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Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (Electrical & Electronics / Electronics & Electrical) (2018 Batch)
(Sem.-3)**ANALOG ELECTRONICS**
Subject Code : BTEEE-302-18
M.Code : 76464

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A**Write briefly :**

1. Define Slew Rate.
2. What is maximum collector efficiency of transformer coupled Class A power amplifier?
3. Open loop gain of amplifier is 60000 and closed loop gain with negative feedback is 300. If there is 10% distortion without feedback, calculate distortion with feedback.
4. Draw VI characteristics of BJT.
5. Differentiate between D-MOSFET and E-MOSFET.
6. What is meant by Gain Bandwidth Product?
7. What is Faithful Amplification?
8. Draw High Frequency model of MOSFET.
9. A transformer coupled Class A large signal amplifier has maximum and minimum values of collector emitter voltage of 25 V and 2.5 V. Determine its collector efficiency.
10. What is the use of the heat sink in power amplifiers?

SECTION-B

11. Discuss the methods to improve CMRR.
12. Mention the features and advantages of the wein bridge oscillator.
13. Prove that Maximum conversion efficiency of Class A transformer coupled amplifier is 50%.
14. Discuss the MOSFET characteristics in depletion mode.
15. Discuss the factors involved in the selection of I_C , R_C and R_E for a single stage common emitter BJT amplifier circuit, using voltage divider bias.

SECTION-C

16. What are Active Filters? Explain any two.
17. Compare the performance characteristics of three BJT configurations.
18. Derive the expression for voltage gain of differential amplifier with two op-amps.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.