

Scheme – E

Sample Question Paper-I

Course Name : Electronics Engineering Group

Course Code : ET/EN/EJ/EX/ED/EI

Semester : Sixth

12274

Subject Title : Telematics

Marks : 100

Times: 3 Hours

Instructions:

1. All questions are compulsory.
2. Illustrate your answers with neat sketches wherever necessary.
3. Figures to the right indicate full marks.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.

Q.1A) Attempt any THREE

12 Marks

- a) Draw and explain operation of telephone system.
- b) Compare Electro mechanical and Electronic switching on the basis of following points
 1. Operation
 2. Quality of service
 3. Traffic handling capacity
 4. Components used.
- c) Describe different analog and digital services provided by Telephone Company.
- d) List services provided by ISDN, Explain any one.

Q.1B) Attempt any ONE

08 Marks

- a) State the operation of a cordless telephone.
- b) Explain working of EPABX with an example.

Q.2 Attempt any FOUR

16 Marks

- a) Describe Telephone Numbering plan.
- b) Explain working of DSL with a neat labeled diagram.
- c) List six maintenance steps for EPABX.
- d) Define switched analog services with a suitable diagram and list the services provided.
- e) Draw message format for ISDN user part and explain significance of circuit identification code.

Q.3 Attempt any FOUR

16 Marks

- a) List advantages of band separation in DTMF signaling.
- b) Explain digital TDM/PCM switch for EPABX.
- c) Compare internal and external Modem (any 4).
- d) For EPABX, explain programming on console and on terminal.
- e) State the features of PRI and BRI for ISDN lines.

Q.4 a) Attempt any TWO

12 Marks

- a) Draw block diagram of cable modem and explain functions of each block.
- b) List advantages of IP phone over voice phone.
- c) List different frequency allocations for telephony.

Q.4 (b) Attempt any ONE

06 Marks

- a) Draw switching network configuration for folded and non-folded network. State the difference between the two (any 2).
- b) Draw and explain wiring diagram of EPABX.

Q.5 Attempt any FOUR

16 Marks

- a) What is MODEM? Explain with a diagram how it transmits digital data using telephone.
- b) Write advantages of 800 and 900 services.
- c) What is the significance of side tone in a telephone conversation?
- d) Compare centralise SPC and Distributed SPC (any 4).
- e) Explain data compression in FAX.

Q.6 Attempt any FOUR

16 Marks

- a) Explain the use of video conferencing and internet.
- b) List any four applications each of e-banking and ATM.
- c) Explain enhanced services in switching system.
- d) Explain ISDN architecture.
- e) Explain X400 family of standard for ISDN.
- f) Classification of switching system.