



C14-AEI-105

4047

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2016

DAEIE—FIRST YEAR EXAMINATION

ELECTRONICS COMPONENTS AND MATERIALS

Time : 3 hours]

[*Total Marks* : 80

PART—A

3×10=30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Define the term 'resistance'.
2. Mention the need for tapering in potentiometer.
3. Classify the capacitors.
4. Define dielectric constant.
5. List any three core materials used in the construction of inductors.
6. Mention any three ratings of fuse.
7. Define microphone.
8. List any three laminates used in PCBs.
9. Classify solids.
10. Define insulating materials.

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PART—B

10×5=50

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

- 11.** (a) Describe the constructional details of carbon potentiometer. 7
(b) Define temperature coefficient of resistance. 3
- 12.** List any three properties and any two applications of the following capacitors :
(a) Paper capacitors 3+2
(b) Mica capacitors 3+2
- 13.** Find equivalent inductance when two inductors are connected in series aiding. 10
- 14.** Explain the working of toggle switch and mention any three ratings. 7+3
- 15.** Explain the constructional features and principle of operation of PMMC loudspeaker. 7+3
- 16.** Describe photo processing techniques for PCB preparation. 10
- 17.** Explain the atomic structure with an example. 7+3
- 18.** (a) Explain thermoplastics and give three examples. 4+3
(b) List any three magnetic materials used in industries. 3
