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C09–AEI–105

3010

BOARD DIPLOMA EXAMINATION, (C–09)

OCT/NOV—2014

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. Classify types of resistors.

2. State the factors affecting the capacitance of a capacitor.

3. Mention the losses in transformer.

4. State the need of a fuse in electronic equipment.

5. Draw the symbols of *p-n-p* and *n-p-n* transistors.

6. Distinguish between intrinsic and extrinsic semiconductors.

7. What is Zener breakdown?

8. Mention the necessity of baffle for a loudspeaker.

9. List the types of storage batteries.

10. Classify printed circuit boards (PCBs).

PART—B

10×5=50

Instructions : (1) Answer *any* **five** questions.

(2) Each question carries **ten** marks.

(3) The answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain the colour code used to calculate a resistance value of a resistor by giving two examples. 10

12. Explain about different variable capacitors and list their applications. 10

13. Describe the constructional features of AF and RF transformers. 10

14. *(a)* Classify switches according to poles and throws. 5

(b) Mention different types of fuses. 5

15. *(a)* Explain the working of a crystal microphone. 5

(b) List the soldering methods of PCBs. 5

16. Describe the working of a *p-n* junction diode with forward bias and reverse bias. 10

17. Draw and explain the input and output characteristics of CB configuration. 10

18. Describe the working of half-wave and full-wave rectifiers with waveforms. 10

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