4047

BOARD DIPLOMA EXAMINATION, (C–14)

OCT/NOV—2016

DAEIE—FIRST YEAR EXAMINATION

ELECTRONIC COMPONENTS AND MATERIALS

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 resistors.

2. Define negative temperature coefficient.

3. Define the term 'capacitance'.

4. List any three factors affecting the capacitance of a capacitor.

5. List any three specifications of inductor.

6. Sketch the ISI symbols of SPST and SPDT switches.

7. Define loudspeaker.

8. Mention any three materials used in screen printing.

9. List three conducting materials.

10. Give classification of magnetic materials.

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. *(a)* Explain the colour code of a resistor. 6

(b) Find the resistance value with tolerance of a resistor colour band sequence of brown, black, gold and silver. 4

12. *(a)* Find equivalent capacitance of two capacitors connected in series. 6

(b) Find equivalent capacitance when 10 F and 20 F are connected in series. 4

13. *(a)* Describe the constructional features and applications of AF chokes. 5+2

(b) Give classification of inductors. 3

14. Explain the construction and working of general purpose electromagnetic relay. 10

15. *(a)* Explain the working of crystal microphone. 7

(b) List three specifications of loudspeakers. 3

16. *(a)* Classify PCBs. 3

(b) List four steps involved in screen printing for making PCBs. 4

(c) List three specifications of PCBs. 3

17. *(a)* Explain the properties of conductivity and resistivity. 3+3

(b) Define superconductivity. 3

18. *(a)* Explain the soft magnetic materials and give three examples. 4+3

(b) List three applications of PVC. 3

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