

Total No. of Questions : 10]

SEAT No. :

P3112

[5154]- 679

[Total No. of Pages : 2

B.E. (Computer Engineering)

PERVASIVE COMPUTING

(2012 Pattern) (Semester - I) (Elective - II (b))

Time :2½ Hours]

[Max. Marks :70

Instructions to the candidates:

- 1) *Attempt question Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10.*
- 2) *Assume suitable data, if necessary.*
- 3) *Figures to the right indicate full marks.*

Q1) a) Outline five core properties that characterize UbiCom system. [5]

b) Explain how CoolTown model can be implemented at workplace and home. [5]

OR

Q2) a) Discuss smart dust and tiny OS. [5]

b) How dynamic adaptation is performed in IBM's transcoding application. [5]

Q3) a) Why user interfaces are primarily visible? Discuss benefits of using auditory interface. [5]

b) What is PostHuman technology model? [3]

c) Define Planned action & situated action. [2]

OR

Q4) a) What are different design characteristics of iHCI model? [5]

b) Write short note on device connectivity. [5]

Q5) a) Explain core capabilities for context aware applications. [5]

b) Write short note on Contextual services. [5]

c) Discuss "Odyssey" system and comment whether it is uses application-level or System-level adaptation. [8]

OR

P.T.O.

- Q6)** a) Discuss actuator services in detail. [6]
b) What is meaning of following terms in adaptation: [6]
Agility, Fidelity & concurrency
c) What is mobile agent? Give it's architecture. [6]

- Q7)** a) Explain various security issues & challenges in Pervasive Computing. [8]
b) Define Authentication & authorization in detail with any case study as an example. [8]

OR

- Q8)** a) Explain Social networking & media exchange example for smart interaction. [8]
b) What is Secure resource discovery. [4]
c) Give collaborative defense strategies for Network Security. [4]

- Q9)** a) Explain graduated levels & system support for each of UbiCom property. [5]
b) Write short note on seven challenges highlighted by Grinter & Edwards for using ubiquitous applications in smart environment. [7]
c) Differentiate in between Human Intelligence & Machine Intelligence. [4]

OR

- Q10)** a) Review following technologies & justify whether they are disruptive or sustaining technologies: Mobile, Radio, email and eBook [8]
b) Compare and contrast the following techniques for lowering energy use: [8]
i) Passive electronic components.
ii) MEMS
iii) Energy harvesting
iv) Ultra-capacitors and fuel cells.

