S.Y.B.SC. (COMPUTER SCIENCE) SEM –III (2014 COURSE) :
SUMMER - 2018
SUBJECT – PRINCIPLES OF COMMUNICATION

Day: **Tuesday** Time: **12.00 NOON TO 02.00 PM**
Date: **24/04/2018** **S-2018-0848** 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) State five points of difference between AM and FM

b) What is constellation diagram? Draw it for QAM. How QAM can be used to increase speed of data communication.

c) With neat diagram explain the bluetooth protocol architecture.

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

a) What is FDM? Explain the formation of 12 channel group.

b) Draw and explain general block diagram of a cellular phone system.

c) With the help of phasor diagram explain the concept of QPSK modulation.

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

a) Explain synchronous transmission with diagram. Also state its disadvantages.

b) Explain AM with respect to definition, AM waveforms, frequency spectrum, modulation index and disadvantages.

c) Draw block diagram of communication system and explain the function of each block.

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

a) Define the following terms

i) Baud rate ii) Signal to nose ratio.

b) State two points of difference between FM and PM.

c) Draw a diagram showing outlet of FSK moderm sending following data 10101100.

d) Define the following terms for antenna:

i) Power gain ii) Antenna resistance

e) Explain handover in GSM

f) Give full forms of: FDMA and TDMA

g) Give one example of simplex and full duplex communication system.

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