentice Hall International Inc., 2000.
9. Pruton, Maron, Principles of Physical Chemistry; 4th edition, Pubs: Oxford & IBH Publishing Co. Pvt. Ltd., 1972.
10. Chandra, A.K., Introductory Quantum Chemistry; 4th edition, Pubs: Tata McGraw-Hill Publishing Company Ltd.
11. Moore, W.J., Basic Physical Chemistry; 1st edition, Pubs: Prentice-Hall of India Pvt. Ltd., 1986.
12. Albert, R.A., Physical Chemistry; 1st edition, Pubs: John-Wiley & Sons, 1992.

BOTANY**B.Sc. (Honours) Botany Fifth and Sixth Semester Syllabus****(Examination 2019-2020)**

Fifth Semester		Time	Theory	Int Assess.	Max Marks
Theory Paper- A:	Biology of Cryptogams and Seed Plants	3 hrs.	36	4	40
Theory Paper-B:	Genetics, Plant Breeding, Biochemistry, Molecular Biology and Biotechnology	3 hrs	36	4	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs	18	2	20
Sixth Semester					
Theory Paper- A:	Microbiology and Plant Pathology	3 hrs.	36	4	40
Theory Paper-B:	Systematics of Angiosperms and Environmental Biology	3 hrs	36	4	40
One practical pertaining to entire syllabus included in both theory papers		3 hrs.	18	2	20
Total					200

Note:

- The number of teaching hours for theory and practical per semester shall be 60 hrs. and 100 hrs. respectively.
- There will be a two theory papers (A & B) in each semester. Each paper will consist of 9 questions. Question No. 1 will be compulsory and will consist of 8 parts (one mark each) comprising 4 MCQ and the rest 4 parts will be of fill-in the blanks covering the entire syllabus in both the theory papers A & B. The remaining 8 questions in papers A & B shall include two questions from each unit. Candidates shall be required to attempt one question from each Unit. Question No. 1 will carry 8 marks and the rest of 8 questions will be of 7 marks each.

BOTANY**B.Sc. (Honours) Fifth Semester (Examination December, 2019)****PAPER-A: BIOLOGY OF CRYPTOGAMS AND SEED PLANTS**

Max. Marks	: 40
Theory	: 36
Internal Assessment	: 04

Objective : The basic objective of this paper is to make the students understand the diversity in various life forms of plant kingdom. It provides knowledge about evolution of simpler forms to complex ones along with their morphology, anatomy and reproduction.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I**BIOLOGY OF CRYPTOGAMS**

Algae: Occurrence and distribution; thallus organization and evolutionary tendencies; ultrastructure of algal cell; criteria for classification, structure and life history of *Oedogonium* (Chlorophyceae), *Vaucheria* (Xanthophyceae), *Ectocarpus* (phaeophyceae), *Batrachospermum* (Rhodophyceae) and economic importance of algae.

Fungi: Occurrence and distribution; ultrastructure of fungal cell, cell wall composition, modern concepts in the classification of fungi; nutrition, reproduction, structure and life history of *Rhizopus* (Zygomycetes), *Peziza*, *Saccharomyces* (Ascomycetes), *Alternaria* (Deuteromycetes), *Agaricus* (Basidiomycetes); types of fungal spores and mode of their liberation and economic importance of fungi.

UNIT-II

Bryophytes: Comparative account of morphology, anatomy and reproduction in *Riccia*, *Marchantia*, *Anthoceros*, *Funaria*; evolution of sporophyte and gametophyte; classification, ecological aspects and economic importance.

Pteridophytes: The primary vascular plants; classification, comparative account of morphology, anatomy and reproduction in *Rhynia*, *Lycopodium*, *Selaginella*, *Equisetum*, *Marsilea*, *Pteris*; Telome theory; stellar evolution; heterospory and seed habit.

UNIT-III SEED PLANTS

Phanerogams, the seed bearing plants: General characteristics and types.

The Living Cycads: Distribution; vegetative organography and anatomy; reproductive cycle –sporophytes and sporangia, gametophytes, fertilization, embryogeny and seed development of *Cycas*.

The Coniferales: General organography and anatomy; foliage leaves; strobilli and sporangia; reproductive cycle– sporogenesis, gametophytes, fertilization, embryogeny and seed development of *Pinus*.

The Gnetales: Habit and distribution; vegetative organography and anatomy; reproductive cycle – the strobilli, sporogenesis, male and female gametophytes, pollination, fertilization and embryogeny of *Ephedra*.

UNIT-IV

Alternatives for Reproduction: Vegetative and sexual reproduction.

Flower: Evolution, concept of flower as a modified determinate shoot and functions of flower.

Structure of Anther : Microsporogenesis: formation of pollen grains (male gametophyte); pollen germination; pollen tube growth.

Structure of Pistil: Ovules; megasporogenesis; development of embryo sac (female gametophyte).

Mechanisms and Agencies of Pollination: Pollen-stigma interaction; self-incompatibility; double fertilization, apomixis.

Seed and Fruit: Development of endosperm and embryo in monocotyledons and dicotyledons; storage of reserve materials and desiccation in seeds; dormancy and seed germination; fruit maturation; ripening and dispersal.

