

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE- SEMESTER-VIII(OLD) • EXAMINATION – WINTER 2017**

**Subject Code: 180704**

**Date: 15-11-2017**

**Subject Name: Advance Computer Networks**

**Time: 02:30 pm to 05:00 pm**

**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) What is the relationship between SONET and SDH? Describe DWDM in detail. **07**  
(b) Explain the ATM reference model and explain what the various services are provided by it. **07**
- Q.2** (a) Write different equipment used in X.25 and explains architecture of X.25. **07**  
(b) Compare Intra domain and Inter Domain routings. **07**
- OR**
- (b) Explain Internet Control Message protocol with message types, Message format and Error reporting. **07**
- Q.3** (a) What is count to infinity (routing loop) problem? Discuss possible solutions to reduce count to infinity problem. **07**  
(b) Discuss protocols associated with layers of TCP/IP protocol suite. **07**
- OR**
- Q.3** (a) Describe working of Routing information protocol (RIP) and compare with IGRP. **07**  
(b) Explain functionality of ARP and RARP protocol. **07**
- Q.4** (a) Explain working, implementation and features of RSVP protocol. **07**  
(b) Compare IPV4 and IPV6 with their header format. **07**
- OR**
- Q.4** (a) Write short note on OSPF (open shortest path first) algorithm. **07**  
(b) What is Multiprotocol Label Switching? Explain its working and operation. **07**
- Q.5** (a) Explain availability, reliability and maintainability of a network in detail for network management. **07**  
(b) Write and explain commands to configure router. **07**
- OR**
- Q.5** (a) Explain IP Addressing using Classful and Classless Addresses. **07**  
(b) Describe BGP (Border Gateway protocol) in detail. **07**

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