BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)
B.Tech.Sem - VIII ELECTRONIC : WINTER- 2022
SUBJECT : OPTICAL FIBER COMMUNICATION

Day : Thursday
Date : 24-11-2022

W-13401-2022

Time : 02:30 PM-05:30 PM
Max. Marks : 60

N.B.
1) All questions are **COMPULSORY**.
2) Figures to the **RIGHT** indicate **FULL** marks.
3) Assume suitable data **WHEREVER** necessary.

Q.1 Explain ray theory in optical transmission. **(10)**

OR

Q.1 **a)** Write in brief on scattering losses. **(05)**
b) What are the advantages of optical fiber communication over other communication system? **(05)**

Q.2 Explain LED drive circuits for analog communication. **(10)**

OR

Q.2 **a)** Write in brief on optical transmitter. **(05)**
b) Write in brief on line coding. **(05)**

Q.3 Explain system design considerations in optical communication. **(10)**

OR

Q.3 **a)** Write in brief on P-N Photodiode. **(05)**
b) Write in brief on Avalanche Photodiode. **(05)**

Q.4 **a)** Write in brief on Raman Amplifier. **(05)**
b) Write in brief on Time Division Multiplexing. **(05)**

OR

Q.4 Explain in brief types of optical amplifier and its application. **(10)**

Q.5 **a)** Write in brief on Isolators and circulations. **(05)**
b) Write in brief on Network topology. **(05)**

OR

Q.5 **a)** Explain fiber optic splices. **(05)**
b) Write in brief on optical coupler. **(05)**

Q.6 **a)** Write in brief on OTDR. **(05)**
b) What are reflectance and return loss measurements? **(05)**

OR

Q.6 Explain in brief applications of optical fiber communications. **(10)**

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