

GUJARAT TECHNOLOGICAL UNIVERSITY**MCA (INTEGRATED) - SEMESTER-IV EXAMINATION – WINTER 2020****Subject Code:2648603****Date:06/02/2021****Subject Name:Computer Networking****Time:02:00 PM to 04:00 PM****Total Marks: 56****Instructions:**

1. Attempt any **FOUR** questions out of **EIGHT** questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a) Write any seven. 07**
1. Baud Rate
 2. Filters
 3. Write one disadvantage of layering scheme.
 4. Difference between OSI and TCP/IP
 5. Fourier Component
 6. Define Microwaves.
 7. Write full form of RED.
 8. Composite Signal
- (b) Do as directed:**
1. Difference between connection oriented vs. connection less. **03**
 2. Explain framing techniques. Explain any one technique in detail with example. **04**
- Q.2 (a) What is OSI Model? Explain the functions and protocols and services of each layer? 07**
- (b) Define a Computer Network. Explain categories of Computer Networks in detail. 07**
- Q.3 (a) What is modulation, Explain different section of modulation? 07**
- (b) Explain Propagation mode of Fiber Optic cable. 07**
- Q.4 (a) Show why FDM and TDM are not suitable for bursty data. 07**
- (b) Generate CRC for frame 1101011011 using generator 10011. 07**
- Q.5 (a) What is hidden station and exposed station problem? Give the solution. 07**
- (b) Discuss in brief about sliding window protocols 07**
- Q.6 (a) Show how the binary exponential algorithm works. 07**
- (b) How does DCF communication works using RTS and CTS? 07**
- Q.7 (a) Explain DV and LS routing algorithms. 07**
- (b) What is congestion? How is congestion controlled in virtual circuit Network?. 07**
- Q.8 (a) What is IPsec? Discuss its usefulness? 07**
- (b) What is two-army or two general problem? How is it related to connection closing? 07**
