BE/Insem./APR-168
B.E. [E&TC]
404189 : MOBILE COMMUNICATION
(2012 Pattern) (Semester - II)

Time : 1 Hour]   *[Max. Marks : 30*
Instructions to the candidates:
   1)   *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6.*
   2)   *Neat diagrams must be drawn wherever necessary.*
   3)   *Figures to the right indicate full marks.*

Q1) a) Define and explain Grade of service, CCS, Erlang, Call completion rate
[4]

   b) On average, during the busy hour, a company makes 180 outgoing calls of average duration 2 minutes. It receives 200 incoming calls of average duration 3 minutes. Find:

      i)   the outgoing traffic **[6]**

      ii)   the incoming traffic

      iii)   the total traffic

OR

Q2) a) State and explain switching functions of switching system **[4]**

   b) Write a short note on: **[6]**

      i)   probability of delay

      ii)   Queues in tandem

Q3) a) Explain the Skipped Grading & Homogeneous Grading. Draw neat diagrams. **[4]**

   b) Write short notes on: **[6]**
      i)   SS7 signaling

      ii)   Common channel signaling

OR

P.T.O.

Q4) a) State and explain Erlang's delay formula [4]

b) With the help of neat diagram, explain: [6]

  i) In -band signaling

  ii) Out-band signaling

Q5) a) Differentiate between FDMA & TDMA [4]

b) With the help of neat diagram explain the three basic propagation mechanisms of signal in mobile communication system [6]

OR

Q6) a) Discuss the factors influencing small scale fading [4]

b) Explain the concept of frequency reuse in Mobile Cellular System [6]

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