Total No. of Questions : 10]

SEAT No. :

P3169

[Total No. of Pages : 2

[5461]-212
B.E. (E & TC)
MOBILE COMMUNICATION
(2012 Course) (End Sem.) (404189) (Semester-II)

Time : 2½ Hours] *[Max. Marks :70*

Instructions to the candidates:

1) ***Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10.***
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) Explain with suitable diagram, datagram packet switching? **[6]**

b) Total 4 Erlang of traffic offered by group of 3 trunks. Find GoS and Probability that at least one trunk is free? **[4]**

OR

Q2) a) State & explain different forms of grading? **[5]**

b) Prove that for two stage network having equal incoming and outgoing trunk, cross point $C_2 = 2N^{3/2}$. **[5]**

Q3) a) Draw and explain Time Multiplexed Time Switching. **[5]**

b) Explain basic components for cellular system. **[5]**

OR

Q4) a) Draw and explain PCM signalling. **[6]**

b) A cellular telephone consist of 9 clusters with 4 cells in each clusters and 10 channels in each cell. **[4]**

Find:

i) No. of channels per cluster

ii) Total channel capacity

P.T.O.

Q5) a) Explain functions of each GSM logical channel. **[9]**

b) Explain different security algorithm used in GSM. **[8]**

OR

Q6) a) Draw and explain different GSM interfaces. **[6]**

b) Explain different radio transmission parameters in GSM? **[5]**

c) Draw & explain in brief GSM time hierarchy? **[6]**

Q7) a) Explin with suitable diagram, point to point SMS service? **[4]**

b) Draw and explain architecture of GPRS network? **[6]**

c) Explain GSM supplimentary services. **[7]**

OR

Q8) a) Draw and explain GSM physical layer? **[5]**

b) Explain GSM channel coding for full rate speech? **[6]**

c) Explain ciphering & deciphering used in GSM? **[6]**

Q9) a) Draw and explain DSSS transmitter and receiver. **[6]**

b) Write CDMA IS-95 technology along with advantages & disadvantages. **[5]**

c) Write important parameters of W-CDMA system. **[5]**

OR

Q10)a) What are the attributes of WCDMA? **[6]**

b) Draw and explain architecture of CDMA-2000? **[5]**

c) Draw and explain: **[5]**

i) Pilot downlink control logical channel of IS 95

ii) Sync downlink control logical channel of IS 95