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SUBJECT CODE NO: - BNP-2697
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. (NEP) (P-2024) S.Y Sem III
Examination November / December 2025
Electronics (Amplifiers)

[Time:1 Hour]**[Max. Marks:30]**

N. B

Please check whether you have got the right question paper.

1. Part A is compulsory followed by multiple choice questions..
2. In part B Solve any four questions from Q.2 to Q.7.
3. Figures to right indicate full mark.

PART-A**Q1 Attempt all of the following multiple Choice questions.****10**

- 1) The process of making operating point independent of temperature changes or Variation in transistor parameters is known as-----
 - a) Amplification
 - b) operating point
 - c) Stabilisation
 - d) Rectification
- 2) The inherent variation of transistor parameters may change the operating point result in-----
 - a) Faithful amplification
 - b) unfaithful amplification
 - c) Stabilization
 - d) Thermal runaway
- 3) 3) The ratio of current in the output circuit to a voltage at the input circuit is known as---
 - a) admittance
 - b) trans conductance
 - c) impedance
 - d) amplification factor
- 4) With voltage feedback amplifier, the Output resistance --- by the reciprocal of the return difference.
 - a) Decreases
 - b) Increases
 - c) no change
 - d) both a and b
- 5) -----is the range of frequency over which the gain is equal to or greater than 70.7% of maximum gain.
 - a) cut off frequency
 - b) upper cut off frequency
 - c) Lower cut-off frequency
 - d) Bandwidth

PART-B

- Q2** What is operating point? Explain it by using output characteristics of transistor **05**
- Q3** Describe the voltage divider bias method in detail. **05**
- Q4** Draw the hybrid model of common source FET amplifier. Derive expression for voltage gain. **05**
- Q5** Explain effect of feedback voltage on output resistance. Derive necessary formula. **05**

Q6 Draw h-parameter equivalent circuit for common base amplifier, derive expression for voltage gain and input resistance. **05**

Q7 Explain the terms: - **05**

- i) Gain
- ii) Frequency response.