Suggested Readings

1. Bhojwani, S.S. and Bhatnagar, S.P. The Embryology of Angiosperms, 4th revised and enlarged edition. Vikas Publishing House, Delhi, India, 2000.
2. Bold, H.C., Alexopoulos, C.J. and Delevoryas, T. Morphology of Plant and Fungi (4th Edition), Harper and Foul Co., New York, 1980.
3. Cronquist, A. The evolution and classification of flowering plants, Thomas Nelson (Printers) Ltd., London and Edinburgh, 1968.
4. Delevoryas, Th. Plant Diversification, Modern Biology Series. Halt, Rinehart and Winston, New York, 1965.
5. Dhand, Neelam. Systematics of Spermatophyta, Trueman Book Company, Jalandhar, India, 2006.
6. Dube, H.C. An Introduction to Fungi, Vikas Publishing House Pvt. Ltd., Delhi, India, 1990.
7. Foster, A.S. and Gifford, A.E.M., Jr. The Comparative Morphology of Vascular Plants, Vakils, Peffer and Simons Pvt. Ltd, 1967.
8. Gifford, E.M. and Foster, A.S. Morphology and Evolution of Vascular Plants, W.H. Freeman & Co., New York, 1989.

9. Gilbert, M.S. Cryptogamic Botany, Vol. I & II (2nd Edition), Tata McGraw Hill Publishing Co. Ltd., New Delhi, India, 1985.
10. Johri, B.M. Embryology of Angiosperms, Springer-Verlag, Berlin, 1984.
11. Kumar, H.D. Introductory Phycology, Affiliated East-West Press Ltd., New York, 1988.
12. Puri, P. Bryophytes, Atmaram & Sons, Delhi, India, 1985.
13. Raghavan, V. Molecular Embryology of Flowering Plants, Cambridge University Press, New York, 1997.
14. Rangaswamy, G. and Mahadevan, A. Diseases of Crop Plants in India, Prentice Hall India Pvt. Ltd. New Delhi, India, 1999.
15. Singh, V, Pande, P.C. and Jain, D.K. Diversity of Microbes and Cryptogams, Rastogi Publications, Meerut, India, 2008.
16. Sporne, K.R. The Morphology of Angiosperms. B.I. Publication, Bombay, India, 1977.
17. Srivastava, H.N. Diversity of Microbes & Cryptogams, Vol. I, Pradeep Publications, Jalandhar, India, 2014.
18. Srivastava, H.N. Diversity of Seed Plants and Their Systematics, Vol.III, Pradeep Publications, Jalandhar, India, 2014.
19. Wilson, N.S. and Rothwell, G.W. Palaeobotany and the Evolution of Plants (2nd Edition), Cambridge University Press, UK, 1993.

Suggested Laboratory Exercises (Biology of Cryptogams)

1. Comparative study of algal genera with reference to the classes mentioned in theory.
2. Comparative study of fungal genera with reference to the classes mentioned in theory.
3. Comparative study of morphology, anatomy and reproductive structures in *Riccia*, *Marchantia*, *Anthoceros* and *Funaria*.
4. Comparative study of different members of Pteridophytes mentioned in the theory syllabus.
5. Comparative anatomical structure of stem/wood of Cycadales, Coniferales, Ephedrales, Gnetales and angiosperms, from sections and macerations.
6. Comparative structure of the male and female cones of Cycads (*Cycas*), Conifers (*Pinus*) and Ephedrales (*Ephedra*).
7. Comparative structure of leaf, leaf appendages, venation and stomata of gymnosperms and angiosperms.
8. Diversity in pollen grain structure among Cycads, Conifers, Ephedrales and angiosperms with respect to size, exine sculpturing, germ spore number, number of constituent cells and any other features.
9. Microsporogenesis and male gametophyte development in angiosperms through microtome sectioning and acetocarmine squash technique.
10. Pollen grain germination by hanging-drop and sitting-drop techniques in *Impatiens*, *Catharanthus roseus* (= *Vinca rosea*) or any other suitable material.
11. Diversity in the structure of stigma, style, stigmatic papillae and transmitting tissue of style.

BOTANY**SEMESTER – V****PAPER-B: GENETICS AND PLANT BREEDING, BIOCHEMISTRY, MOLECULAR BIOLOGY AND BIOTECHNOLOGY**

Objective: The course work of this paper deals with basic concepts of genetics, plant breeding, molecular biology and biotechnology. It deals with various types of plant reproduction and methods of plant improvement. It provides knowledge of molecular and cellular basis that would enable the students to understand the hereditary and evolutionary trends in plants kingdom.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

**UNIT-I
GENETICS**

Cell division - Mitosis and Meiosis.

Mendel's Experiments and Principles of Inheritance: Backcross and test cross; gene interactions and modified dihybrid ratios – complementary, supplementary, duplicate and epistatic factors.

Quantitative Genetics: Quantitative traits and quantitative genetics; the multiple factor hypothesis; descriptive statistics.

Linkage and Recombination: Coupling and repulsion phases; two and three point testcrosses with their significance in chromosome mapping; interference and co-efficient of coincidence.

Maternal Influence on Inheritance: Shell coiling in snails and Kappa particles in Paramecium; cytoplasmic inheritance in yeast (mitochondria) and *Mirabilis jalapa* (plastids).

Changes in Chromosome Structure: Origin, types and effects of duplications, deletions, inversions and translocations; meiosis in structural heterozygotes.

UNIT –II

PLANT BREEDING

Methods of Plant Improvement: Pure line and mass selection; hybridization in self and cross pollinated crops; introduction and acclimatization; hybrid vigour.

Alterations in the Genetic makeup – changes at Genetic Level: Spontaneous and induced mutations; mutagens – types and mode of action; transitions, Transversions and frame-shift mutations; detection of mutations.

Alterations in Genetic makeup – changes in Chromosome Number : Origin, types and effects of auto and allopolyploidy; origin and meiosis in nullisomics, monosomics and trisomics.

Mutations and polyploidy as methods of plant improvement.

UNIT-III

BIOCHEMISTRY AND MOLECULAR BIOLOGY

Nucleic Acids: Composition of nucleic acids and synthesis of nucleotides; DNA structure; A,B and Z forms of DNA; denaturation and renaturation of DNA; chromatin structure; DNA replication and recombination; DNA polymerases; different forms of RNA and their role.

