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B.E. - (I.T.)

MOBILE COMPUTING

(Elective - I) (2003 Course) (414445) Sem I

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) Answer 3 questions from Section I and 3 questions from Section II.
- 2) Answers to the two sections should be written in separate books.
- 3) Neat diagrams must be drawn wherever necessary.
- 4) Assume suitable data, if necessary.

SECTION - I

- Q1) a) What do you mean by mobile computing environment? Explain atleast 4 application areas where mobile computing environment is used. [8]
- b) Explain the role of Context Manager and describe it's various informations and relevances in the mobile computing environment. [8]

OR

- Q2) a) Explain various types of mobilities in mobile communication environment. [8]
- b) Explain the three tier architecture of mobile computing. [8]

- Q3) Explain GSM in the following context.

- a) General features & frame details. [6]
- b) Architecture and it's entities in detail. [6]
- c) Security issues used. [6]

OR

- Q4) Write short notes on : [18]

- a) Bluetooth and it's protocol stack.
- b) Java card.
- c) IPv6.

- Q5) a) Explain various services, applications and limitations of GPRS. [8]
- b) Explain in detail the WAP protocol stack. [8]

OR

- Q6)** a) Explain the spread spectrum technologies you know. [8]
b) Explain GPRS transmission plane protocol architecture. [8]

SECTION - II

- Q7)** a) What are the various issues to be considered in designing the WLAN environment. [8]
b) What are the design constraints in applications for handheld devices? [8]

OR

- Q8)** a) Explain the authentication process in 802.11 framework. [8]
b) Explain SS#7 network architecture. [8]
- Q9)** a) Explain the three layers of Palm OS in detail. [8]
b) Describe various security issues used in symbian OS. [8]

OR

- Q10)** a) Compare J2ME with J2SE or J2EE. [8]
b) What are the functions of various layers used in symbian OS architecture? [8]
- Q11)** a) Explain the three layers of windows CE architecture. [8]
b) Compare SIP and H.323 [5]
c) Explain SAP/SDP in detail. [5]

OR

- Q12)** a) Explain the various components of information security. [10]
b) Explain various security models used in mobile computing. [8]
