

*



C20-AEI-105

7012

BOARD DIPLOMA EXAMINATION, (C-20)

FEBRUARY/MARCH —2022

DAEI - FIRST YEAR EXAMINATION

ELECTRONICS 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 specifications of resistors.
2. Define the term temperature co-efficient of resistance.
3. List any three types of capacitors.
4. Define mutual inductance.
5. List any three contact materials used in relays.
6. Define loudspeaker.
7. List any three applications of diode.
8. Define active region of transistor.
9. State the necessity of DC power supply for electronic circuits.
10. List any three types of PCB.

*

*

PART—B

8×5=40

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

- 11.** (a) (i) State the need of fuse in electronic equipment.
(ii) List different types and ratings of fuses.

(OR)

- (b) Explain the construction and working of general-purpose electromagnetic relay with diagram.

- 12.** (a) (i) Mention the necessity of baffle for loudspeaker and list the types of baffles.
(ii) State the uses of woofers and tweeters.

(OR)

- (b) Explain the working of crystal microphone with diagram.

- 13.** (a) Explain the working of tunnel diode with diagram.

(OR)

- (b) Explain the working of Zener diode with diagram.

- 14.** (a) Explain the working of PNP transistor with diagram.

(OR)

- (b) Explain the working of transistor as amplifier in CE configuration.

- 15.** (a) Explain the working of bridge rectifier circuit with waveforms.

(OR)

- (b) Explain the operation of simple Zener regulator with diagram.

*

PART—C

10×1=10

- Instructions :** (1) Answer the following question.
(2) Each question carries **ten** marks.

- 16.** If you wish to store a large amount of charge in a capacitor bank, would you connect capacitors in series or in parallel? Explain with diagram.

030 030 030 030 030

*