

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VIII EXAMINATION – WINTER 2015

Subject Code:180704**Date:16/12/2015****Subject Name: ADVANCE COMPUTER NETWORKS****Time: 2:30pm to 5:00pm****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) Explain how DWDM achieves high data rate transmission? What are advantages and disadvantages of DWDM over SONET? **07**

(b) Draw and explain SDH Frame structure. **07**

Q.2 (a) Explain the functions of ATM adaption layers. Explain in detail the ALL1 and ALL2 layers. **07**

(b) Explain time division multiplexing in ATM. **07**

OR

(b) Explain the different traffic descriptors used in ATM. **07**

Q.3 (a) Write a short note on: Virtual Circuit Packet Switching. **07**

(b) Explain in detail TCP/IP Protocol suite. **07**

OR

Q.3 (a) Write a short note on: X.25. **07**

(b) What is the difference between the delivery of a frame in the data link layer and the delivery of a packet in the network layer? Explain the functionalities of the network layer. Explain IP headers. **07**

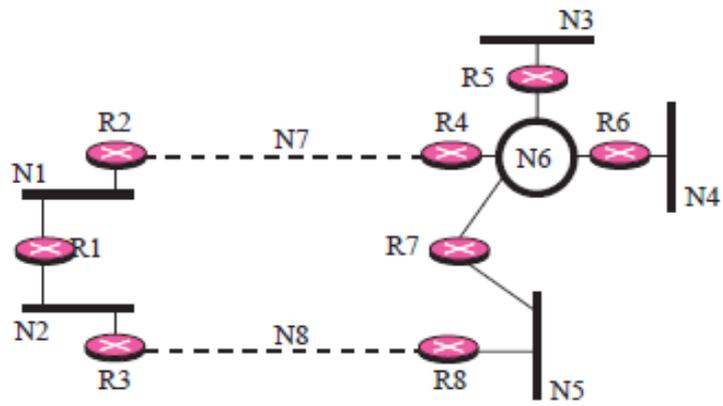
Q.4 (a) What is routing? Explain the distance vector routing algorithm. **07**

(b) Why is there a checksum field in the OSPF packet format but not in the RIP packet format? A router running RIP has a routing table with 20 entries. How many periodic timers are needed to handle this table? How many expiration timers are needed to handle this table? How many garbage collection timers are needed to handle this table if five routes are invalid? **07**

OR

Q.4 (a) Explain link state protocol (OSPF). **07**

(b) Why do OSPF messages propagate faster than RIP messages? Which of the networks in figure is a transient network? Which is a stub network? **07**



- Q.5** (a) Describe in detail about multi-protocol label switching. **07**
 (b) Write a short note: traffic sizing. **07**
- OR**
- Q.5** (a) Explain in detail about SNMP protocol. **07**
 (b) Write a short note: VOIP. **07**
