

ANURAG Engineering College

(An Autonomous Institution)

II B.Tech I Semester Supplementary Examinations, Jan/Feb-2024

ELECTRONIC DEVICES AND CIRCUITS

(COMMON TO EEE (R18), ECE (R18) & CSE (R18&R15))

Time: 3 Hours**Max. Marks: 75****Section – A (Short Answer type questions)****(25 Marks)****Answer All Questions**

	Course Outcome	B.T Level	Marks
1. Explain about diffusion process	CO1	L1	2M
2. Classify the type of rectifiers and give the value of ripple factor of each rectifier	CO1	L2	3M
3. Explain the construction of PNP transistor.	CO2	L1	2M
4. Illustrate the characteristics of MOSFET.	CO2	L2	3M
5. Define stability factor.	CO3	L1	2M
6. Distinguish between BJT and field effect transistor	CO3	L2	3M
7. Compare BJT and FET amplifiers.	CO4	L2	2M
8. Distinguish between CS and CG in FET amplifier	CO4	L2	3M
9. Classify the type of feedback amplifiers	CO5	L2	2M
10. Demonstrate current series feedback amplifier and compute gain, Input resistance and output resistance	CO5	L2	3M

Section B (Essay Questions)**Answer all questions, each question carries equal marks.****(5 X 10M = 50M)**

11. A) Explain the characteristics of Tunnel diode.	CO1	L3	10M
OR			
B) Derive the expression for efficiency, ripple factor of Bridge rectifier with neat sketches.	CO1	L3	10M
12. A) Demonstrate CC input and output characteristics with neat sketches.	CO2	L3	10M
OR			
B) Illustrate the working of P-channel Enhancement MOSFET with its characteristics.	CO2	L3	10M
13. A) Demonstrate Potential divider bias circuit and derive its stability factor.	CO3	L3	10M
OR			
B) Explain the operation of fixed bias circuit with neat diagram and derive its stability factor.	CO3	L3	10M
14. A) Analyse the Hybrid model of CB configuration in terms of current gain, Voltage gain, Input resistance, output admittance.	CO4	L3	10M
OR			
B) Explain FET Common Drain amplifier with neat circuits and graphs.	CO4	L3	10M
15. A) Analyse the frequency of Wein's Bridge oscillator.	CO5	L3	10M
OR			
B) Explain RC phase shift oscillator with necessary derivations and diagrams.	CO5	L3	10M

