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C09-EC-105

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**BOARD DIPLOMA EXAMINATION, (C-09)
OCTOBER/NOVEMBER-2018
DECE - FIRST YEAR EXAMINATION**

BASIC ELECTRONICS

Time : 3 Hours]

[Total Marks: 80

PART-A

3X10=30

Instructions :

1. Answer **All** questions.
2. Each question carries **three** marks.
3. Answer should be brief and straight to the point and shall not exceed five simple sentences.

1. Define peak factor and form factor for sinusoidal ac quantity.
2. List any three specifications of a resistor.
3. State the expression for the energy stored in capacitor.
- * 4. Classify relays based on principle of operation.
5. How does one can minimize the effect of antiphase sound produced by the loud speaker?
6. Sketch the forward and reverse bias characteristics of a diode.
7. Draw the symbols of semiconductor diode and zener diode and mention one application each.
8. Define α and β with respect of a transistor.
9. List any three advantages of maintenance free batteries.
10. List the applications of stepper motor.

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PART-B

10X5=50

- Instructions** : *
1. Answer any **Five** questions.
 2. Each question carries **ten** marks.

11. Obtain expression for the equivalent resistance when three resistors of equal value are connected in (a) Series (b) Parallel
12. Find the expression for the equivalent inductance, when two inductors are connected in series opposing.
13. (a) Explain the working of push down button switch with a neat sketch.
(b) List the applications of push buttons and toggle switches.
14. (a) Compare the parameters sensitivity, frequency response and directivity of carbon and crystal microphones
(b) List ratings of condenser and dynamic microphones
15. Describe the formation of P type semiconductor material
16. Explain the working of NPN transistor.
17. (a) Explain the working principle of auto transformer.
(b) Explain various losses in transformers.
18. (a) Explain the working principle of DC generator.
(b) Explain different losses in DC machines.

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