



C16-AEI-105

6012

BOARD DIPLOMA EXAMINATION, (C-16)

OCT/NOV—2017

DAEI—FIRST YEAR EXAMINATION

ELECTRONIC COMPONENTS AND DEVICES

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. List any three types of resistors.
2. Define dielectric constant and dielectric strength of material.
3. Draw the symbols of iron core, air core, and ferrite core inductors.
4. Define relay.
5. Define loudspeaker.
6. Draw the symbols of Zeener diode, Varactor diode, and tunnel diode.
7. What is Zener breakdown?
8. Define cutoff region of transistor.
9. Define voltage regulation.
10. State the need of PCB in electronic equipment.

**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 details and working of carbon potentiometers.
12. (a) Find the equivalent capacitance of two capacitors, when they are connected in parallel. 6  
(b) Two capacitors of capacitances 10 F and 20 F are connected in series. Calculate total capacitance. 4
13. Explain the constructional features of RF chokes and write its applications.
14. Explain the working of toggle, rotary switches and mention their applications.
15. Explain the formation of P-type and N-type materials with diagrams.
16. Explain the transistor in CE configuration and sketch its input and output characteristics.
17. Explain the working of full wave rectifier circuit with wave forms
18. (a) Explain the working of crystal microphone. 5  
(b) Explain the method of etching of PCB. 5

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