Total No. of Questions : 10]

SEAT No. :

P-2934

[Total No. of Pages : 3

[6004]-875
B.E. (E&TC)
MOBILE COMMUNICATION
(2015 Pattern) (Semester - II) (404189)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q.10.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Use of logarithmic tables slide rule, Mollier charts, electronic pocket calculator and steam tables is allowed.***
5) ***Assume suitable data, if necessary.***

Q1) a) State and explain switching functions of the switching system. **[6]**

b) Consider a group of 1200 subscribers which generate 600 calls during the busy hour. The average holding time is 2.2 minutes. What is the offered traffic in Erlangs, CCS & CM? **[4]**

OR

Q2) a) Compare in channel and common channel signalling related with following parameters: **[4]**

i) Integrity speech

ii) Trunks

iii) Signalling information

iv) Signalling equipment

v) Transfer of information

b) Draw the explain output controlled time division time switch. **[6]**

P.T.O.

Q3) a) State and explain lost system with assumptions. **[6]**

b) Total channel capacity for cellular telephone are comprised of 12 clusters with 4 cells in each clusters & 20 channels in each cell. How much channels are occupied? **[4]**

OR

Q4) a) Explain - **[6]**

i) Progressive grading

ii) Skipped grading

iii) Homogeneous grading

b) Compare voice traffic and data traffic with following parameters. **[4]**

i) Signal type

ii) Bandwidth

iii) Line utilization

iv) Loss & error

Q5) a) Explain the following terms related with GSM system architecture. **[8]**

i) MSC

ii) BTS

iii) BSC

iv) GMSC

b) Explain the following services related to GSM system. **[4]**

i) Tele services

ii) Bearer services

c) Compare GSM 900 with DCS 1800 related with following parameters **[4]**

i) wavelength

ii) carrier spacing

iii) bandwidth

iv) uplink & downlink frequency

OR

Q6) a) Discuss various functional entitites used in GSM architecture. **[8]**

b) List out GSM interfaces and write functions of each. **[8]**

Q7) a) Draw & explain the following terms : **[8]**

i) Inter BSC handover

ii) Intra BSC handover

b) Draw & explain the following terms : **[9]**

i) TDMA

ii) FDMA

iii) CDMA

OR

Q8) a) Compare GPRS with EDGE with following parameters : **[8]**

i) Modulation

ii) Bit rate

iii) Data rate (user)

iv) Radio data rate

b) Draw & Explain architecture of HSCSD. **[9]**

Q9) a) Compare following points from 1G to 5G. **[10]**

i) Standards

ii) Technologies

iii) Multiple access

iv) Data rate

v) Services

b) Draw & explain architecture of LTE. **[7]**

OR

Q10)a) Discuss the disruptive technologies of 5G mobile communication. **[9]**

b) Discuss different LTE design parameter. **[8]**