



### SECTION-B

2. (i) Define work, power & energy .Write down their units in Electrical, mechanical & thermal sense.  
(ii) Convert delta connected set of 3 resistors R into star.
3. (i) Establish relation between Line & phase current in case of balanced 3 phase delta connection.  
(ii) Establish relation of power consumed in balanced 3 phase load.
4. Explain principle, construction and working of synchronous generator with suitable sketches.
5. Find the average value of sine wave for complete cycle which is clamped to half its negative maximum value.

### SECTION-C

6. Explain construction & working of LVDT in detail.
7. Explain the energy band description of semiconductor. List the properties of semiconductor also.
8. Explain the principle of operation and the characteristics of FJT.
9. Implement the following logic expression with logic gates.

$$Y = ABC + AB + BC$$