



C16S-EE-506(B)

5863

BOARD DIPLOMA EXAMINATION, (C-16S)

NOVEMBER - 2019

DEEE - V SEMESTER EXAMINATION

ELECTRICAL UTILIZATION & MAINTENANCE

Time : 3 Hours]

[Total Marks : 80

PART - A

3×10=30

- Instructions :*
- (1) Answer **ALL** questions.
  - (2) Each question carries **THREE** marks.
  - (3) Answer should be brief and straight to the point.

- |   |  |   |
|---|--|---|
| 1 | Define the following.  | 3 |
|   | (a) Candle power.  |   |
|   | (b) Luminous Flux.   |   |
| 2 | Define glare and utilization factor.                                       | 3 |
| 3 | List the requirements of good heating material.                            | 3 |
| 4 | State the advantages of electric heating.                                  | 3 |
| 5 | Classify the different types electric welding.                             | 3 |
| 6 | List the conditions for successful welding.                                | 3 |
| 7 | List any six tools required for testing and repair of domestic appliances. | 3 |

- 8 Draw the electrical wiring diagram of ceiling fan. 3
- 9 State the need for preventive and periodical maintenance of electrical power devices. 3
- 10 Write a brief note on air blast circuit breaker maintenance. 3

**PART - B**

**10×5=50**

*Instructions :*

- (1) Answer any **FIVE** questions.
- (2) Each question carries **TEN** marks.
- (3) Answer should be comprehensive and criterion for valuation is the content but not the length of the answer.

- 11 (a) State the requirements of good lighting. 5
- (b) State and explain laws of illumination. 5
- 12 A drawing hall 30m × 13m with ceiling height of 5m is to be provided with general illumination of 120 lux. Taking co-efficient of utilisation of 0.5 and depreciation factor as 1.4, determine the number of fluorescent lamps required, their spacing, mounting height and total wattage. Luminous efficiency of 80 W fluorescent lamp is 40 lm/watt. Show the disposition of lamps with sketch. 10
- 13 Explain the working principle, construction and operation of direct arc furnace with a neat sketch. 10
- 14 (a) What are the applications of dielectric heating. 5
- (b) What is induction heating ? Explain the core type induction heating with a neat sketch. 5

- 15 (a) Explain the principle of operation of welding transformer with a neat sketch. 5  
(b) Explain about seam welding with a diagram. 5
- 16 Explain the principle, construction, dismantling and assembling and repair work of electric oven. 10
- 17 Explain the principle, construction, dismantling and assembling and repair work of mixie. 10
- 18 Explain the preventive and periodical maintenance schedule of the UPS/inverter. <http://www.sbtetonline.com> 10

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