

RAN-2503000505049001 / 2503000505059001

T. Y. B. Sc. (NCF-NEP) (Sem. - V) Examination October - 2025
Small Signal Amplifier (New) Paper - EL-MNI-501

Time: 2 Hour]
[Total Marks: 25
સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
 Fill up strictly the above details on your answer book.

Seat No.:

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Student's Signature

- Q. 1. One word or short answer (Any Five) (05)**
- Why a transistor needs to be biased?
 - What are the limitations of base bias circuit?
 - What are the advantages of voltage divider bias.
 - What is a small signal amplifier?
 - Name the different configurations of BJT-based small signal amplifiers.
 - Which configuration is known as an emitter follower.
- Q. 2. Answer (Any Two) (10)**
- Explain the working of a fixed bias circuit.
 - What is thermal runaway? How can it be prevented in bias circuits?
 - Why is stability factor important in transistor biasing?
- Q. 3. Answer (Any Two) (10)**
- Compare common emitter, common base, and common collector amplifiers.
 - Draw and explain circuit of a common emitter amplifier.
 - Draw and label a two-stage RC coupled amplifier using BJT.