



RAN - 1903000203020091



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S. Y. B. Sc. (Electronics) (Sem. - III) Examination

March - 2023

Electronics : Paper - III

Electronics Circuits and Applications

Time: 1 Hour]

[Total Marks: 50

સૂચના : / Instructions

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of signs on your answer book

Name of the Examination:

S. Y. B. Sc. (Electronics) (Sem. - III)

Name of the Subject :

Electronics : Paper - III Electronics Circuits and Applications

Subject Code No.: **1903000203020091**

Seat No.:

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Student's Signature

- (2) Symbols used have their usual meaning.
- (3) Each MCQ Q. 1 to Q. 16 carries one mark.
- (4) Each MCQ Q. 17 to Q. 33 carries two marks.

***O.M.R. Sheet ભરવા અંગેની અગત્યની સૂચનાઓ આપેલ
O.M.R. Sheetની પાછળ છાપેલ છે.***

***Important instructions to fillup O.M.R. Sheet
are given on back side of the provided O.M.R. Sheet.***

SECTION - I

- Q. 1.** Which is beta independent biasing circuit?
- A) Fixed bias circuit B) Emitter bias circuit
C) Collector to base bias circuit D) Voltage divider bias circuit
- Q. 2.** The cause of small voltage gains for an RC coupled amplifier in the high frequency region compared to mid frequency region is due to
- A) Coupling capacitors B) Series capacitor
C) Shunt capacitor D) None
- Q. 3.** In bias compensation technique we can stabilize collector current due to variation in
- A) Temperature only
B) Transistor parameter only
C) Temperature and Transistor parameter
D) None
- Q. 4.** Hybrid equivalent circuit for transistor is a
- A) Small signal model B) Large signal model
C) Both A & B D) None
- Q. 5.** Trans-conductance factor g_m is related to
- A) BJT B) FET
C) UJT D) None
- Q. 6.** For FET input current is generally assumed to be
- A) Zero B) Infinity
C) Negative D) Positive

- Q. 7.** h_{fb} is
- A) A positive number B) A negative number
C) Zero D) None
- Q. 8.** Current gain (A_i) for CB amplifier is
- A) A positive number B) A negative number
C) Zero D) All the above
- Q. 9.** Input resistance for CE amplifier is
- A) Greater than h_{ib} B) Less than h_{ie}
C) Equal to h_{ib} D) Greater than h_{ie}
- Q. 10.** In class B amplifier the Q – point is located
- A) At the centre of the active region
B) Near the saturation region
C) Near the cut off region
D) Below the cut off region
- Q. 11.** CC amplifier is used as
- A) Voltage amplifier B) Current amplifier
C) Power amplifier D) Buffer
- Q. 12.** The co-ordinates of operating point of a small signal amplifier are
- A) (v_{ce}, i_c) B) $(-V_{CE}, I_C)$
C) (V_{CE}, I_C) D) $(-v_{CE}, i_C)$
- Q. 13.** What is the phase difference between input voltage and output voltage in a common emitter amplifier?
- A) 180 B) 360
C) 0 D) 90

SPACE FOR ROUGH WORK