



C14-AEI-105

4047

BOARD DIPLOMA EXAMINATION, (C-14)

OCT/NOV—2017

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. Classify types of resistors.
2. State negative temperature coefficient of resistance.
3. List any three specifications of capacitor.
4. Write any three common faults in capacitors.
5. Define self-inductance.
6. Define relay.
7. List any three specifications of loudspeaker.
8. Write any three types of PCB.

* 9. Write any three classifications of solids.

10. Write any three applications of PVC.

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) Derive the expression for the equivalent resistance when two resistors are connected in parallel. 6

(b) Find the equivalent resistance, when two resistors 20 ohm and 30 ohm are connected in parallel. 4

12. (a) State the properties, range of values and applications of ceramic capacitors. 6

(b) State the factors affecting the capacitance of a capacitor. 4

13. Explain the construction features of RF choke with diagram and list its applications.

14. Explain the working of toggle switch with diagram and write any three applications of the switch.

15. Explain the working of condenser microphone with diagram.

16. Explain the photo processing techniques for PCB preparation.

17. Explain the following general properties : 5+5=10

(a) Conductivity

(b) Resistivity

18. Explain soft magnetic materials with examples.
