Reg. No. :

Question Paper Code: 42313

M.E. DEGREE EXAMINATION, NOV 2016

First Semester

Computer Science and Engineering

(Common to Computer Science and Engineering [with specialization in networks])

14PNE103 - MOBILE AND PERVASIVE COMPUTING

(Regulation 2014)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions.

PART A - (5 x 1 = 5 Marks)

1. Who is responsible for processing the web service request?

    (a) Service requester   (b) Service provider

    (c) Discovery agency   (d) Service receiver

2. Principal areas of application of RFID

    (a) Security   (b) Stock market

    (c) Traffic management   (d) Library management

3. Which is the primary data collection points is Wireless Networks?

    (a) Wi Fi Networks   (b) Adhoc Networks

    (c) Sensor Networks   (d) Mobile Networks

4. Pervasive computing is also called as

    (a) Autonomic computing   (b) Ubiquitous computing

    (c) Grid computing   (d) Cloud computing

5. What is the protocol used for portable device to communicate with web.

    (a) CDMA   (b) WAP   (c) TDMA   (d) VXML

<center>PART - B (5 x 3 = 15 Marks)</center>

6. Define middleware and gateway. Give examples.

7. Define Walsh Function.

8. List out the applications of wireless sensor networks.

9. What is Biometrics?

10. Discuss about speech applications and security.

<center>PART - C (5 x 16 = 80 Marks)</center>

11. (a) (i) Briefly summarize the ICAP server services. (6)

      (ii) Describe in details about different types of middleware components and gateways with neat architecture. (10)

<center>Or</center>

    (b) Draw the architecture of the mobile computing and explain every component. (16)

12. (a) (i) Briefly explain the 3G specific applications for virtual home environment over open source architecture. (8)

      (ii) Illustrate with neat sketch for Wireless Broadband system. (8)

<center>Or</center>

    (b) (i) Write short notes on IPV6 and java card. (8)

      (ii) Draw the architecture of GSM and explain the functionalities of its components. (8)

13. (a) (i) Discuss in detail about the Wireless LAN architecture and its advantages. (12)

      (ii) Differentiate 3G and WiFi. (4)

<center>Or</center>

    (b) Explain the formation and functional procedures of mobile adhoc networks. (16)

14. (a) Illustrate the concept of human machine interfaces. (16)

<center>Or</center>

    (b) Explain how operating system issues are handled in pervasive computing. (16)

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15. (a) (i) What is CC/PP configurations and explain its profile by using smart phone. (10)

      (ii) Explain pervasive web application architecture with neat sketch. (6)

<div align="center">Or</div>

  (b) Explain WAP infrastructure and security issues. (16)

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