

**GUJARAT TECHNOLOGICAL UNIVERSITY****M.E –II<sup>st</sup> SEMESTER–EXAMINATION – JULY- 2012****Subject code: 1720401****Date: 06/07/2012****Subject Name: T.S.S.N. & N.M.****Time: 10:30 am – 13:00 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) 1. Define : (1)Erlang (2) Symmetric Network (3) CCR **07**  
 (4) Folded network (5)Transit exchange (6) BHCA  
 (7) Time Consistent Busy Hour

(b) 1. Why is it necessary to keep the magnetic diaphragm in an earphone displaced from its unstressed position? **03**

2. Over a 20 minute observation interval, 40 subscribers initiate calls. Total duration of the calls is 4800 seconds. Calculate the load offered to the network by the subscribers and the average subscriber traffic. **04**

**Q.2** (a) Explain TCP-IP protocol Suit . Compare it with OSI Reference Model. **07**

(b) Draw and Explain basic Time Division Time Switching . Also explain it's modes of operation . **07**

**OR**

(b) Explain Network Monitoring Applications. **07**

**Q.3** (a) Draw and Explain Parallel – in/Serial-out Configuration of Time Multiplexed Time switching **07**

(b) Compare Single stage with Multistage Networks for space division Switching **07**

**OR**

**Q.3** (a) Calculate the maximum access time that can be permitted for the data and control memories in a TSI switch with a single input and single output trunk multiplexing 2500 channels. Also estimate the cost of the switch and compare it with that of a single stage space division switch. **07**

(b) Draw and Explain Two stage Networks of Space Division Switching **07**

**Q.4** (a) Explain ATM Networks with necessary figures. **07**

(b) Write a short note on Remote Monitoring(RMON) **07**

**OR**

**Q.4** (a) Explain any two MAC Protocol with necessary details **07**

(b) Write a short note on Web based Management. **07**

**Q.5** (a) Explain SNMPv2 architecture . What is main disadvantage of SNMPv2? **07**

(b) Briefly explain each block of basic software tools for Network Management **07**

**OR**

**Q.5** (a) Explain SNMPv3 Architecture and List it's applications. **07**

(b) Explain Network Monitoring tools with brief description. **07**

\*\*\*\*\*