| Register Number | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

# SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

*SRM Nagar, Kattankulathur – 603203, Chengalpattu District, Tamil Nadu*

Set - B

## College of Engineering and Technology

### School of Computing

**Academic Year: 2021-22 (Even)**

| | | | |
|---|---|---|---|
| **Test** | **:** CLA-T3 | **Date** | **:** 24-06-2022 |
| **Course Code & Title** | **:** 18CSS202J - Computer Communications | **Duration** | **:** 100 Minutes (2 Periods) |
| **Year & Sem** | **:** II Year / IV Sem | **Max Marks** | **:** 50 |

**Course Articulation Matrix:**

| S.No. | Course Outcome | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CO1 | 3 | - | - | - | - | - | - | - | - | - | - | 3 |
| 2 | CO2 | 3 | 2 | 3 | - | - | - | - | - | - | - | - | 3 |
| 3 | CO3 | 3 | 3 | 3 | - | - | - | - | - | - | - | - | 3 |
| 4 | CO4 | 3 | 2 | - | - | - | - | - | - | - | - | - | 3 |
| 5 | CO5 | 3 | - | - | - | - | - | - | - | - | - | - | 2 |
| 6 | CO6 | 3 | 3 | 3 | - | - | - | - | - | - | - | - | 3 |

Part – A (20 x 1 = 20 Marks)

Instructions: 1) Answer ALL questions. 2) The duration for answering the part A is 30 minutes (this sheet will be collected after 30 minutes). 3) Encircle the correct answer 4) # denotes the type of the question is “fill in the blank”

| Q. No | Question | Marks | BL | CO | PO | PI Code |
|---|---|---|---|---|---|---|
| 1 | _____ control refers to methods of error detection and correction.<br>A. Flow B. Error C. Transmission D. Data Control | 1 | 1 | 4 | 1 | 1.7.1 |
| 2 | In the sliding window method of flow control, the receiver window _____ size when an ACK is sent.<br>A. increases in B. decreases in<br>C. doubles in D. remains its original | 1 | 2 | 4 | 1 | 1.7.1 |
| 3 | A sender has a sliding window of size 15. The first 10 frames are sent. How many frames are in the window now?<br>A. 4 B. 5 C. 6 D. 10 | 1 | 3 | 4 | 2 | 2.6.3 |
| 4 | The _____ is the regulation of the amount of data that can be sent.<br>A. Line discipline B. Flow control<br>C. Error control D. Data flow | 1 | 1 | 4 | 1 | 1.7.1 |
| 5# | ARQ stands for _____ | 1 | 1 | 4 | 1 | 1.7.1 |
| 6 | In the _____ Protocol, if no acknowledgment for a frame has arrived, we resend all outstanding frames.<br>A. Stop-and-Wait ARQ B. Go-Back-N ARQ<br>C. Selective-Repeat ARQ D. both A & B | 1 | 1 | 4 | 1 | 1.7.1 |
| 7 | In block coding, the message is divided into blocks, each of k bits, called _____<br>A. blockwords B. datawords C. blocks D. Data | 1 | 2 | 4 | 2 | 2.6.3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 8 | The Hamming distance between equal codewords is _____<br>A. 1 B. n C. 0 D. 2 | 1 | 1 | 4 | 1 | 1.7.1 |
| 9 | In _____ methods, no station is superior to another station and none is assigned the control over another<br>A. random access B. controlled access<br>C. channelization D. serial access | 1 | 1 | 4 | 1 | 1.7.1 |
| 10 | PPP consists of _____components<br>A. One B. Two C. Three D. Four | 1 | 1 | 4 | 1 | 1.7.1 |
| 11 | In _____ forwarding, the mask and destination addresses are both 0.0.0.0 in the routing table<br>A. next-hop B. network-specific<br>C. host-specific D. default | 1 | 1 | 6 | 1 | 1.7.1 |
| 12 | A _____ routing table contains information entered manually.<br>A. static B. dynamic C. hierarchical D. hybrid | 1 | 1 | 6 | 1 | 1.7.1 |
| 13 | The input and output ports of a router perform the _____ layer functions of the router.<br>A. physical and data link B. network<br>C. transport D. session | 1 | 1 | 6 | 1 | 1.7.1 |
| 14 | The Routing Information Protocol is an intradomain routing based on _____ routing.<br>A. distance vector B. link state<br>C. path vector D. vector | 1 | 1 | 6 | 1 | 1.7.1 |
| 15 | To create a neighborhood relationship, a router running BGP sends an _____ message.<br>A. open B. update C. keep alive D. connect | 1 | 1 | 6 | 1 | 1.7.1 |
| 16 | Which command displays RIP routing updates?<br>A. Show IP route B. Debug IP rip<br>C. Show protocols D. Debug IP route | 1 | 1 | 6 | 1 | 1.7.1 |
| 17 | Where are EIGRP successor routes stored?<br>A. In the routing table only B. In the neighbor table only<br>C. In the topology table only<br>D. In the routing table and the topology table | 1 | 1 | 6 | 1 | 1.7.1 |
| 18 | Which routing method best describes BGP?<br>A. distance vector B. link-state<br>C. path-vector<br>D) hybrid of link-state and distance vector | 1 | 1 | 6 | 1 | 1.7.1 |
| 19 | Count-to-Infinity problem occurs in _____<br>A. distance vector routing B. short path first<br>C. link state routing D. hierarchical routing | 1 | 1 | 6 | 1 | 1.7.1 |
| 20 | In OSPF header, which field is used to detect errors in the packet?<br>A. Type B. Area ID<br>C. Authentication type D. Checksum | 1 | 1 | 6 | 1 | 1.7.1 |

