



C16-AEI-105

6012

BOARD DIPLOMA EXAMINATION, (C-16)

JUNE—2019

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. Define temperature coefficient of resistance.
2. List any three losses in capacitors.
3. List any three core materials used in the construction of inductors.
4. Define a relay.
5. Define loudspeaker.
6. List any three differences between intrinsic and extrinsic semiconductors.
7. List any three specifications of a diode.
8. Draw the CB configuration of a transistor.
9. State the need for a filter circuit in power supply.
10. List any three laminates used in PCBs.

**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. Describe the constructional details and working of carbon potentiometer.
12. (a) List any six specifications of a capacitor.  
(b) Define dielectric strength of a material.
13. Find equivalent inductance when two inductors are connected in series aiding.
14. (a) Explain the working of rotary switch.  
(b) Mention the use of MCB.
15. (a) Explain the working of magnetic headphones.  
(b) Explain the grid system in PCB layout planning.
16. Explain the working of zener diode with its characteristics.
17. (a) Define alpha and beta factors of a transistor.  
(b) Compare any three performance characteristics of transistor in CB, CE and CC configurations.
18. Explain the working of centre tapped full wave rectifier with waveforms.

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