

# PURBANCHAL UNIVERSITY

2021

Bachelor in Information Technology (B.I.T.)/Fifth Semester/Final

Time: 03:00 hrs.

Full Marks: 60 /Pass Marks: 24

**BIT372CO: Data Communication (New Course)**

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

## Group A

Answer TWO questions.

2×12=24

1. Define Data Communication System with the help of simple communication model. What are the major communication tasks in Data Communication? 6+6
2. What is symbol? Define bit rate and baud rate. Explain synchronous and asynchronous mode of data transfer with their data formats and mention possible errors. 2+2+4+4
3. What is parity check for error detection? Define burst formatting. Explain *Digital Data-Analog Signal Encoding Techniques* with their types along with figures and necessary expressions. 1+2+3+3+3

## Group B

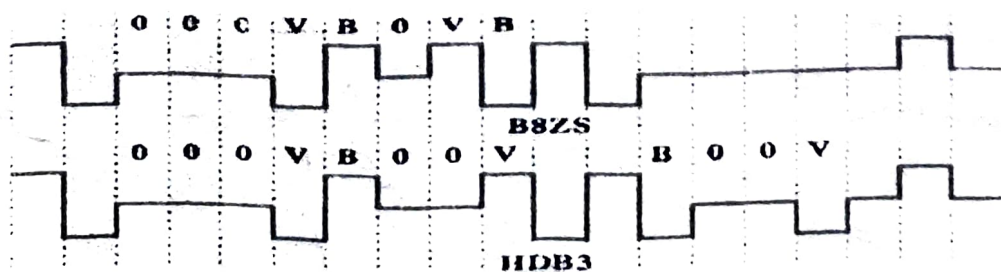
Answer SIX questions.

6×6=36

4. Calculate the maximum data rate of the telephone channel if SNR is specified to be 32 dB. If the data is represented by 512 levels, what will be the Nyquist data rate? 4+2

Or

Decode the following B8ZS and HDB3 coding into a Digital Binary form. 3+3



Contd.