Amino Acid and Protein Metabolism: Structure, characteristics and classification of amino acids; protein and non-protein amino acids; amino acid biosynthesis; GS/GOGAT cycle; transamination; peptide bond and polypeptide chain; primary, secondary, tertiary and quaternary structure of proteins; protein biosynthesis and its regulation; post-translational modification of proteins; protein targeting; protein degradation.

Carbohydrate Metabolism: Classification; structure of some representatives examples of monosaccharides, disaccharides, polysaccharides; stereoisomers, enantiomers and epimers; biosynthesis and degradation of sucrose and starch.

Lipid Metabolism: Saturated and unsaturated fatty acids; fatty acid biosynthesis; oxidation of fatty acids; storage and mobilization of fatty acids and lipids.

UNIT-IV

BIOTECHNOLOGY

Gene Structure, Expression and Regulation: Gene organization in prokaryotes and eukaryotes; operon concept; gene regulation in prokaryotes and eukaryotes; inducible, repressible, positive and negative gene regulation; interrupted genes in eukaryotes; RNA splicing; mRNA stability.

Recombinant DNA Technology: Restriction endonucleases: prokaryotic and eukaryotic cloning vectors; genomic and cDNA libraries; southern and northern analysis; various techniques of gene mapping and DNA fingerprinting (RFLP, RAPD, AFLP); chromosome walking; polymerase chain reaction; DNA sequencing.

Plant Biotechnology: Cellular differentiation and totipotency; organogenesis and embryogenesis; protoplast isolation and culture; somatic hybridization; clonal propagation; genetic engineering of plants; vectors for gene delivery; selectable markers and reporter genes; methods of gene delivery; *Agrobacterium* – the natural genetic engineer; salient achievements in crop biotechnology (with suitable examples) and prospects.

Suggested Readings:

1. Alberts, B., Bray, D., Lewis, J., Raff, M., Roberts, K. and Watson, J.D. *Molecular Biology of Cell*, Garland Publishing Co., Inc., New York, USA, 1999.
2. Atherly, A.G., Girton, J.R. and McDonald. *The Science of Genetics*, Saunders College Publishing Co., Fort Worth, USA, 1999.
3. Bhatia, K.N. and Dhand, Neelam. *Cell Biology and Genetics*, Trueman Book Company, Jalandhar, India, 2013
4. Buchanan, B.B., Gruissem, W. and Jones, R.L. *Biochemistry and Molecular Biology of Plants*, American Society of Plant Physiologists, Maryland, USA, 2000.
5. Dennis, D.T., Turpin, D.H., Lefebvre, D.D. and Layzell, D.B. (eds). *Plant Metabolism* (2nd Edition), Longman, Essex, England, 1997.
6. Gardener, J., Simmons, H.J. and Snustad, D.P. *Principles of Genetics* (8th Edition), John Wiley & Sons, New York, 1991.
7. Gupta, P.K. *Cytogenetics*, Rastogi Publications. Shivaji Road, Meerut, India, 1995.
8. Gupta, P.K. *Cytology, Genetics and Molecular Biology*, Rastogi Publications. Shivaji Road, Meerut, India, 2009.
9. Gupta, P.K. *Genetics*, Rastogi Publications. Shivaji Road, Meerut, India, 1994.
10. Hartl, D.L. and Jones, E.W. *Genetics: Principles and Analysis* (4th Edition), Jones & Bartlett Publishers. Massachusetts, USA, 1998.
11. Lea, P.J. and Leegood, R.C. *Plant Biochemistry and Molecular Biology* (2nd Edition), John Wiley and Sons, Chichester, England, 1999.
12. Lodish, H., Berk, A., Zipursky, S.L., Matsudaira, P., Baltimore, D. and Darnell, J. *Molecular Cell Biology* (4th Edition), W.H. Freeman and Co., New York, U.S.A, 2000.
13. Old, R.W. and Primrose, S.B. *Principles of Gene Manipulation*, Blackwell Scientific Publications, Oxford, UK, 1989.
14. Poehlmann, J.M. and Sleeper, D.R. *Breeding Field Crops*, Panima Publishing House, New Delhi, India, 1995.
15. Russel, P.J. *Genetics* (5th Edition), The Benjamin/Cummings Publishing Co., Inc., USA, 1998.
16. Sharma, J.R. *Principles and Practice of Plant Breeding*, Tata McGraw Hill Publishing Co. Ltd., New Delhi, India, 1994.
17. Simmonds, N.W. *Principles of Crop Improvement*, Longman, London and New York, 1979.
18. Snustad, D.P. and Simmons, M.J. *Principles of Genetics* (2nd Edition), John Wiley & Sons, Inc., USA, 2000.
19. Srivastava, H.N. *Cell Biology and Genetics*, Vol.II, Pradeep Publications, Jalandhar, India, 2006.
20. Srivastava, H.N. *Plant Physiology, Biochemistry and Biotechnology*, Vol.V, Pradeep Publications, Jalandhar, India, 2013.
21. Verma, P.S. and Agarwal, V.K. *Cell Biology, Genetics, Molecular Biology, Evolution and Ecology*. S. Chand & Company (Reprint, 2010).

