

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VIII • EXAMINATION – SUMMER • 2015**

**Subject Code:180704****Date: 07/05/2015****Subject Name: Advance Computer Networks****Time: 10.30am-01.00pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Discuss the functions of each SONET layer. What is the relationship between SONET and SDH? **07**  
(b) Discuss the benefits of using ATM technology. **07**
- Q.2** (a) List and explain Network Layer protocol of TCP/IP in brief. **07**  
(b) Write a note on Mapping ATM service classes to QoS classes and AAL protocols **07**
- OR**
- (b) List and explain various QoS and Traffic parameters used in ATM networks. **07**
- Q.3** (a) Discuss various methods used for Packet switching. **07**  
(b) Discuss File Transfer Protocol and its working. **07**
- OR**
- Q.3** (a) Explain the architecture of X.25 in detail. **07**  
(b) Discuss Dynamic Host Configuration Protocol and its working. **07**
- Q.4** (a) An organization is granted the block 130.56.0.0/16. The administrator wants to create 1024 subnets. **07**  
1. Find the subnet mask.  
2. Find the number of addresses in each subnet.  
3. Find the first and last address in subnet 1024.  
(b) Create WAN connecting five routers. Assign appropriate IP address to each router. Show router configuration command for setting up RIP protocol. **07**
- OR**
- Q.4** (a) Explain IP Addressing using Classful and Classless Addresses. **07**  
(b) Create WAN connecting five routers. Assign appropriate IP address to each router. Show router configuration command for setting up OSPF protocol. **07**
- Q.5** (a) Write a short note on Storage area Network (SAN) and its benefits. **07**  
(b) Discuss the real-time problems faced in Multimedia networking. **07**
- OR**
- Q.5** (a) Compare and contrast ATM and MPLS networks. **07**  
(b) Explain availability, reliability and maintainability of a network in detail. **07**

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