

**DIPLOMA – VIEP – ELECTRONICS AND
COMMUNICATION ENGINEERING (DECVI)**

Term-End Examination

00396

December, 2014

BIEL-033 : BASIC TELEMATICS

Time : 2 hours

Maximum Marks : 70

Note : Attempt any *five* questions in all. Question no. 1 is *compulsory*. All questions carry equal marks.

1. Choose the correct answer :

7×2=14

(a) ISDN is

- (i) Integrated Services Digital Network
- (ii) Interconnection Services Digital Network
- (iii) Intelligent Services Digital Network
- (iv) Integrated Services Direct Network

(b) The second generation cordless phones are called

- (i) CT₂
- (ii) CT₁
- (iii) CT₄
- (iv) CT₀

- (c) The frequency of the ringing tone is
- (i) 134 Hz or 400 Hz
 - (ii) 135 Hz or 400 Hz
 - (iii) 133 Hz or 410 Hz
 - (iv) 133 Hz or 400 Hz
- (d) Number unobtainable tone is a continuous _____ Hz signal.
- (i) 402
 - (ii) 404
 - (iii) 300
 - (iv) 400
- (e) The Switching Network may be designed to provide $N/2$ simultaneous switching paths. In this case the network is said to be
- (i) blocking
 - (ii) partial blocked
 - (iii) no blocking
 - (iv) None of the above

- (f) TDM is
- (i) Time Duration Multiplexing
 - (ii) Time Division Multiplexing
 - (iii) Time Direct Multiplexing
 - (iv) Time Division Multiplication
- (g) Amplitude, frequency and _____ are used in the design of modem.
- (i) Phase modulation
 - (ii) PCM
 - (iii) TDM
 - (iv) OOK

2. Explain the various types of tones used in telephone exchanges. 14
3. (a) Explain the different types of switching systems. 7
- (b) Explain Switching Hierarchy routing with the help of its block diagram. 7
4. (a) What are the applications of Telecommunication ? Discuss the Business application of telecommunication. 7
- (b) Explain the working principle of ATM machine with the help of its block diagram. 7

5. (a) Define Video-conferencing. 7
(b) Explain the services provided by ISDN. 7
6. Explain the working of various types of telephone instruments with the help of its block diagram. 14
7. (a) Define Digital TDM/PCM switch. 7
(b) Explain CMOS cross point switch. 7
8. Write short notes on any *four* of the following : $4 \times 3 \frac{1}{2} = 14$
- (a) Telephone Receiver
 - (b) Elements of Switching System
 - (c) Telephone Network
 - (d) Digital Data Service
 - (e) Telemedicine
 - (f) Message format for ISDN
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