Suggested Laboratory Exercises:

1. Determination of chromosome count from dividing pollen mother cells and root tips.
2. Preparation of karyotypes from dividing root tip cells and pollen grains.
3. Determination of intraspecific variation in chromosome number from locally available taxa.
4. Correlation of floral structure with pollination system (e.g. *Salvia*, *Sesamum*, pea, *Lathyrus*, wheat, rice, maize).
5. Field exploration for detection of male sterile plants and estimation of their pollen fertility in locally grown crop plants e.g. *Sorghum*, tomato and *Linum*.
6. Estimation of pollen ovule ratio and its bearing on pollination system.
7. Emasculation and bagging of flowers of Brassicaceae, Poaceae, Papilionaceae, Malvaceae and Linaceae, pollinating them manually and estimating fruit and seed set.
8. Chemical tests to demonstrate the presence of starch, sugar, fat and protein in plant material.
9. To identify the amino acids in a mixture by resolving through paper chromatography or TLC.
10. To prepare the standard curve for protein and determine the protein content in unknown samples by Biuret method.
11. Colorimetric estimation of RNA using orcinol.
12. Colorimetric estimation of DNA using diphenyl amine.
13. Isolation of plant genomic DNA and its spooling.
14. Isolation of total RNA from plant tissue and its colorimetric estimation.
15. Preparation of tissue culture media, sterilization and inoculation of plant material.
16. Demonstration of techniques of in vitro culture of various explants.
17. Isolation of plant protoplasts (e.g. Tobacco, *Petunia*) using enzymes available commercially and estimation of their yield.

Note: In the practical classes, emphasis should be given on basic principles of spectro-photometry, chromatography, electrophoresis and rDNA technology and related fundamentals.

Guidelines for Botany Practical Examination:

Max Marks	:	20
Practical	:	18
Int. Assessment	:	2
Time	:	3 hrs.

- | | |
|--|---|
| Q.1 Identify classify & write illustrated morphological note on specimens A & B (unit I – III of paper A) | 4 |
| Q.2 Demonstrate and perform the experiment C (Biochemistry/Biotechnology) and show it to the examiner. | 5 |
| Q.3. Identify slides D & E giving at least two reasons for each. | 4 |
| Q.4 Practical note book | 2 |
| Q.5 Viva-Voce | 3 |

BOTANY

B.Sc. (Honours) Sixth Semester (Examination May, 2020)

PAPER-A: MICROBIOLOGY AND PLANT PATHOLOGY

Objectives: The basic objective of this paper is to make students familiar with the systematic position of microorganisms, their ultrastructure, classification and industrial application. It also deals with the important aspects of plant diseases, their pathogens and disease management.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I (MICROBIOLOGY)

General account of Microorganisms and their characteristics features.

Ultrastructure of Microorganisms: Prokaryotic microorganisms; fine structure of prokaryotic cell; eukaryotic microorganisms; viruses – properties and classification; characteristic features of host-virus interaction; bacteriophage T4; tobacco mosaic virus; general account of mycoplasma and actinomycetes.

Industrial Application of Microorganisms: Organic acids, alcohol, food processing, milk products, antibiotics and biopesticides.

UNIT-II

Genetic Recombination in Prokaryotes: Conjugation, transformation and transduction.

Role of Microorganisms in biogeochemical cycling of nitrogen and carbon; Biological N₂ fixation.

UNIT-III (PLANT PATHOLOGY)

Major Diseases of Plants, their symptoms and Control : Blast and brown spot of rice, rust and smuts of wheat, downy mildew and green ear disease of bajra, white rust of crucifers, late blight of potato, wilt of pigeon pea, damping off seedlings of tomato/mustard/chillies, Tikka or leaf spot of groundnut, citrus die back, powdery mildews of cucurbits and grapes, red rot of sugarcane.

Plant Disease Management: Chemical, biological; IPM systems; development of transgenics; biopesticides; plant disease clinics.

UNIT-IV

Pathogen Attack and Defense Mechanisms: Physical, physiological, biochemical and molecular aspects.

Plant Disease Epidemiology: Transmission and spread of plant pathogens; disease cycles, epidemics; modeling and disease forecasting.

Suggested Readings:

1. Agrios, G.N. Plant Pathology, Academic Press, London, 1997.
2. Albajes, R. Gullino, M.L., Van Lenteren, J.C. and Elad, Y. Integrated Pest and Disease Management in Green house crops, Kluwer Academic Publishers, 2000.
3. Bridge, P. et al. Molecular Variability of Fungal Pathogens, CAB International, UK, 1998.
4. Bridge, P. et al. Application of PCR in Mycology, CAB International, UK, 1999.
5. Bridge, P., Moore, D.R. and Scott, P.R. Informational Technology, Plant Pathology and Biodiversity, CAB International, UK, 1998.
6. Clifton, A. Introduction to the Bacteria, McGraw Hill Co., New York, 1958.
7. Mandahar, C.L. Introduction to Plant Viruses, Chand & Co. Ltd., Delhi, India, 1998.
8. Persley, G.J. Biotechnologies and Integrated Pest Management, CAB International, UK, 1996.
9. Skerritt, J.H. and Apples, R. New Diagnostics in Crop Sciences, CAB International, UK, 1995.

Suggested Laboratory Exercises

1. Calibration of microscope: determination of dimensions of microorganisms (suggested model organisms: yeast, lactobacilli, cyanobacteria).
2. Cultivation media for autotrophic and heterotrophic microorganisms (cleaning of glasswares, mineral media, complex media, solid media, sterilization).
3. Isolation of microorganisms: streaking on agar plates/pour plate method, isolation of clones, preservation.
4. Preparation of Winogradsky column using pond bottom mud, observations on temporal sequence of appearance of microbes. (visual appearance, microscopic observations)
5. Observation on virus infected plants (symptoms).
6. Fermentation by yeast (inverted tube method, use of different substrates, e.g. glucose, fructose, cane sugar, starch)
7. Study of histopathology of various plant diseases included in theory.
8. Isolation and culture of plant pathogens (e.g. *Colletotrichum*, *Fusarium*, *Alternaria*) and establishment of Koch's postulates and their pathogenicity.
9. Study on antagonism between isolated antagonists and plant pathogens and test of biological control.
10. Demonstration of the assay of prohibitins (phytoalexins).
11. Demonstration of biopesticides (essential oils, neem, turmeric and garlic) against some pathogens.

