

**DIPLOMA - VIEP - COMPUTER SCIENCE AND
ENGINEERING (DCSVI)**

Term-End Examination

00927 December, 2017

**BICS-034 : PRINCIPLES OF COMMUNICATION
ENGINEERING**

Time : 2 hours

Maximum Marks : 70

**Note : Attempt any *five* questions. Question no. 1 is
compulsory. Each question carries equal marks.**

1. Choose the correct answer.

7×2=14

(a) Encoding is also known as

- (i) Demodulation
- (ii) Modulation
- (iii) Destination
- (iv) Channel

(b) Indicate the noise whose source is in a category different from that of the other three.

- (i) Solar noise
- (ii) Cosmic noise
- (iii) Atmospheric noise
- (iv) Galactic noise

- (c) Polarization of an antenna refers to
 - (i) The direction in space of the E-field portion of the EM wave being radiated.
 - (ii) The direction in space of the magnetic field portion of the EM wave being radiated.
 - (iii) The direction in space of the E-field portion of the FM wave being radiated.
 - (iv) The direction in space of the E-field portion of the AM wave being radiated.
- (d) The directions of the electric field, the magnetic field and propagation are mutually
 - (i) Perpendicular
 - (ii) Parallel
 - (iii) Diagonal
 - (iv) Directional
- (e) Space waves are also called
 - (i) Tropospheric waves
 - (ii) Ionospheric waves
 - (iii) Ground waves
 - (iv) Underground waves

- (f) The forms of FM and AM waves are
- (i) continuous waves
 - (ii) small waves
 - (iii) no waves
 - (iv) big waves
- (g) We can obtain frequency modulation from phase modulation.
- (i) True
 - (ii) False
2. (a) Draw and explain the block diagram of a communication system. 7
- (b) Explain various types of noises. 7
3. (a) Compare and contrast Simplex, Full duplex and Half duplex systems. 7
- (b) What are the requirements of bandwidth ? 7
4. (a) How is the AM generated ? 7
- (b) Explain Phase-Shift method. 7
5. (a) What is the importance of Single-Side Band (SSB) transmission ? 7
- (b) Differentiate between Pre-emphasis and De-emphasis. 7
6. (a) What is an Antenna ? Explain the terms Directive gain and Resistance. 7
- (b) Differentiate between ground waves and space waves. 7

7. (a) Explain briefly, the fundamentals of transmission lines. 7

(b) What is meant by propagation of waves ? Also explain sky-wave propagation. 7

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

(a) Superheterodyne Receiver

(b) Electromagnetic Radiation

(c) Loop Antenna

(d) FM

(e) Wave Guides

(f) AM
