

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

Term-End Examination

December, 2016

00083

BIEL-033 : BASIC TELEMATICS

Time : 2 hours

Maximum Marks : 70

Note : *Attempt five questions in all. Question no. 1 is compulsory. All questions carry equal marks. Use of scientific calculator is permitted.*

1. Choose the correct answer.

7×2=14

(a) The modern telephone network is now

- (i) digital
- (ii) analog
- (iii) digital as well as analog
- (iv) None of the above

(b) DSL is

- (i) Downstream Subscriber Line
- (ii) Digital Subscriber Line
- (iii) Data Subscriber Line
- (iv) None of the above

- (c) The largest portion of the bandwidth for ADSL carries
 - (i) voice communication
 - (ii) upstream data
 - (iii) downstream data
 - (iv) control data

- (d) Time synchronization is necessary in
 - (i) FDM
 - (ii) TDM
 - (iii) WDM
 - (iv) Quadrature Multiplexing

- (e) SPC stands for
 - (i) Standard Protocol Control
 - (ii) Stored Program Control
 - (iii) Signalling and Switching Centre
 - (iv) Signalling Process Centre

- (f) In a DTMF phone, a dialling of 8 generates
 - (i) 1336 Hz – 770 Hz
 - (ii) 1209 Hz – 1477 Hz
 - (iii) 1209 Hz – 941 Hz
 - (iv) 1336 Hz – 852 Hz

- (g) ISDN handles data pertaining to
 - (i) all digital services
 - (ii) speech and video
 - (iii) computer data only
 - (iv) speech only

- 2. (a) Describe the different analog and digital services provided by a telephone company. 7
- (b) Explain the working of EPABX with an example. 7

- 3. (a) Compare internal and external MODEM. 7
- (b) State the features of Primary Rate Interface (PRI) and Basic Rate Interface (BRI) for ISDN lines. 7

- 4. (a) What is SPC ? Give the organisation of centralized SPC. 7
- (b) Discuss the advantages of SPC automation in telephone switching. 7

- 5. (a) Draw the message format for ISDN user part and explain the significance of circuit identification code. 7
- (b) Explain data compression in FAX. 7

6. (a) Write the advantages of 800 and 900 services. 7
- (b) List different frequency allocations for telephony. 7
7. Write short notes on any *four* of the following : $4 \times 3 \frac{1}{2} = 14$
- (a) Voice Over IP Phone
- (b) ADSL
- (c) DDS
- (d) Telephone Receiver
- (e) Video Conferencing
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