BOTANY**SEMESTER – VI****PAPER-B: SYSTEMATICS OF ANGIOSPERMS AND ENVIRONMENTAL BIOLOGY**

Objective: This paper deals with taxonomy and species concept of plants. It provides a knowledge about identification, nomenclature and classification which forms the basis of future research work. It also deals with inter-relations of plants and environment as well as various environmental problems, role of national and international organization in environmental management.

Teaching Methodology: Teaching methodology includes series of lectures, making use of charts, transparencies, LCD, Models, slides, practical demonstrations, extension lectures from experts, field visits, discussions, quiz competitions etc. In practicals, students would be provided with fresh/preserved materials for their morphological and anatomical studies making use of microscopes and binoculars and hands-on tools/equipment etc.

UNIT-I**ANGIOSPERM SYSTEMATICS**

Introduction : Aims and components of systematics, introduction to identification, nomenclature, phylogeny and classification.

Systematics in Practice: Importance of herbarium specimens and their preparation; role of herbaria and botanical gardens; documentation (floras, monographs, manuals, journals, abstracts, indices and dictionaries); keys for identification of plants.

Taxonomic Hierarchy: Taxonomic category, taxonomic groups; concepts of species, genus and family.

Botanical Nomenclature: Principles and rules; ranks and names; type method; principle of priority and its limitations; names of hybrids and cultivars; concept of biocode.

UNIT-II

General characters of Angiosperms.

Systems of Classification: Bentham and Hooker's system. Engler and Prantl's system and Takhtajan's system.

Modern Taxonomy: Supporting evidences/inputs for taxonomy; taxonomy in relation to anatomy, embryology, palynology, ecology, cytology (cytotaxonomy), secondary metabolites in plants (chemotaxonomy).

A brief account of following families: Ranunculaceae, Brassicaceae, Rutaceae, Fabaceae, Cucurbitaceae, Apiaceae, Asteraceae, Asclepiadaceae, Solanaceae, Lamiaceae, Chenopodiaceae, Euphorbiaceae, Liliaceae and Poaceae.

UNIT-III

ENVIRONMENTAL BIOLOGY

Introduction: Inter-relationship between the living world and the environment; the components and dynamism; homeostasis; relevance to man.

Earth as a System: The biosphere, the hydrosphere, the atmosphere and the lithosphere; components within biosphere (Biomes); parameters delimiting individual biomes.

The Environment: Soil, water and atmosphere – general account and adaptations.

Organismal Ecology/Biotic components: Individuals, species, population communities and their characteristics.

Ecosystems: Concepts of ecosystem; homeostasis; structure of ecosystem; functions of ecosystem; transfer of energy and minerals via grazing and detritus chains and role of micro-organisms; cycles (hydrologic, gaseous); role of humans in maintaining biogeochemical cycles.

Diversity of Ecosystem: Aquatic (fresh water); terrestrial (forest/grassland); man-made ecosystems.

UNIT-IV

Human Ecology and Ecological Management: The human population; renewable and non-renewable natural resources and their management; conservation of biodiversity; endangered species; conventional and non-conventional energy sources.

Impact of human activities: Pollution of air, water and soil; a brief account of environmental toxicology; incidence of noise; thermal and radioactive pollution; prevention and control of pollution; global warming, desertification and ozone depletion.

Suggested Readings

1. Barbour, M.G., Burk, J.H. and Pitts, W.D. Terrestrial Plant Ecology, Benjamin/Cummings, Publications Co., California, 1987.
2. Bhojwani, S.S. Plant Tissue Culture: Applications and Limitations, Elsevier Science Publishers, New York, USA, 1990.
3. Collins, H.A., and Edwards, S. Plant Cell Culture, Bios Scientific Publishers, Oxford, UK, 1998.
4. Dhand, Neelam. Systematics of Spermatophyta, Trueman Book Company, Jalandhar, India, 2006.
5. Hill, M.K. Understanding Environmental Pollution, Cambridge University Press, 1997.
6. Kormondy, E.J. Concepts of Ecology, Prentice-Hall of India Pvt. Ltd., New Delhi, India, 1996.
7. Mackenzie, A. et al. Instant Notes in Ecology, Viva Books Pvt. Ltd., New Delhi, India, 1999.
8. Misra, R. Ecology Work Book, Oxford & IBH, New Delhi, India, 1968.
9. Moore, P.W. and Chapman, S.B. Methods in Plant Ecology, Blackwell Scientific Publications, 1986.
10. Odum, E.P. Basic Ecology. Saunders, Philadelphia, 1983.
11. Raghavan, V. Embryogenesis in Angiosperms: A Developmental and Experimental Study, Cambridge University Press, New York, USA, 1986.
12. Smith R.K. Ecology and Field Biology. Harper Collins, New York, 1996.

13. Srivastava, H.N. Diversity of Seed Plants and Their Systematics, Vol. III, Pradeep Publications, Jalandhar, India, 2014.
14. Vasil, I.K. and Thorpe, T.A. Plant Cell and Tissue Culture, Kluwer Academic Publishers, The Netherlands, 1994.

