

B.Sc. (NEP) Sem.-3 Examination

DSC-C-231

Electronics

Time : 2-00 Hours]

November-2025

[Max. Marks : 50

Instructions: (1) Symbols used here have their usual meanings.
(2) Figures to the right indicate marks.

- Q-1 (a) Write notes on DRDO's achievements and programs (10)
OR
(a) Explain in detail: Scientific experiment of Jagdish Chandra Bose (10)
- Q-2 (a) Describe classification of amplifiers on different bases. (10)
OR
(a) Derive formula for the power efficiency of class B push-pull amplifier. (10)
- Q-3 (a) Explain static characteristics of JFET. (10)
OR
(a) Write a note on common source JFET amplifier. (10)
- Q-4 (a) Draw the block-diagram of a regulated power supply. Explain function of each block. (10)
OR
(a) What is filter? Explain series inductor filter in detail. (10)
- Q-5 Answer in brief (Attempt any ten out of twelve) (10)
- (1) State full form of DRDO.
 - (2) Mention any one program run by DRDO.
 - (3) What is Crescograph? Who has invented it?
 - (4) Draw the typical circuit diagram of transformer coupled class – A amplifier.
 - (5) What is cross-over distortion?
 - (6) Maximum theoretical power efficiency of class-A resistive load amplifier is _____%.
 - (7) Define: Gate of FET.
 - (8) FETs have high input impedance but low output impedance. Is this sentence true or false?
 - (9) In a JFET pinch-off means current-off. Is this sentence true or false?
 - (10) What is bleeder resistor?
 - (11) What is voltage regulation? Why it is required?
 - (12) A dc and an ac voltmeter were used to measure the output voltage from a filter circuit. If the readings of the two voltmeters are 25V and 2.5V respectively, calculate the ripple factor of the filter circuit.
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