5E28 40

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – Oct 2018

Course: B. Tech in Electronics and Telecommunications Engg. **Sem: III**

Subject Name: Electronic Devices and Circuits **Subject Code: BTEXC303**

Max Marks: 20 **Date:- 10/10/2018** **Duration:- 1 Hr.**

Instructions to the Students:

1. Verify that you got correct question paper.
2. Figures to right indicate full marks.
3. Assume suitable data wherever necessary.

Marks

Q. 1 Solve the following **6**

1. _____ is not a Region of operation for JFET?

   a) Cut-off b) Ohmic c) Saturation d) Linear

2. The voltage at which JFET goes into cut off is called as pinch off voltage.

   a) True b) False

3. The minimum gate source voltage that creates an inversion layer is called

   a) cut off voltage b) on voltage c) threshold voltage d) zener voltage

4. Common base is one of the configurations of MOSFET amplifier.

   a) True b) False

5. The bandwidth using negative feedback

   a) Increase b) Decreases c) Remains constant d) None of these

6. The overall gain can be increased using multi stage amplifier

   a) True b) False

Q.2 Solve Any Two of the following. **3 X 2**

a) Calculate the transconductance of a JFET when reverse gate to source voltage changes from 4V to 3.9V causes change in drain current from 1.3 mA to 1.6 mA.

b) List the biasing methods of MOSFET. Draw a neat circuit diagram of any two.

c) Compare and contrast: Voltage series feedback, Voltage shunt feedback, Current series feedback, Current shunt feedback.

Q. 3 Solve Any One of the following. **8**

a) Draw and explain the construction and working of n channel EMOSFET.

b) Analyze the effect of negative feedback on terminal characteristics of an amplifier.

***** End *****