Suggested laboratory Exercises

Description of the following flowers belonging to the various families included in theory syllabus:

1. Ranunculaceae : *Ranunculus, Delphinium*
2. Brassicaceae : *Brassica, Iberis*
3. Rutaceae: *Citrus, Murraya*
4. Fabaceae: *Lathyrus, Cassia, Mimosa* and *Acacia*
5. Cucurbitaceae: *Luffa*
6. Apiaceae; *Coriandrum*
7. Asteraceae: *Helianthus, Ageratum, Sonchus*.
8. Asclepiadaceae: *Calotropis*.
9. Solanaceae: *Solanum, Petunia*
10. Lamiaceae: *Ocimum, Salvia*
11. Chenopodiaceae: *Chenopodium*
12. Euphorbiaceae: *Euphorbia, Phyllanthus*
13. Liliaceae: *Asphodelus, Asparagus*
14. Poaceae: *Avena, Triticum*.

Suggested laboratory Exercises (Environmental Biology)

1. Mechanical analysis of soils by sieve method
2. Determination of water holding capacity and field capacity of soil.
3. Determination of permeability (capillarity and percolation) of different types of soils.
4. Determination of species area curve by minimal quadrat size.
5. Analysis of the herbaceous vegetation for frequency, density and abundance.
6. Effect of tree canopy on the distribution of herbaceous vegetation.
7. Field visit: students should be taken for field visits to places of ecological/environmental interest. They should submit detailed report of the visit in the form of project report in the final practical examination for evaluation. The report shall carry marks.

Note to teachers:

The students are to be familiarized with the families listed above in the practical classes with representative's species or any other that may be available locally. However, questions pertaining to these may be asked in the theory examinations.

Guidelines for Botany Practical Examination:

Max Marks	:	20
Practical	:	18
Int. Assessment	:	2
Time	:	3 hrs.

Q.1	Describe specimen A in technical terms & proper sequence. Draw F.D and V.S of the flower. Cut T.S of ovary and V.S of the flower and show it to the examiner. Write its F.F. as well.	6
Q.2	Identify specimen B and write Histopathological note on it.	3
Q.3.	Identify slides C by giving at least two reasons.	2
Q.4	Field Diary	2
Q.5	Practical note book	2
Q.6	Viva-Voce	3

ZOOLOGY
SEMESTER – V

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-I

PAPER II: AQUATIC BIOLOGY-I

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-I

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Structure and functions of testis, epididymis, vas deferens.

UNIT -II

Seminal vesicle and prostate gland.
Semen composition, sperm maturation and capacitation.

UNIT -III

Structure and functions of ovary, oviduct, uterus and vagina.

UNIT -IV

Oestrous and menstrual cycles.
Fertilization, implantation, gestation, parturition and lactation.

Books Recommended :

1. Milt, J. & Everitt, B.J., Essential of Reproduction, Blackwell Scientific Publications, 1985.
2. Genong, M., Reproduction, Saunders Intern. Publications, 1985.
3. Greep, R.O. & Astwood, E.B., (Eds), Handbook of Physiology, Kluwer Academic/ Plenum Publishers, New York, 2002.
4. Balin, H., & Glasser, S. (Eds.), Reproductive Biology, Excerpta Media, 1972.
5. Guyton, A.S., Text Book of Medical Physiology, 7th edition, Iquakushoinl/Saunders International Publications, 1994.

PAPER II: AQUATIC BIOLOGY-I

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Physico-chemical characteristics of marine environment

UNIT -II

Zonation in marine habitat : Pelagic and benthic zone and their flora and fauna.

UNIT -III

Freshwater zonation in a lake and stream : Supralittoral, littoral, sublittoral, profundal & limnetic zones of a lake. Pool zone and rapid zone of a stream.

UNIT -IV

Classification of freshwater habitats : Streams ponds, lakes, marshes and swamps.

Books recommended

1. Ruttner, F., Fundamentals of Limnology, University of Toronto Press, Toronto, 1975.
2. Reid, G.K. & Wood, R.D., Ecology of Inland Waters and Estuaries, Van Nostrand Reinhold Publishing Co., New York, 1975.
3. Welch, P.S., Limnology, McGraw Hill Book Co., New York, 1952.
4. Jhingran, V.G., Fish & Fisheries of India, Hindustan Publications Corporation, Delhi, 1991.

PRACTICALS**Practical based on both theory papers I & II :**

- I. Demonstration of male and female reproductive systems and their associated glands in rat/rabbit through charts.
- II. Histology of testis, epididymis, vas deferens, prostate, seminal vesicle, ovary, uterus and vagina through permanent slides..
- III. Study of permanent slides of the vaginal smear of human menstrual cycle and rat/mice oestrous cycle.
- IV. Determination of the different phases of the oestrous cycle in living rat through permanent slides.
- V. Study of mammalian sperm through slides/charts.
- VI. Histological examination of placenta through slides/charts.
- VII. Freshwater zonation in lake/stream and study of different communities (plankton, nekton, neuston, benthos and lotic communities).

Scheme for Conduct of Practical Examination

Max. Marks	: 20
Practical Exam.	: 18 marks
Internal Assessment	: 2 marks

- Note :
1. Practical will be of 4 hrs. duration.
 2. The students will be required to submit in writing the principles, methods employed and precautions to be observed wherever necessary within 1 hr. of the start of examination.

- | | | |
|------|---|------|
| I | Draw a labeled sketch of given system and show to examiner/Spot parts of system on the charts/models. | (3) |
| II | Identification of phases of oestrous cycle. | (1) |
| III | Record biota in a given sample from a lake. Make labeled sketches and demonstrate them to the examiner. | (2) |
| IV | Examine the water sample for various communities from different zones of a lake and draw labelled sketches. | (2) |
| V | Identify the specimens/slides/charts A-D. Give reasons of the identification. | (4) |
| VI. | Note book and charts. | (3) |
| VII. | Viva-Voce. | (3) |

ZOOLOGY
SEMESTER – VI

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-II

PAPER II: AQUATIC BIOLOGY-II

PAPER I: REPRODUCTIVE BIOLOGY AND HUMAN WELFARE-II

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT –I

Neuro-Hormonal Regulation of production of Gonadal and Gonadotropic hormones.

