

No. of Printed Pages : 4  
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**2nd / Trade-Elect.**

**Subject : Electronics - I**

Time : 3 Hrs.

M.M. : 100

**SECTION-A**

**Note:**Objective type questions. All questions are compulsory (10x1=10)

- Q.1 Centre Tap transformer is used in \_\_\_\_\_ wave rectifier.
- Q.2 Free electrons exist in \_\_\_\_\_ band. (Valence, Conduction)
- Q.3 JFET stands for \_\_\_\_\_
- Q.4 Efficiency of half wave rectifier is \_\_\_\_\_.
- Q.5 Point of intersection of DC and AC load line is \_\_\_\_\_.
- Q.6 MOSFET has \_\_\_\_\_ terminal. (two, three)

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- Q.7 Filter circuits are used to reduce \_\_\_\_\_
- Q.8 Value of knee voltage for Ge diode \_\_\_\_\_ V (0.7, 0.3)
- Q.9 CE transistor has high gain. (True/False)
- Q.10 \_\_\_\_\_ region, both junctions are forward biased. (Saturation, cutoff)

**SECTION-B**

**Note:**Very short answer type questions. Attempt any ten questions out of twelve questions. 10x2=20

- Q.11 Why FET is unipolar transistor.
- Q.12 Define voltage and power gain.
- Q.13 Define light emitting diode.
- Q.14 Define Diffusion current.
- Q.15 What is transistor biasing.
- Q.16 Two advantages of FETS.
- Q.17 What is forward biasing of a diode.
- Q.18 Define barrier potential.

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Q.19 Give applications of transformer coupled amplifier.

Q.20 Give symbol of Zener diode.

Q.21 Define input and output impedance.

Q.22 What are multistage amplifiers.

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions.  $8 \times 5 = 40$

Q.23 Explain voltage divider biasing circuit.

Q.24 Explain full wave rectifier working.

Q.25 Explain loading effect in multistage amplifiers.

Q.26 Explain DC coupled amplifier working.

Q.27 Explain CC configuration input and output characteristics.

Q.28 How to find voltage gain of single stage amplifier using its characteristics.

Q.29 Give operation of N-channel JFET and its characteristics.

Q.30 What is junction transistor and its types. Explain.

Q.31 Explain effect of coefficient of coupling on frequency response of transformer coupled amplifier.

Q.32 Explain emitter follower circuit.

### SECTION-D

**Note:** Long answer type questions. Attempt any three questions out of four questions.  $3 \times 10 = 30$

Q.33 Explain various types of filter circuits and their applications.

Q.34 Explain MOSFET and its types and characteristics.

Q.35 Explain H-parameters of a transistor.

Q.36 Explain RC coupled amplifier and its frequency response and applications.

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