

University of Mumbai

Examinations Summer 2022

Program: Electronics and Telecommunication Engineering

Curriculum Scheme: Rev 2016

Examination: TE Semester VI

Course Code: ECC 602 and Course Name: Computer Communication Engineering (CCN)

Time: 2hour 30 minutes Max. Marks: 80

| Q1. | Choose the correct option for following questions. All the Questions are compulsory and carry equal marks |
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| 1. | For STOP and WAIT ARQ, if 10 data packets are sent,acknowledgements are needed. |
| Option A: | Exactly 10 |
| Option B: | Less than 10 |
| Option C: | Greater than 10 |
| Option D: | Exactly 5 |
| 2. | The following is a dump of a UDP header in hexadecimal format - CB8400D001C001C. Then what will be the source and destination port number. |
| Option A: | 52100, 13 |
| Option B: | 13,52100 |
| Option C: | 28,13 |
| Option D: | 52100,28 |
| 3. | If you wanted to have 12 subnets with a Class C network ID, which subnet mask would you use? |
| Option A: | 255.255.255.252 |
| Option B: | 255.255.255.255 |
| Option C: | 255.255.255.240 |
| Option D: | 255.255.255.248 |
| 4. | Protocols in which the desire to transmit is broadcast before the actual transmission are called as |
| Option A: | Reservation Protocol |
| Option B: | Aloha Protocol |
| Option C: | Bit Map protocol |
| Option D: | TCP Protocol |
| 5. | If maximum network layer payload size is 1500 Bytes, what is the maximum TCP payload size? |
| Option A: | 1540 |
| Option B: | 1460 |
| Option C: | 1480 |
| Option D: | 1520 |
| 6. | 802.11 wireless networking uses ----- as the media of access. |
| Option A: | CSMA/CD |
| Option B: | CTS/RTS |
| Option C: | CSMA/CA |
| Option D: | CSCD/CA |

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| 7. | Which is the Class E address in this |
| Option A: | 00000011 00001011 00001011 11101111 |
| Option B: | 10000001 10000011 00011011 11101111 |
| Option C: | 16.23.110.7 |
| Option D: | 250.5.15.122 |
| 8. | Which of the following devices modulates digital signals into analog signals that can be sent over traditional telephone lines? |
| Option A: | Router |
| Option B: | Gateway |
| Option C: | Switch |
| Option D: | Modem |
| 9. | Encryption and Decryption are the functions of the following layer of OSI model. |
| Option A: | Transport |
| Option B: | Session |
| Option C: | Data link layer |
| Option D: | Presentation |
| 10. | In segment header, sequence number and acknowledgement number fields refer to----- |
| Option A: | Byte number |
| Option B: | Buffer number |
| Option C: | Segment number |
| Option D: | Acknowledgment |

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| Q2 (20 Marks Each) | Solve any Two Questions out of Three 10 marks each |
| A | Explain the Link State Routing Algorithm. |
| B | Explain the Sliding Window Protocol. |
| C | Draw and Explain the TCP segment Header. |

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| Q3 (20 Marks Each) | Solve any Two Questions out of Three 10 marks each |
| A | Explain the function of Repeater, hub, bridge, routers and switches in details and mention in which layer they work. |
| B | Explain TCP Connection Establishment and TCP Connection Release. |
| C | Explain in detail the physical media used for computer communication. |

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| Q4 (20 Marks Each) | Solve any Two Questions out of Three 10 marks each |
| A | Explain HDLC frame format. Describe configuration and response modessupported by HDLC protocol. |
| B | Discuss various scheduling medium access control techniques. |
| C | <p>An ISP is granted a block addresses starting with 190.100.0.0/16 (65536 addresses).The ISP needs to distribute these addresses to three groups of customers as follows :</p> <ol style="list-style-type: none"> The first group has 64 customers, each needs 256 addresses The second group has 128 customers , each needs 128 addresses The third group has 128 customers, each needs 64 addresses <p>allocate the sub-blocks and find out how many addresses are still available after these allocations.</p> |