



C09-AEI-105

**3010**

**BOARD DIPLOMA EXAMINATION, (C-09)**

**MARCH/APRIL—2017**

**DAEI—FIRST YEAR EXAMINATION**

**ELECTRONIC COMPONENTS AND DEVICES**

*Time* : 3 hours ]

[ *Total Marks* : 80

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**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. List the specifications of resistor.
2. Classify the types of capacitors based on dielectric medium.
3. Define mutual inductance.
4. Classify the switches according to poles and throws.
5. List any three specifications of loudspeaker.
6. State the electrical properties of solid semiconductor materials.
7. Define drift current.
8. Draw the symbols of *P-N-P* and *N-P-N* transistors.

\* 9. State the necessity of DC power supply for electronic circuits.

10. List any three materials used in soldering.

**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. Explain the constructional detail of wire-wound potentiometer with diagram.

12. Explain the properties, range of values and applications of paper and mica capacitors.

13. Explain the construction features and applications of AF chokes.

14. Explain the construction and working of general purpose electromagnetic relay.

15. Explain the forward and reverse bias characteristics of diode with diagrams.

16. Explain the transistor in CE configuration and sketch its input and output characteristics.

17. Explain the operation of simple Zener regulator.

\* 18. (a) Explain the necessity of baffle for loudspeaker. 5

(b) Mention the methods of etching of PCBs. 5

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