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C09-EC-105

3031

BOARD DIPLOMA EXAMINATION, (C-09)

MARCH/APRIL—2021

DECE - FIRST YEAR EXAMINATION

BASIC ELECTRONICS

Time : 3 hours]

[Total Marks : 80

PART—A

4×5=20

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

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

(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Define potential difference.
2. Define the property of resistance.
3. State the factors affecting the capacitance of a capacitor.
4. List the materials used in soldering.
5. List the types of microphones.
6. Define semiconductor.
7. Identify majority and minority carriers in p-type materials.
8. Draw the symbol of NPN and PNP transistors.
9. List different types of transformers.
10. List the applications of DC generators.

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PART—B

15×4=60

- Instructions :** (1) Answer *any four* questions.
(2) Each question carries **fifteen** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Identify resistance value by using colour code.
12. Calculate equivalent capacitance of capacitors connected in parallel.
13. Explain the working of push button switch.
14. Explain the working of carbon microphone.
15. Sketch energy level diagrams for conductors, semiconductors and insulators.
16. Sketch the input and output characteristics of CB configurations.
17. Explain the working of auto transformer.
18. Explain the working principle of DC motor.

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