



C14-EE-305

4246

BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL—2018
DEEE—THIRD SEMESTER EXAMINATION
ELECTRONICS—I

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. Define resistance and factors affecting the resistance of a material.
2. Find the value of resistance for colour code of gray, red, orange and gold.
3. Mention any three differences between intrinsic and extrinsic semiconductors.
4. Draw the circuit diagram of bridge rectifier.
5. Draw the block diagram of regulated power supply.
6. Mention the applications of LCD.
7. Draw the equivalent circuit of UJT.
8. Define thermal runaway.

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9. ^{*}Mention the condition to be fulfilled to achieve faithful amplification in a transistor amplifier.
10. Classify the amplifiers based on the period of conduction.

PART—B

10×5=50

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 losses of inductors and transformers.
(b) Mention five differences between carbon potentiometers and wire-wound potentiometers.
12. Draw the input and output characteristics of CE configuration and explain.
13. Explain how Zener diode acts as a voltage regulator in power supply.
14. (a) Draw and explain the drain characteristics of JFET.
(b) Mention the advantages of FET over BJT.
- ^{*}15. Explain the construction and working of SCR.
16. Explain voltage divider bias with a neat diagram and derive an expression for stability factor.
17. Explain the following terms of an amplifier :
(a) Gain
(b) Gain in decibels
(c) Frequency response
(d) Bandwidth
18. Draw and explain the working of two-stage R-C coupled amplifier and draw its frequency response.

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