

00511

**DIPLOMA VIEP ELECTRONICS AND
COMMUNICATION ENGINEERING (DECE)**

Term-End Examination

December, 2013

BIEL-033 : Basics 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. Answer the following Multiple choice objective questions : **7x2=14**
- (a) In SPC, switching is controlled by :
 - (i) Software program
 - (ii) Hardware
 - (iii) Manual
 - (iv) None of these
 - (b) The international unit of Telephone Traffic is :
 - (i) Number of call/sec
 - (ii) Number of Caller/sec
 - (iii) Erlang
 - (iv) None of these.
 - (c) ISDN is capable of carrying :
 - (i) Voice only
 - (ii) Data only
 - (iii) Video only
 - (iv) All of the above

- (d) Which Transmission mode is used for data communication along Telephone lines ?
- (i) Parallel
 - (ii) Serial
 - (iii) Synchronous
 - (iv) Asynchronous
- (e) Trunks are the lines that run between :
- (i) Subscriber and exchange
 - (ii) Switching System and exchange
 - (iii) Local Area Network
 - (iv) Switching Stations
- (f) Side Tone is the speech heard by :
- (i) The receiving subscriber
 - (ii) both calling and receiving subscriber
 - (iii) by on looker
 - (iv) by calling subscriber
- (g) In a DTMF phone a digit is represented by :
- (i) 2 sets of frequencies
 - (ii) 3 sets of fequencies
 - (iii) more than 3 sets of frequencies
 - (iv) None of the above.
2. (a) How are Switching Systems classified ? In what way is stored program control is superior to hardwired control ? **10**
- (b) What is the significance of side tones in a Telephone Conversation ? **4**
3. (a) Explain the different elements of a Telecommunication Switching System. **10**
- (b) What is a Analog CMOS cross point switch ? Give its application. **4**
4. (a) With a neat sketch explain ISDN User Network inter face configuration. **10**
- (b) Explain the 'Numbering Plan' of Telephone Number. **4**

5. Describe the working principle of MODEMS and Discuss the Different types of modem. 14
6. Draw the block diagram of a FAX machine and explain its working principle. 14
7. (a) Explain the working of a DTMF Tone Type Telephone System with the help of suitable diagram. 8
- (b) Write the steps for installing a EPABX instrument. 6
8. Write Short Notes on **any four** of the following :
- (a) Subscriber loop System. 4x3.5=14
- (b) Classification of Switching system.
- (c) Voice over IP phone.
- (d) Centralized SPC. Vs distributed SPC.
- (e) Digital TDM/PCM Switch
- (f) Cable Modem
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