(Please write your Enrollment Number) Enrollment No. 01401027022

End-Term Examination (Regular & Reappear)
(CBCS)(SUBJECTIVE TYPE)(OffLine)
Course Name:<B.Tech ECE>, Semester:<3>
(November-December, 2023)

Subject Code: BEC 203	Subject: Signals & Systems

Time :3 Hours Maximum Marks :60

Note:Q. 1 is compulsory. Attempt one question each from the Units I, II, III & IV.

Q1		(2.5*8=20)	
	(a) Difference between Static and Dynamic.		
	(b) What do you mean by Superposition principle ? Explain it with example.		
	(c) Check whether the signals are periodic or aperiodic-: I. Sin 30 πt II. Sinπt u(t)		
	(d) Explain the property Time shifting with example.		
	(e) Explain the difference between Linear and Non-Linear phase.		
	(f) Describe the properties of LTI system.		
	(g) Explain the properties of ROC.		
	(h) What do you mean by Aliasing?		
	UNIT-I		
Q2	State the Differences with example-: a) Even and Odd signals b) Continuous time signal and discrete time signals	(10)	
Q3	Draw the waveforms of the following signals-: a) $X_1(t)=u(t-2)$ b) $X_2(t)=u(t+3)$ c) $X_3(t)=u(-2t+1)$ d) $X_4(t)=u(-t)$ e) $X_5(t)=u(t)-2u(t-1)+u(t-3)$	(10)	
	UNIT-II		
Q4	Describe the properties of periodic signals in detail	(10)	
Q5	Find the Fourier transform of the signal g(t) defined by $g(t)=te^{-at}u(t)$	(10)	
	UNIT-III		
Q6	Explain the terms-: a) Group Delay b) Phase Delay	(10)	
Q7	What do you mean by All Pass system? Explain it with suitable diagrams.	(10)	
	UNIT-IV		
Q8	Explain the terms-: a) Sampling b) Interpolation	(10)	
Q9	Determine the Laplace transform of-: $X(t)= - e^{-2t}u(-t)+e^{-3t}u(-t)$	(10)	