3007M24   Candidate's Seat No :_____

B.Sc. Sem.-6 Examination
CC - 309
Electronics

Time : 2-00 Hours]   July 2021   [Max. Marks : 50

Instructions:
1) All questions in **Section-I** carry equal marks
2) .Attempt any **THREE** questions in Section-I
3) Question IX in **section II is COMPULSORY**

	Section-I	
Q. 1		
A)	Why we use fiber optics ? Explain history of the fiber optics in detail	07
B)	Explain term reflection and refraction in detail	07
Q-II		
A)	Explain term dispersion and diffraction. in detail with suitable figure.	07
B)	Write notes on absorption and Scattering	07
Q.III		
A)	Draw the block diagram of TRF receiver and explain each block	07
B)	Draw the block diagram of Super Heterodyne Receiver and explain each block	07
Q.IV		
A)	Explain RF section and characteristics of AM receiver	07
B)	What is intermediate frequencies and IF Amplifiers? Explain in detail	07
Q. V		
A)	Write notes on television Systems and Standards	07
B)	Explain beam scanning in black and white television transmission	07
Q-VI		
A)	What is blanking and synchronizing pulses in black and white television transmission? Explain in detail with figure.	07
B)	Write notes on Color reception of television	07
Q.VII		
A)	What is digital communication? explain fundamental of digital communication in detail	07
B)	Explain he emergence of data communications systems.	07
Q.VIII		
A)	Explain characteristics of data transmission in detail.	07
B)	Write notes on digital code	07
	Section-II	
Q-IX	**Attempt any eight**	08
(A)	1958 Charles Townes and Arthur Schawlow of _____ Laboratories had theorized the use of the laser as an intense light source	
(B)	A single fiber can handle as many voice channels as a _____ pair cable can	
(C)	_____ is the bending of light as it passes through an opening in an obstacle	
(D)	Reflections in many directions are called _____	
(E)	Full form of AGC is _____	
(F)	The super heterodyne receiver is tuned to _____ kHz	

(P.T.O)

(G)	Consider a tuned circuit required to have a bandwidth of 10 kHz at a frequency of 525 kHz. The Q of this circuit must be	
(H)	In super heterodyne receiver A high value of intermediate frequency increases	
(I)	American Standards of Major Television Systems, channel width=____ MHz	
(J)	European Standards of Major Television Systems, number of frame per second=	
(K)	Full form of NTSC is=	
(L)	Full form of PAL is=	
(M)	Beginning in 1964, a _____ generation of computers began .to emerge	
(N)	The Shannon-Hartley law is related to _____ noise	
(O)	The Baudot code is a _____-bit code which has been used in telegraphy and paper-tape systems	
(P)	Full form of ENIAC is =	