| Register Number | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

# SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

*SRM Nagar, Kattankulathur – 603203, Chengalpattu District, Tamil Nadu*

Set - B

## College of Engineering and Technology

### School of Computing

**Academic Year: 2021-22 (Even)**

| | | | |
|---|---|---|---|
| **Test** | : CLA-T3 | **Date** | : 24-06-2022 |
| **Course Code & Title** | : 18CSS202J - Computer Communications | **Duration** | : 100 Minutes (2 Periods) |
| **Year & Sem** | : II Year / IV Sem | **Max Marks** | : 50 |

**Part – B (2 x 5 = 10 Marks)**

**Instructions: Answer ALL questions**

| Q. No | Question | Marks | BL | CO | PO | PI Code |
|---|---|---|---|---|---|---|
| 21 | Compare and contrast byte-stuffing and bit-stuffing. Which technique is used in byte-oriented protocols and bit-oriented protocols? | 5 | 2 | 4 | 1 | 1.7.1 |
| 22 | Contrast and compare distance vector routing with link state routing. | 5 | 2 | 6 | 1 | 1.7.1 |

**Part – C (2 x 10 = 20 Marks)**

**Instructions: Answer ALL questions**

| Q. No | Question | Marks | BL | CO | PO | PI Code |
|---|---|---|---|---|---|---|
| 23. A | Illustrate the design mechanism for Stop-and-Wait Protocol and explain in detail with example. | 10 | 2 | 4 | 1 | 1.7.1 |
| | **Or** | | | | | |
| 23. B.i. | Assuming even parity, find the parity bit for the data unit 1 0 0 0 0 0 0 | 2 | 3 | 4 | 2 | 2.6.3 |
| 23. B.ii. | Given the dataword polynomial $x^7 + x^5 + x^2 + x + 1$ and the divisor polynomial $x^4 + x_2 + x + 1$, Show the generation of the codeword polynomial at the sender site (using binary division). | 8 | 3 | 4 | 2 | 2.6.3 |
| | | | | | | |
| 24. A | Illustrate the working of distance vector protocol with example. | 10 | 1 | 6 | 1 | 1.7.1 |
| | **Or** | | | | | |
| 24. B | Describe the Border Gateway Protocol with example. | 10 | 2 | 6 | 1 | 1.7.1 |

**Course Outcome (CO) and Bloom's level (BL) Coverage in Questions**