

GANPAT UNIVERSITY**B. Tech. Sem. VII (EC)****Regular Examination November/December-2012****EC706 [Elective – II(A)]: Telecom Transmission & Switching****Time: 3 Hours****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Answers to the two sections must be written in separate answer books.
3. Figures to the right indicate full marks.
4. Assume suitable data, if necessary.

SECTION-I

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|-----------|-----|---|---|
| 1 | (A) | What is the need of switching system? State and explain the elements of switching system. | 6 |
| | (B) | Explain the two stage space-time switch with example. | 4 |
| | (C) | What is the difference between uniselector and two-motion selector ? | 2 |
| OR | | | |
| 1 | (A) | Draw and explain the common control switching system. | 6 |
| | (B) | Write short note on three stage time-space-time switch. | 4 |
| | (C) | What is the difference between the Touch tone dial telephone arrangement and Rotary dial telephone arrangement? | 2 |
| 2 | (A) | Give the difference between Single-stage Network and Multi-stage Network. | 6 |
| | (B) | Draw and explain time multiplexed space switching. | 5 |
| OR | | | |
| 2 | (A) | What is 100 – line switching system ? Give the brief idea of different designs. | 6 |
| | (B) | Draw and explain time multiplexed time switching. | 5 |
| 3 | (A) | Explain the birth-death process in detail. | 6 |
| | (B) | Write short note on switching hierarchy and routing. | 6 |

SECTION-II

- 4 (A) A group of 20 servers carry a traffic of 10 erlangs. If the average duration of a call is three minutes, calculate the number of calls put through by a single server and the group as a whole in a one-hour period. 4
- (B) Write short note on dual processor architecture in synchronous duplex mode. 4
- (C) Draw and explain the different signaling tones in automatic exchange. 4
- OR**
- 4 (A) Draw and explain three stage space-time-space switch. 4
- (B) Write short note on dual processor architecture in load sharing mode. 4
- (C) Explain frame alignment in 30 channel PCM system with electronic decision making process. 4
- 5 (A) Explain functional grouping in ISDN. 6
- (B) Draw and explain PDH multiplexing in north America. 5
- OR**
- 5 (A) What is the importance of reference points in ISDN? Explain reference points in detail. 6
- (B) List services that are available through Broadband ISDN. 5
- 6 (A) Draw and explain PCM primary multiplexer transmission and reception path in detail. 6
- (B) Explain payload pointer with necessary figure. 4
- (C) What is computer integrated telephony? 2

END OF PAPER

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