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DIPLOMA – VIEP – ELECTRONICS AND COMMUNICATION ENGINEERING (DECVI)

Term-End Examination

December, 2015

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.*

1. Choose the correct answer.   *7×2=14*

    (a) FDM is

        (i) Frequency Duration Multiplexing

        (ii) Frequency Division Multiplexing

        (iii) Frequency Direct Multiplexing

        (iv) Frequency Division Multiplication

    (b) Which of the following helps to solve an important transmission problem in telephone set design ?

        (i) Equalizers

        (ii) Microphone

        (iii) Ringer circuit

        (iv) None of the above

(c) The most common telephone jack in use today, that can have upto six conductors, is

   (i) SJ 10

   (ii) SJ 09

   (iii) SJ 11

   (iv) SJ 111

(d) Telephone traffic is measured in

   (i) Seconds

   (ii) Hours

   (iii) Erlang

   (iv) Pulses per minute

(e) MAC is the abbreviation for

   (i) Multimedia Access Control

   (ii) Media Access Control

   (iii) Mobile Access Control

   (iv) Master Access Point Control

(f) Broadband ISDN handles data rate of about

   (i) 64 kbps

   (ii) 100 mbps

   (iii) 5·4 mbps

   (iv) 2·048 mbps

(g) Direct inward dialling is used as a feature in

    (i) PSTN

    (ii) PBX

    (iii) EPABX

    (iv) VPN

2. (a) List the services provided by ISDN. Explain any one.   7

   (b) Draw and explain the operation of a telephone system.   7

3. (a) Explain the working of DSL with a neat labelled diagram.   7

   (b) Compare centralized SPC and Distributed SPC.   7

4. (a) What is Modem ? Explain with a diagram how it transmits digital data using a telephone.   7

   (b) Describe the different analog and digital services provided by the telephone companies.   7

5. (a) Explain the working principle of a FAX machine with the help of its block diagram.   7

   (b) Describe Telephone Numbering Plan.   7

6. (a) List the advantages of IP phone over voice phone. 7

(b) Explain Analog CMOS cross point switch. 7

7. Write short notes on any *four* of the following : $4 \times 3\frac{1}{2} = 14$

(a) Internet

(b) TDM Switch

(c) Telemedicine

(d) Switching Hierarchy Routing

(e) PRZ