



C16-EE-305

6241

BOARD DIPLOMA EXAMINATION, (C-16)

AUGUST/SEPTEMBER—2021

DEEE - THIRD SEMESTER EXAMINATION

ELECTRONICS - I

Time : 3 hours]

[Total Marks : 80

PART—A

- 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 P-type and N-type semiconductors. 1½+1½
2. Mention manufacture specifications of zener diode. 1½+1½
3. Write the advantages of bridge rectifier over center tapped rectifier. 1+1+1
4. Write different types filters. 1+1+1
5. List applications of opto coupler. 1+1+1
6. List advantages of FET over BJT. 1+1+1
7. List the causes of instability of biasing in transistor amplifier. 1+1+1
8. What is the necessity of cascading of amplifier? 3
9. Draw the block diagrams of voltage series, voltage shunt current series and current shunt feedback amplifiers. 1+1+1
10. Distinguish between voltage and power amplifier. 1+1+1

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[Contd...

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PART—B

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

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| 11. | Explain the working of NPN transistor. | 10 |
| 12. | Explain the working of center tapped full wave rectifier with neat circuit diagram. | 10 |
| 13. | Explain the constructional details of UJT and draw its diode equivalent circuit. | 5+5 |
| 14. | Explain the construction and working of photo diode. | 5+5 |
| 15. | Explain about collector to base bias circuit and derive stability factor. | 5+5 |
| 16. | (a) Explain the need for stabilization in transistor biasing. | 3 |
| | (b) List advantages and disadvantages of RC coupled amplifier. | 7 |
| 17. | Explain transformer coupled amplifier with its circuit diagram and its frequency response. | 10 |
| 18. | Explain the performance characteristics of emitter follower. | 10 |

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