



C20-AEI-105

7012

BOARD DIPLOMA EXAMINATION, (C-20)

SEPTEMBER/OCTOBER—2021 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. Define the term temperature coefficient of resistance.
2. Write the colour code of the resistor if the resistance value is $23\text{k } \Omega \pm 5\%$.
3. List any three losses in capacitors.
4. List any three specifications of inductors.
5. Define the term relay.
6. State the uses of woofers and tweeters.
7. Define intrinsic semiconductor.
8. List transistor configurations.
9. Define voltage regulation.
10. State the need of PCB in electronic equipment.

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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) Explain the working of slider switch with diagram.

OR

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

12. (a) Explain the construction and working of PMMC loudspeaker with diagram.

OR

(b) (i) List different types of microphones based on impedance, polar characteristics and principle of working. 4

(ii) Mention the specifications of microphones. 4

13. (a) Explain the working of clamper circuit using diode with diagram.

OR

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

14. (a) Explain the input and output characteristics of CB configuration with diagram.

OR

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

15. (a) Explain the operation of simple Zener regulator with diagram.

OR

(b) Explain the operation of CLC filter with diagram.

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PART—C

10×1=10

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

- 16.** When two resistors are connected in series and in parallel, their equivalent resistances are 20 ohms and 4.8 ohms respectively. What is the individual resistor's resistance? Explain with diagram.

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A.A.N.M. & V.V.R.S.R. Polytechnic, Gudlavalleru, Krishna District, Andhra Pradesh

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