BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)

CLASS: BE   SEMESTER: V
BRANCH: IT   SESSION : MO/2019

SUBJECT : IT5021 DATA COMMUNICATION

TIME: 1.5 HOURS   FULL MARKS: 25

INSTRUCTIONS:
1. The total marks of the questions are 30.
2. Candidates may attempt for all 30 marks.
3. In those cases where the marks obtained exceed 25 marks, the excess will be ignored.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. The missing data, if any, may be assumed suitably.

Q1	(a)	Define the protocol.	[2]
	(b)	Write the similarities between OSI and TCP/IP models.	[3]
Q2	(a)	Define the PDU.	[2]
	(b)	Explain the exchange of information using the OSI model through a suitable diagram.	[3]
Q3	(a)	How we can reduce the thermal noise, delay distortion?	[2]
	(b)	The bandwidth of a channel is 2 MHz and its signal to noise ratio is 63. Calculate the appropriate bit rate and signal level.	[3]
Q4	(a)	What is the difference between wired media and wireless media?	[2]
	(b)	Explain the different types of twisted-pair cables.	[3]
Q5	(a)	What is baseline wander?	[2]
	(b)	Explain the NRZ, NRZI, Manchester encoding using an example for bits 0010111101000010.	[3]
Q6	(a)	Define the data rate and modulation rate.	[2]
	(b)	What factors determine how successful the receiver will be in interpreting the incoming signal?	[3]