UNIT –II

Neuro-Hormonal Regulation of production of Hypothalamic factors and Structural behaviour.

UNIT –III

Fertility Regulation

Contraception and modern contraceptive technology-natural, mechanical, chemical immunological and surgical methods and Fertilization *in vitro* (Test tube baby).

UNIT -IV

Application of fertility regulation in live stock:

- i. Artificial insemination in farm animals.
- ii. Milk yield.
- iii. Egg production in poultry.

Books Recommended :

1. Milt, J. & Everitt, B.J., Essential of Reproduction, Blackwell Scientific Publications, 1985.
2. Genong, M., Reproduction, Saunders Intern. Publications, 1985.
3. Turner, C.P. & Bagnara, J.T., General Endocrinology, Saunders Intern. Publications, 1984.
4. Balin, H., & Glasser, S. (Eds.), Reproductive Biology, Excerpta Media, 1972.
5. Guyton, A.S., Text Book of Medical Physiology, 7th edition, Iquakushoinl/Saunders International Publications, 1994.

PAPER II: AQUATIC BIOLOGY-II

Max. Marks	: 40
Theory Exam.	: 36 marks
Internal Assessment	: 4 marks
Time	: 3 hrs.

Note : Nine questions are to be set. Question No.1 is compulsory consisting of short answer type questions covering the whole syllabus. It will have 8 parts of 1 mark each. Two questions are to be set from each Unit. One question is to be attempted from each Unit. In all, Five questions are to be attempted including compulsory one. 50% of the questions are to be split up into 2-4 sub-parts.

UNIT -I

Ecosystem : Study of ecosystem with particular reference to the components of aquatic ecosystem. Food chains and food webs. Flow of energy in a food chain.

UNIT -II

Physico-chemical characteristics of freshwater environment : Temperature, light, current of water, density, pH, dissolved oxygen, carbon dioxide and nutrients.

UNIT -III

Productivity : Concepts of productivity, primary, secondary and tertiary productivity, yield and carrying capacity.

UNIT -IV

Ecological succession : Succession, kinds of succession, changes in animal life during hydrarch concept of climax.

Adaptations of aquatic organisms.

Books recommended

1. Ruttner, F., Fundamentals of Limnology, University of Toronto Press, Toronto, 1975.
2. Reid, G.K. & Wood, R.D., Ecology of Inland Waters and Estuaries, Van Nostrand Reinhold Publishing Co., New York, 1975.
3. Welch, P.S., Limnology, McGraw Hill Book Co., New York, 1952.
4. Odum, E.P., Fundamentals of Ecology, Saunders Co., Philadelphia, 2004.

PRACTICALS**Practical based on both theory papers I & II:**

- I. Study of permanent slides of mammalian ovary and testis.
- II. Study of different techniques of contraception through charts/models/video clippings.
- III. Study of artificial insemination, egg production through charts/models/video clippings.
- IV. Study of components of lake ecosystem and grazing type of food chain.
- V. Physico-chemical characteristics of freshwater environment. Temperature, Light, turbidity, current of water, density, pH, dissolved O₂, CO₂ and nutrients.
- VI. Ecological succession in an aquatic habitat in the laboratory.

Scheme for Conduct of Practical Examination

Max. Marks	: 20
Practical Exam.	: 18 marks
Internal Assessment	: 2 marks

- Note :
1. Practical will be of 4 hrs. duration.
 2. The students will be required to submit in writing the principles, methods employed and precautions to be observed wherever necessary within 1 hr. of the start of examination.

- I Draw a labeled sketch of techniques of contraception/artificial insemination. (3)
- II Determine the physico-chemical factors in a given sample of fresh water. Write the procedure followed. (4)
- III Draw labeled diagram of food chain (in aquatic/terrestrial environment) (2)
- IV Identify the cells/part in slides A & B. Give reasons for identification and name the hormone secreted by it. (3)
- V. Note book and charts (3)
- VI. Viva-Voce. (3)

B.A. (Honours) MUSIC (INDIAN CLASSICAL DANCE)**SEMESTER-V****General Instructions:-**

- 1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
- 2) There would not be more than eight students in one section in practical examination.
- 3) There would be upto eight students in one section in practical class.
- 4) In all, nine questions will be set from the whole syllabus. The question paper will be divided into five units. First four units will contain two questions each, out of which the candidates are to attempt one question from each unit, the ninth question of fifth unit is compulsory and is consists of 13 short answer questions (covering entire syllabus i.e theory & practical) out of which students have to attempt 09 questions of 01 marks each.
- 5) No electronic Instruments will be allowed for lehra in practical examination.
- 6) While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.

