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| **Velegapudi Ramakrishna Siddhartha Engineering College::Vijayawada**  **(Autonomous)**  III /IV B Tech Degree Examinations(Month/Year)  Fifth Semester  **Department of Information Technology**  **20IT5301:COMPUTER NETWORKS** | | | | | | | |
| Time:3Hrs | | | **MODEL QUESTION PAPER** | | Max Marks:70 | | |
| Part – A is Compulsory  Answer one (01) question from each unit of Part – B  Answers to any single question or its part shall be written at one place only | | | | | | | |
| ***Cognitive Levels(K): K1-Remember;K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create*** | | | | | | | |
| **Q. No** | | **Question** | | **Marks** | | **Course Outcome** | **Cog. Level** |
| **Part - A** | | | | **10X1=10M** | | | |
| 1 | a | **Define Point-to-point networks?** | | 1 | CO1 | | K1 |
|  | b | **List the differences between OSI and TCP reference models** | | 1 | CO1 | | K2 |
|  | c | **Do routers have IP addresses? If so, how many?** | | 1 | CO3 | | K4 |
|  | d | **Write the purpose of cookies?** | | 1 | CO4 | | K4 |
|  | e | **How is Host aliasing used?** | | 1 | CO4 | | K1 |
|  | f | **Convert the IP address 223.1.3.27** **in to 32-bit binary equivalent.** | | 1 | CO3 | | K3 |
|  | g | **What is subnet?** | | 1 | CO3 | | K4 |
|  | h | **Discuss single-hop infrastructure based wireless networks** | | 1 | CO2 | | K2 |
|  | I | **Why network need security?** | | 1 | CO2 | | K4 |
|  | j | **Define firewall** | | 1 | CO2 | | K1 |
| **Part - B** | | | | **4X15 =60M** | | | |
| **UNIT - I** | | | | | | | |
| 2 | a | **“Computer networks are useful for real time applications”, Justify.** | | 8M | CO1 | | K4 |
|  | b | **Describe in brief the design issues for the layers** | | 7M | CO1 | | K4 |
| **(OR)** | | | | | | | |
| 3 | a | **Explain in detail about OSI Reference Model with neat sketch.** | | 10M | CO1 | | K2 |
|  | b | **Differentiate a circuit-switched network with a packet-switched network.** | | 5M | CO1 | | K2 |
| **UNIT - II** | | | | | | | |
| 4 | a | **Outline the general formats of HTTP request and response message for a web page** | | 8M | CO4 | | K1 |
|  | b | **Summarise the process of how people send and receive messages with SMTP.** | | 7M | CO4 | | K2 |
| **(OR)** | | | | | | | |
| 5 | a | **Analyse the causes and cost of congestion control with an example scenario**. | | 8M | CO4 | | K4 |
|  | b | **Evaluate UDP checksum with an example**. | | 7M | CO4 | | K3 |
| **UNIT - III** | | | | | | | |
| 6 | a | **What is Virtual circuit network, explain in detail?** | | 9M | CO3 | | K2 |
|  | b | **Explain error detection and correction techniques.** | | 6M | CO3 | | K5 |
| **(OR)** | | | | | | | |
| 7 | a | **Illustrate the distance vector routing algorithm with an example.** | | 8M | CO3 | | K3 |
|  | b | **Consider the network shown below, with the indicated link costs. Use Dijkstra's shortest path algorithm to compute a table to find the shortest past from F to all network nodes.** | | 7M | CO3 | | K3 |
| **UNIT - IV** | | | | | | | |
| 8 | a | **Analyse CDMA with simple example.** | | 7M | CO2 | | K2 |
|  | b | **Explain 802.11 architecture.** | | 8M | CO2 | | K2 |
| **(OR)** | | | | | | | |
| 9 | a | **Describe the functioning of DES algorithm with a neat sketch** | | 7M | CO2 | | K2 |
|  | b | **What is firewall? Explain the categories of firewall.** | | 8M | CO2 | | K1 |