[5354]-679

B.E. (Computer Engineering) (Semester - I)
PERVASIVE COMPUTING
(2012 Pattern) (Elective - II (b))

Time : 2½ Hours]   *[Max. Marks : 70*

Instructions to the candidates:
1) *Neat diagrams must be drawn wherever necessary.*
2) *Figures to the right indicate full marks.*
3) *Assumne suitable data, if necessary.*

Q1) a) Discuss SMART DUST and Tiny OS. **[4]**

    b) Explain context aware computing and types of contexts with example.**[6]**

OR

Q2) a) How cooltown model can be implemented at workplace discuss. **[4]**

    b) Explain location management principles and techniques in mobile computing. **[6]**

Q3) a) Define planned action and situated action. **[4]**

    b) Brief about device connectivity with suitable examples and available Technologies for. **[6]**

OR

Q4) a) Why user interfaces are primarily visible? Discuss benefits of using visual interfaces auditory interfaces. **[6]**

    b) Explain context aware applications and steps to develop them. **[4]**

Q5) a) Explain mobile and wireless security issues. **[8]**

    b) Explain core capabilities for context aware applications. **[8]**

P.T.O.

Q6) a) Discuss actuator services in detail. **[8]**

b) Explain experimental comparision of collaborative defence strategies for network security. **[8]**

Q7) a) Define Authentication and authorization in detail with respect to pervasive computing. **[8]**

b) Explain Human - Computer interaction in detail. What is Human - Device interaction, explain. **[8]**

OR

Q8) a) Explain social networking and media exchange example for smart interaction. **[8]**

b) Explain following with respect to security: **[8]**
   i)   Man in the middle attack.
   ii) Replay attacks.

Q9) a) Explain graduated levels and system support for each of the Ubicom property. **[6]**

b) Differentiate between Human intelligence and machine intelligence. **[6]**

c) Compare & contrast the following techniques for lowering energy use:**[6]**
   i)   MEMS
   ii) Energy harvesting
   iii) Ultra-capacitor and fuel cells.

OR

Q10) a) Explain various issues related to distributed systems interaction to be more intelligent. **[8]**

b) Review following technologies. Justify whether they are sustaining or disraptive. **[10]**
   i)   Mobile
   ii) Radio
   iii) email
   iv) e- Book
   v)   e - Commerce.

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