1311E1130

Candidate's Seat No :_____

B.Sc. (NEP) Sem.-5 Examination

DSC-C-351

Electronics

November-2025

Time : 2-00 Hours] **[Max. Marks : 50**

	Instructions (1) All questions carry equal marks. **(2) Symbols used have their meanings as usual:**	
Q-1		
A)	Explain history of fiber optics	05
B)	Explain refraction and reflection with suitable figure	05
	OR	
Q-1		
A)	Explain fiber optics characteristics and classification	05
B)	Explain dispersion and diffraction with suitable figure	05
Q-2		
A)	What is the process of modulation ?Derive the expression for amplitude modulated voltage	05
B)	Draw the Wave form of amplitude modulated voltage and derive the equation $m_a=\frac{Ecmax-Ecmin}{Ecmax+Ecmin}$	05
	OR	
Q-2		
A)	Derive the necessary equation for total power in the modulated wave in amplitude modulation	05
B)	Derive $e=E_c \sin[\omega_c t + \theta_d \sin \omega_m t]$ for phase modulation	05
Q- 3		
A)	What is internet protocols? Explain various types of connections	05
B)	Explain various types of internet addressing scheme	05
	OR	
Q-3		
A)	Discuss features of the wireless communication	05
B)	Explain cellular technology concept with suitable figure	05
Q-4		
A)	Explain inverting and non-inverting summing amplifier with suitable figure	05
B)	Write notes on full wave rectifier application using op-amp	05
Q-4	**OR**	
A)	Explain voltage to current converter with suitable circuit diagram	05
B)	Write notes on comparator	05
Q-5	**Attempt any ten out of twelve**	10
1	Compare copper cable system and optical fiber system	
2	Write any two main advantages of fiber optics	
3	What is fiber losses?	
4	What is the need of modulation?	
5	Define Amplitude modulation	
6	What is signal to noise ratio?	
7	What is World Wide Web?	
8	What is wireless communication?	
9	What is mobile phone?	
10	What is phase shift circuits?	
11	What is the function of peak detector?	
12	What is op-amp clipper?	