Guru Nanak Dev Engineering College, Ludhiana			
Department of Electronics and Communication Engineering			
Program	B.Tech.(ECE)	**Semester**	6
Subject Code	OEEC-102	**Subject Title**	Basics of Electronics and Communication
Mid Semester Test (MST) No.	1	**Course Coordinator(s)**	Pf. Harminder Kaur Pf. Simranjit Kaur
Max. Marks	24	**Time Duration**	1 hour 30 minutes
Date of MST	22nd March, 2022	**Roll Number**	1905322 / 1921023

Note: Attempt all questions

Q. No.	Question	COs, RBT level	Marks
Q1	Explain briefly the need of biasing in transistors	CO2, L2	2
Q2	In a CB configuration, the current amplification factor is 0.97. If the emitter current is 1 mA, Determine the value of base current	CO2, L5	2
Q3	Demonstrate the V-I characteristics of p-n junction diode	CO1, L2	4
Q4	Illustrate the working of zener diode as a voltage regulator	CO1, L2	4
Q5	Determine the hexadecimal equivalent of decimal number $(750.760)_{10}$	CO4, L5	4
Q6	a. Distinguish between the characteristics of CB, CE and CC configuration b. Solve the following subtraction using 1's complement method $(100101)_2 - (110110)_2$	CO2, CO4 L4, L5	4+4=8

Course Outcomes (CO)

Students will be able to

1	Apply the knowledge of working principle of diode for utilization in different applications.
2	Apply the knowledge of working principle of transistor for utilization in different applications.
3	Understand the basic concept of feedback in amplifiers and applying for designing LC and RC oscillators.
4	Comprehend the basic concept of Binary Number System and apply for Boolean problems.
5	Analyze performance of different types of analog modulation techniques.
6	Demonstrate the concepts of digital modulation techniques.

RBT Classification	Lower Order Thinking Levels (LOTS)			Higher Order Thinking Levels (HOTS)		
RBT Level Number	L1	L2	L3	L4	L5	L6
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating