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C14-EE-501

**4636**

**BOARD DIPLOMA EXAMINATION, (C-14)  
MARCH/APRIL—2021  
DEEE - FIFTH SEMESTER EXAMINATION  
ELECTRICAL UTILISATION**

Time : 3 hours ]

[ Total Marks : 80

**PART—A**

4×5=20

- Instructions :** (1) Answer *any five* questions.  
(2) Each question carries **four** marks.  
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Define utilisation factor and space-height ratio.
2. Define glare. How can it be minimized?
3. State any six requirements of good lighting.
4. State the requirements of good heating material.
5. What are the applications of dielectric heating?
6. List different types of electrodes used for welding.
7. Draw a neat block diagram of an air conditioner and name the parts.
8. List any four components in refrigerator.
9. State the need of power saving devices.
10. State the advantages of compact fluorescent lamps.

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## PART—B

15×4=60

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

11. State and explain the laws of illumination.
12. List the lamp fittings used in domestic and industrial applications.
13. Explain different methods of temperature control of resistance heating with neat sketches.
14. Explain direct resistance heating with a neat sketch.
15. Explain the principle of butt welding with a neat sketch.
16. Explain the principle of operation of welding transformer with a neat sketch.
17. Draw a neat electric circuit diagram of a refrigerator and state the function of each component.
18. Explain the working of magnetic induction lamp with a neat sketch.

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