4636

BOARD DIPLOMA EXAMINATION, (C-14) MARCH/APRIL—2021

DEEE - FIFTH SEMESTER EXAMINATION

ELECTRICAL UTILISATION

Time: 3 hours [Total Marks: 80

PART—A

 $4 \times 5 = 20$

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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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.