Paper-A: THEORY (Duration 45 minutes, 02 theory periods per week) : 45 Marks

Paper-B: PRACTICAL (Duration 45 minutes, 06 practical periods per week) : 45 Marks

Paper-A Theory

Maximum Marks : 50 marks
 Theory : 45 marks
 Int. Assessment : 05marks
 Time : 3 Hours

Unit-I

1. Definitions:- Pharmaishi Chakardar paran, Chakardar paran, Hela, Kataksh, Anghar
2. Eyebrow movements
3. Comparison of Gat Nikas and Gat Bhav

Unit-II

1. Knowledge of dance forms:- Kuchipudi, Kathak
2. Costumes used is kathak in the period of mughal and present
3. Dance and festivals

Unit-III

1. Knowledge of modern dance
2. Contribution of Pt. Birju Maharaj in the field of kathak dance
3. Description of tribal dance i.e. sammi, santhal

Unit-IV

1. Notation of that, Amad, Tora, Chakardar, Paran, Chatusjati Paran, Kavit in Teentaal
2. Notation of Thaata, Amad, Utham, Tora, Ganesh Paran in swari Taal (15 Matra)
3. Notation of Tora, Tukra, Paran in sultaal (10 Matra)
4. Nagma of above mentioned Taals
5. Ekgun, Dugun, Tigun, Chaugun Layakries of above Taals

Unit-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper- B Practical

Maximum Marks :	50 marks
Theory :	45 marks
Int. Assessment :	05marks
Time :	20 minutes

1. Teentaal (16 Matra)
Thaat-1
Amad-1
Tora-2
Chakardar Paran-1
Chatusjati Paran-1
Kavit-1
2. Swari Taal (15 Mara)
Thaat-1
Amad-1
Utham-1
Tora-2
Ganesh Paran-1
3. Sool Taal (10 Matra)
Tora-2
Tukra-1
Paran-1
4. Gat Nikas :- Thaata and Murli
5. Paltas in Teentaal
6. Practical demonstration of Sammi and Naatti
7. Play Nagma in Teentaal and Swari Taal

Books Recommended

1. Bharat Ke Lok Nritya : Dr. Laxmi Narayan Garg
2. Folk Dance of Punjabi : Aarohi Walia
3. Natyeshwarta Ka Sangeet Vivechan : Puru Dhadhach
4. Nrityesutram : Puru Dhadhach
5. Nritye Nibandh : Puru Dhadhach
6. Pachchatye Nritye Kala : Puru Dhadhach
7. Kathak Preveshika : Tirth Ram Azad
8. Kathak Ke Pracheen Nritaang : Geeta Raguvir
9. Kal Aaj Aur Kal : Shikha Shukla
10. Books prescribed of B.A. Indian Classical Dance (General)

B.A. (Honours) MUSIC (INDIAN CLASSICAL DANCE)**SEMESTER-VI****General Instructions:-**

- 1) In case of the private candidates, there will be no internal assessment and the marks obtained in the external assessment of the practical examination shall be proportionately increased.
- 2) There would not be more than eight students in one section in practical examination.
- 3) There would be upto eight students in one section in practical class.
- 4) In all, nine questions will be set from the whole syllabus. The question paper will be divided into five units. First four units will contain two questions each, out of which the candidates are to attempt one question from each unit, the ninth question of fifth unit is compulsory and is consists of 13 short answer questions (covering entire syllabus i.e theory & practical) out of which students have to attempt 09 questions of 01 marks each.
- 5) No electronic Instruments will be allowed for lehra in practical examination.
- 6) While sending the syllabus to paper setter in theory, the syllabus prescribed for the practical paper should also be sent.

Paper-A: THEORY (Duration 45 minutes, 02 theory periods per week) : 45 Marks

Paper-B: PRACTICAL (Duration 45 minutes, 06 practical periods per week) : 45 Marks

Paper-A Theory

Maximum Marks : 50 marks
 Theory : 45 marks
 Int. Assessment : 05marks
 Time : 3 Hours

Unit-I

1. Definitions: - Chaturang, Trivat, Tarana, Sargam, Palta.
2. Neck Movements
3. Choreography

Unit-II

1. Knowledge of Dance forms:- Sattriya and Kathak
2. Contribution of leading Institutions of Kathak Dance
3. Importance of Thumri and Hori in Kathak Dance

Unit-III

1. Contribution of Guru Rajinder Gangani in the field of Dance
2. Dance and Society
3. Detailed knowledge of dance

Unit-IV

1. Notation of Thaata, Amad, Uthan, Tora, Mishrgati Paran, Kavita, Premlu
2. Notation of Thaata, Amad, Tora, Kavita in Basant Taal
3. Nation of Thaata, Tora, Premlu, Shiv Paran in Dhamar Taal.
4. Nagma of above mentioned Taals
5. Ekgum, Dugun, Tigun, Chaugun, Layakaries of above mentioned Taals

Unit-V

The ninth question of unit V is compulsory & it consists of 13 short answer questions (covering entire syllabus i.e. theory and practical) out of which students have to attempt 09 questions of carry 01 marks each.

Paper-B Practical

Maximum Marks :	50 marks
Theory :	45 marks
Int. Assessment :	05marks
Time :	20 minutes

1. Teentaal (16 Matra)
Thaat-1
Amad-1
Tora-2
Mishrjati Paran-1
Kavit-1
Paremolu-1
2. Basant (9 Mara)
Thaat-1
Amad-1
Tora-2
Kavit-1
3. Dhamar (14 Matra)
Thaat-1
Tora-2
Premelu-1
Shiv Paran-1
4. Gat Nikas – Ghungat, Gagri
5. Palttas in Teentaal
6. Practical demonstration in Luddi and Haryanvi
7. Play Nagma in Teentaal and Dhamar

Books Recommended

1. Bharat Ke Lok Nritya : Dr. Laxmi Narayan Garg
2. Folk Dance of Punjabi : Aarohi Walia
3. Natyeshwartar Ka Sangeet Vivechan : Puru Dhadhach
4. Nrityesutram : Puru Dhadhach
5. Nritye Nibandh : Puru Dhadhach
6. Pachchatye Nritye Kala : Puru Dhadhach
7. Kathak Preveshika : Tirth Ram Azad
8. Kathak Ke Pracheen Nritaang : Geeta Raguvir
9. Kal Aaj Aur Kal : Shikha Shukla
10. Books prescribed of B.A. Indian Classical Dance (General)
