

Total No. of Questions : 8]

SEAT No. :

PD4586

[Total No. of Pages : 2

[6404]-91

B.E. (Computer Engineering)

MOBILE COMPUTING

(2019 Pattern) (Semester - VII) (Elective - IV) (410245 (C))

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Solve Q1 or Q2, Q3 or Q4, Q5 or Q6, and Q7 or Q8.*
- 2) *Figures to the right indicate full marks.*
- 3) *Assume suitable data if necessary.*
- 4) *Neat diagrams must be drawn wherever necessary*

- Q1)** a) Draw and explain Mobile computing architecture for a mobile device. [5]
b) Explain using block diagram the process of authentication in a GSM Service. [6]
c) Write a short note on SIM. [6]

OR

- Q2)** a) Explain the Virtual Home Environment (VHE). [5]
b) Describe the functions of HLR and VLR in call routing and roaming. [6]
c) Explain the GSM System Protocol Architecture. [6]

- Q3)** a) Explain mobility management with neat diagram. [5]
b) Explain the process of call origination and call termination in GSM. [6]
c) What do you mean by tunneling, encapsulation and decapsulation? [6]

OR

- Q4)** a) Discuss the Handover mechanism in GSM. [5]
b) Short note on Handoff Strategies. [6]
c) Write a short note on VLR failure restoration. [6]

P.T.O.

Q5) a) Describe data transfer from a mobile node to a fixed node and vice versa. [5]

b) Short note on MANET. [5]

c) Describe DSDV and DSR routing algorithms for ad hoc networks. [8]

OR

Q6) a) Explain the VANET. [6]

b) Explain generic routing encapsulation. [5]

c) How to achieve the optimization in mobile IP? Why? [7]

Q7) a) Explain block diagram for UMTS in detail. [6]

b) Write a short note on Quality of service in the 3G network. [6]

c) State and explain the features of W-CDMA. [6]

OR

Q8) a) Explain UTRA-Network (UTRAN) Architecture. [5]

b) Write a note on CDMA 2000. [5]

c) Write a short note [8]

i) HSPA

ii) HSDPA

