VIT
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act 1956)

SCHOOL OF INFORMATION TECHNOLOGY & ENGINEERING

Continuous Assessment Test – 1
Winter Semester 2019-20

Programme: B.Tech

Course Name: Data Communication and Computer Networks

Course Code: ITE3001

Duration: 90 Minutes.

Max. Marks: 50

Course Mode: CAL

Slot: A1 + TA1

PART – A

Answer all the questions (5 X 10 = 50)

1. A sender needs to send the four data items Ox3456, OxABCC, Ox02BC, and OxEEEE. Answer the following:
   a. Find the checksum at the sender site.
   b. Find the checksum at the receiver site if there is no error.
   c. Find the checksum at the receiver site if the second data item is changed to OxABCE.
   d. Find the checksum at the receiver site if the second data item is changed to OxABCE and the third data item is changed to Ox02BA.

2. How unguided media differs from guided media? Explain any four unguided media with neat sketch.

3. Given the dataword 1010011110 and the divisor 10111,
   a. Show the generation of the codeword at the sender site (using polynomial division).
   b. Show the checking of the codeword at the receiver site (assume no error).

4. State the goals of multiplexing. List and explain the three types multiplexing with neat sketch.

5. How do you relate OSI and ISO to each other? Analyze the necessity of Layered architecture? Which layer is responsible for the following? Discuss the respective layer functions, Services and protocols
   i. Node to node delivery
   ii. Process to process delivery