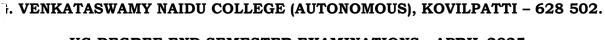
Reg. No.
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**COURSE TITLE** 



COMPONENT

SEM | CATEGORY

## **UG DEGREE END SEMESTER EXAMINATIONS - APRIL 2025.**

(For those admitted in June 2021 and later)

## PROGRAMME AND BRANCH: B.Sc., ELECTRONICS

**COURSE CODE** 

IV	PART-III		CORE ELECTIVE U21EL4E2A		E2A	ADVANCED COMMUNICATION SYSTEMS		
Date	& Sessi	ion: 25	.04.2025/FN Time :3 hours Maximum: 75 Marks					
Course Outcome	Bloom's K-level	Q. No.	<u>SECTION – A (</u> 10 X 1 = 10 Marks) Answer <u>ALL</u> Questions.					
CO1	K1	1.	The process of using a pulse signal to represent information is called				·	
			a) Pulse modulation b) Frequency modulation					
			-		d) Phase	) Phase modulation		
CO1	K2	2.	Quantizing noise occurs in.					
			a) Pulse width modulation		-	-	sion multiplexing	
			c) Pulse code modulation			-division r	nultiplexing	
CO2	K1	3.	QAM uses as the dimensions.					
			a) In phase & Quad	lrature	b) Qua			
			c) In phase		d) In cir	cle		
CO2	K2	4.	Whose bandwidth i	s Maximum?				
			a) ASK b)	PSK	c) FSK		d) DPSK	
CO3	K1	5.	A satellite cross – link means.					
			a) Earth – to – satellite link b) satellite – to – earth link					
			c) Satellite - to sate	ellite link	d) earth	n – to – ear	th link	
CO3	K2	6.	Point on the satellite orbits closest to the earth.					
			a) Apoge b)	perigee	c) progr	ade	d) zenith	
CO4	K1	7.	MIN stands for.					
			a) Mobile identification Number b) Mobile in internet					
			c) Mobility in Network d) Mobility in internet		rnet			
CO4	K2	8.	Which of the following usually stores all user related data that is also relevant			evant		
			to GSM mobile syst	tems?				
			a) VLR b)	HMR	c) CMR		d) SIM	
CO5	K1	9.	The term "HLR" sta	nds for the	· · · · · · · · · · · · · · · · · · ·		·	
			a) Home Location R			Location	Register	
			c) Home Live Register d) House Live Reg		Live Regi	ster		
CO5	K2	10.	The term TDM stan					
			a) Time Division Mu			Transfer	Division Multiplexi	ng
			c) Tedious Division	Multiplexing	d)	Television	n Divisions Multiple:	xing
Course	Bloom's K-level	Q. No.	SECTION - B (5 X 5 = 25 Marks) Answer ALL Questions choosing either (a) or (b)					
CO1	КЗ	11a.	Describe the elements of communication systems. (OR)					
CO1	КЗ	11b.	Compare PCM and DM systems.					

CO2	КЗ	12a.	Illustrate the function of coherent ASK detector. (OR)
CO2	КЗ	12b.	Describe the probability error of ASK and FSK.
CO3	K4	13a.	State and explain the Kepler's law. (OR)
CO3	K4	13b.	Discuss global positioning system and its applications.
CO4	K4	14a.	Explain the concept of frequency reuse. (OR)
CO4	K4	14b.	Analyze how will improve coverage and capacity in cellular communication.
CO5	K5	15a.	Evaluate the performance of CDMA technology. (OR)
CO5	K5	15b.	Explain the difference between wireless and fixed telephone networks.

Course	Bloom's K-level	Q. No.	$\frac{\text{SECTION} - C \text{ (5 X 8 = 40 Marks)}}{\text{Answer } \frac{\text{ALL}}{\text{Questions choosing either (a) or (b)}}$
CO1	КЗ	16a.	Explain in detail the function of differential pulse code modulation with neat diagram.
			(OR)
CO1	КЗ	16b.	Explain the function of delta modulation and its drawback.
CO2	K4	17a.	Describe the operation of non-coherent FSK with neat sketch.  (OR)
CO2	K4	17b.	Describe the operation of coherent reception of QPSK with neat sketch.
CO3	K4	18a.	Discuss in detail about transponders in satellite communication. (OR)
CO3	K4	18b.	Evaluate the efficiency of Direct-to-Home (DTH) broadcasting systems.
CO4	K5	19a.	Briefly explain the concept of hand off strategies and explain its types.  (OR)
CO4	K5	19b.	Explain in detail the cell splitting and cell sectoring concept in cellular communication.
CO5	K5	20a.	Compare FDMA with TDMA. (OR)
CO5	K5	20b.	Draw the architecture of GSM and explain in detail.