



C09-EC-105

3031

BOARD DIPLOMA EXAMINATION, (C-09)

OCT/NOV—2018

DECE—FIRST YEAR EXAMINATION

BASIC ELECTRONICS

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. State Ohm's law.
2. List the applications of sensistors.
3. Find the equivalent inductance when two inductors 10 mH and 20 mH are connected in series opposing with a mutual inductance of 5 mH.
4. State the need of fuse in electronic equipment.
5. Classify microphones based on impedance.
6. Mention the applications of a diode.
7. Mention the majority and minority charge carriers in P and N type materials.
8. Define alpha and beta of a transistor.
9. State the applications of miniature button cells.
10. State the function of commutator in dc generators.

PART-B

10×5=50

*

- Instructions :** (1) Answer *any five* questions.
(2) Each questions carries **ten** marks.
(3) Answers should be comprehensive and the criteria for valuation are the content but not the length of the answer.

- 11.** a) Define resistance and classify types of resistor.
b) Distinguish between carbon and wire wound Potentiometers.
- 12.** Compare the properties, range of value and applications of paper and electrolytic capacitors.
- 13.** Explain the need of PCB in electronic equipment and list the various steps involved in PCB preparation.
- 14.** a) Explain the need for baffle and mention different types of baffles.
b) Explain the need for a horn type loud speaker with reference to its construction and advantages.
- 15.** Describe the construction and working of zener diode.
- 16.** Describe the working of transistor as an amplifier in CE configuration.
- 17.** a) Explain the working principle of auto transformer.
b) Explain various losses in transformers.
- 18.** Explain the working principle of a stepper motor.

* * *