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MASTER OF SCIENCE (M.Sc) in COMPUTER APPLICATIONS
EXAMINATION : DECEMBER/JANUARY-2023-24
SEMESTER - I
Sub.: Advanced Computer Networks (MSC-105-22)

Date : 01/01/2024   **Total Marks : 60**   **Time: 10.00 am to 12.30 pm**

Instruction:
1. *All questions are compulsory unless and otherwise stated.*
2. *Bold figures to the right of every question are the maximum marks for that question.*
3. *Candidates are advised to attempt questions in order.*
4. *Answers written illegibly are likely to be marked zero.*
5. *Use of scientific calculators, Log tables, Mollier Charts is allowed.*
6. *Draw neat and labelled diagram wherever necessary.*

Q. 1. **Answer the following in 2-3 lines. (Any 5)**   **(10)**

1. Define the term "Load Balancing".

2. Explain the functionality of RADIUS protocol.

3. What is Clustering?

4. Explain the working of NAT.

5. Explain the working of ARP protocols?

6. Explain working of switch.

7. What is frame relay?

Q. 2. **Answer the following in short. (Any 4)**   **(20)**

1. What is network topology? Explain any one topology in detail with diagram.

2. Explain the different Wi-Fi standards used in Wireless network?

3. Define switching. Explain working of circuit switching.

4. What is frame relay? Explain with diagram.

5. State the advantages and disadvantages of VPN.

6. What is proxy server? Explain its working.

Q. 3. **Answer the following in detail. (Any 3)**   **(30)**

1. Explain four layers of TCP/IP model.

2. What is subnetting? What is subnet mask? Explain the implementation of Subnet in Class C.

3. What is firewall? Explain Packet filtering firewall? State its advantages and disadvantages.

4. What is Cloud Computing? Explain PaaS model of Cloud Computing?

5. What is RAID? Explain working of RAID1 and RAID5 with diagrams.