

[illegible]

**SRM Institute of Science and Technology**  
**College of Engineering and Technology**  
**School of Computing**

Set - A

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

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

Test: CLA-T2

Date: 30-05-2022

Course Code & Title: 18CSS202J - Computer Communications

Duration: 100 Minutes (2 Periods)

Year & Sem: II Year / IV Sem

Max. Marks: 50

**Course Articulation Matrix:**

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**Part - A**

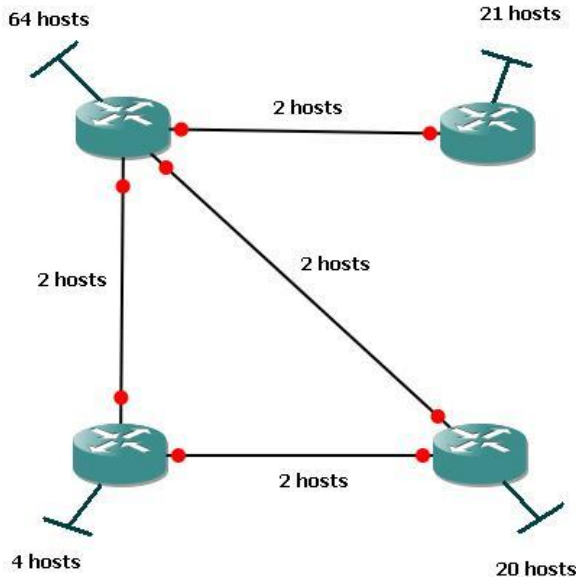
**(20 x 1 = 20 Marks)**

**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 more than one choice may be correct**

| Q. No | Question   | Marks | BL | CO | PO | PI Code |
|-------|--|-------|----|----|----|---------|
| 1     | In IPV4 address, Class A uses _____ bits for net ID and _____ bits for host ID<br>a) 8, 24                      b)16, 16                      c)15, 17                      d)24, 8  | 1     | 1  | 3  | 1  | 1.7.1   |
| 2     | How many possible addresses per network are there in a class C of an IPv4 address?<br>a) 65536                      b) 128                      c) 256                      d) 2097152   | 1     | 1  | 3  | 1  | 1.7.1   |
| 3     | Choose the binary notation of the IPv4 address 145.101.168.123<br>a) 01111011 10101000 01100101 10010001<br>b) 10010011 01100111 10101001 01111001<br>c) 10010001 01100101 10101000 01111011<br>d) 10010001 01100111 11101000 11111011                     | 1     | 2  | 3  | 2  | 2.6.3   |
| 4     | Choose the class of the given IPV4 address<br>128.28.12.128<br>a) A      b) B      c) C      d) D  | 1     | 1  | 3  | 1  | 1.7.1   |
| 5     | Find the number of addresses in 192.168.10.26/26.<br>a) 16    b) 32    c) 64    d)128  | 1     | 2  | 3  | 1  | 1.7.1   |
| 6     | In IPv4 datagram header there are many fields and one of the field is Time to Live -TTL. This field is used to _____<br>a) optimize throughput                      b) reduce delay<br>c) set priority for packets                      d) prevent looping | 1     | 2  | 3  | 1  | 1.7.1   |

|     |  |   |   |   |   |       |
|-----|--|---|---|---|---|-------|
| 7   | The block 224.0.0.0/4 has the _____.<br>a) Multicast Addresses                      b) loopback address<br>c) limited broadcast address              d) first address  | 1 | 2 | 3 | 1 | 1.7.1 |
| 8 * | Router operates at layer (s) ____ of the OSI model.<br>a) Physical Layer                      b) Network Layer<br>c) Session Layer                      d) Presentation Layer  | 1 | 2 | 3 | 1 | 1.7.1 |
| 9   | A _____ is a device in which the stations are completely unaware of its existence.<br>a) passive hub                      b) repeater<br>c) simple bridge                      d) transparent bridge   | 1 | 1 | 3 | 1 | 1.7.1 |
| 10  | Slash Notation is also called as CIDR. CIDR stands for _____.<br>a) Classful inter-domain routing<br>b) Classless inter-domain routing<br>c) Classful intra-domain routing<br>d) Classless intra-domain routing  | 1 | 1 | 3 | 1 | 1.7.1 |
| 11  | The Amplitude shift keying is used to convert the _____.<br>a) digital signal into analog data<br>b) analog data into digital signal<br>c) digital data into analog signal<br>d) analog signal into digital data   | 1 | 1 | 4 | 1 | 1.7.1 |
| 12  | In _____ the signal levels are on one side of the time axis, either above or below.<br>a) Unipolar              b) Polar                      c) Bipolar                      d) Multilevel  | 1 | 1 | 4 | 1 | 1.7.1 |
| 13  | The _____ is the number of signal elements sent in 1s.<br>a) data rate              b) signal rate              c) pulse rate              d) message rate   | 1 | 1 | 4 | 1 | 1.7.1 |
| 14  | In Binary ASK, the peak amplitude of one signal level is _____ and the other is _____.<br>a) 0, same as the amplitude of the carrier frequency<br>b) same as the amplitude of the carrier frequency, 1<br>c) 1, same as the amplitude of the carrier frequency<br>d) same as the amplitude of the carrier frequency, 0 | 1 | 1 | 4 | 1 | 1.7.1 |
| 15  | Calculate the value of the signal rate for the case "One data element per one signal element" if the data rate is 1 Mbps and $c = 1/2$ .<br>a) 500 Kbaud              b) 1 Mbaud                      c) 250 Kbaud              d) 375 Kbaud   | 1 | 3 | 4 | 2 | 2.6.3 |
| 16  | Which multiplexing technique transmits analog signals?<br>a) TDM                      b) FDM                      c) CDM                      d) SDM   | 1 | 1 | 4 | 1 | 1.7.1 |
| 17  | In _____ synchronous TDM, the data flow of each input connection is divided into units, where each input occupies one input time slot.<br>a) Synchronous TDM                      b) Synchronous FDM<br>c) Synchronous CDM                      d) Synchronous SDM   | 1 | 1 | 4 | 1 | 1.7.1 |
| 18  | If there are n signal sources of same data rate, then the TDM link has _____ slots.<br>a) 2n                      b) n/2                      c) n*2                      d) n   | 1 | 2 | 4 | 1 | 1.7.1 |
| 19  | The Polar Return to Zero scheme uses _____ voltage values.<br>a) 1                      b) 2                      c) 3                      d) 4   | 1 | 1 | 4 | 1 | 1.7.1 |
| 20  | In cable television, many television channels are carried simultaneously on a single cable - which multiplexing is used in cable television?<br>a) TDM                      b) FDM              c) CDM                      d) Synchronous TDM   | 1 | 3 | 4 | 1 | 1.7.1 |



|       |   |    |   |   |   |       |
|-------|---|----|---|---|---|-------|
| Or    |   |    |   |   |   |       |
| 23. B | <p>Solve the below-given scenario using VLSM for the network 192.168.10.0 and list out the addressing range of all subnets in detail.</p>  | 10 | 3 | 3 | 2 | 2.6.3 |
| 24. A | <p>Explain Unipolar NRZ, Polar NRZ and RZ encoding schemes with suitable diagram.</p>   | 10 | 2 | 4 | 1 | 1.7.1 |
| Or    |   |    |   |   |   |       |
| 24. B | <p>With an appropriate example, explain the Frequency shift keying mechanism.</p>   | 10 | 2 | 4 | 1 | 1.7.1 |

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

