

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech. (ME) (Sem.-7th & 8th)
INDUSTRIAL ENGINEERING**

Subject Code : DE/PE-2.1

Paper ID : [A0876]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

I. Write briefly :

- (a) What are the activities Industrial Engineer has to perform in an organization?
- (b) Define plant layout.
- (c) Material handling can be effectively deployed as a value adding activity in the manufacturing organization. Give an example to justify this statement.
- (d) Enumerate various types of cranes used in industry for material transportation.
- (e) How does work study improve safety at workplace?
- (f) What are various recording techniques used in industry for method study?
- (g) Differentiate between normal time and standard time in work measurement.
- (h) Define Value.
- (i) What is the significance of ergonomics in Industrial situations?
- (j) What do you understand by job enrichment?

SECTION - B

2. What is the role of Industrial Engineering in the context of manufacturing / service organizations? Discuss.
3. How material handling equipment can be classified? Give salient features and applications of fixed path material handling equipment.
4. Discuss the steps involved in conducting method study.
5. Discuss briefly the ergonomics considerations in designing man-machine systems.
6. Briefly describe the technological and behavioral factors involved in effective job design.

SECTION - C

7. (a) Briefly describe the qualities of an Industrial Engineer. (5)
(b) Discuss the reactions of management and labour to work study. (5)
8. How can you classify different types of plant layout? Give five salient features and applications of various types of plant layouts. (10)
9. What is the significance of Value Engineering in industrial applications? Discuss the phases involved in value engineering studies. (10)