

S.Y.B.SC. (COMPUTER SCIENCE) SEM –III (2014 COURSE)

:WINTER - 2017

SUBJECT – PRINCIPLES OF COMMUNICATION

Day: Monday  
Date: 06/11/2017

W-2017-0748

Time: 12.00 NOON TO 02.00 PM  
Max. Marks: 40

**N.B.:**

- 1) All the questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw diagrams **WHEREVER** necessary.
- 4) Use of **CALCULATOR** is allowed.

**Q.1** Answer **ANY TWO** of the following: [10]

- a) Draw block diagram of communication system and explain its different blocks.
- b) What is FDM? Explain the formation of 12 channel group.
- c) With neat block diagram explain the GSM architecture.

**Q.2** Answer **ANY TWO** of the following: [10]

- a) With the help of suitable block diagram and waveform explain pulse amplitude modulation.
- b) Explain Handover in mobile communication.
- c) Explain with neat diagram the working of diode demodulator.

**Q.3** Answer **ANY TWO** of the following: [10]

- a) State five points of difference between AM and FM.
- b) With the help of block diagram and phase of diagram explain the working of QPSK modulator.
- c) What is keying? What are the principles of ASK and FSK? Draw output waveforms for sending data 01110110 using ASK.

**Q.4** Answer **ANY FIVE** of the following: [10]

- a) What is constellation diagram?
- b) What is need of modulation? Calculate modulation Index If  $V_m = 6 \sin 2\pi(3\text{KHz})t$  and  $V_c = 8 \sin 2\pi(1200\text{KHz})t$ .
- c) Explain half duplex and full duplex systems.
- d) Give any two applications of Bluetooth.
- e) Explain following parameters for antenna:
  - i) Gain
  - ii) Bandwidth
- f) Give any two applications of GPRS
- g) Define:
  - i) Asynchronous transmission
  - ii) Synchronous transmission

\* \* \* \* \*