



C-14-AEI-105

**4047**

**BOARD DIPLOMA EXAMINATION, (C-14)**

**APRIL/MAY—2015**

**DAEI—FIRST YEAR EXAMINATION**

**ELECTRONICS COMPONENTS AND MATERIALS**

*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 resistance and mention its units. 2+1

2. Calculate the value of resistance for the following colour codes :  
Yellow; Violet; Brown; Gold

3. Classify the types of capacitor.

4. Define dielectric constant.

5. List the specifications of inductors.

6. What is a relay? Mention any two applications of it.

7. State the need of baffle for a loudspeaker.

8. Classify PCBs.

\* 9. List various properties of semiconductors.

10. Write any three applications of PVC. 1×3=3

**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 of carbon potentiometer and mention its applications. 8+2

12. State different types of variable capacitor and list their applications. 7+3

13. Explain mutual inductance in coils and coefficient of coupling with neat diagrams. 5+5

14. Explain the working of toggle switch and push-button switch. 5+5

15. Explain the construction and principle of carbon microphones.

16. Explain the steps involved in screen printing for making PCBs.

17. Explain the general properties of (a) conductivity, and (b) resistivity. 5+5

18. Explain thermoplastics and thermosetting plastics with examples. 5+5

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