**C**

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## Question Paper Code: 53R03

M.E. DEGREE EXAMINATION, NOV 2019

Third Semester

Computer Science and Engineering

15PCS303/15PNE301 - MOBILE AND PERVASIVE COMPUTING

(Regulation 2015)

(Common to Computer Science and Engineering (With Specialization in Networks))

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?                     CO1- R

 (a) Service requestor    (b) Service provider   (c) Service response   (d) All the above

2.   The user interface in IVR applications is called as_____.                 CO2 -R

 (a) Call Flow          (b) Data Flow          (c) Operator calls     (d) System Call

3.   3G WCDMA is also known as_____                                            CO3- R

 (a) UMTS              (b) DECT              (c)  DCS_1800          (d) ETACS

4.   Major driving force in the Pervasive computing Market is                        CO4 -R

 (a) Internet Services                       (b) Basic Mobile Phone Services

 (c) Tele Marketing Services                 (d) None of the above

5.   WAP is designed for_____                                               CO5- R
 (a) Internet explorer   (b) Web browser      (c) Micro browser     (d) Macro browser

PART – B (5 x 3= 15 Marks)

6.   What is an ISM Band? List the characteristics of mobile computing              CO1-U
     environment.

7.   Differentiate GSM and 3G.                                                      CO2-U

8.   What are the differences between wireless LAN and wireless PAN?                CO3-U

9. What are the major segments of pervasive computing market? CO4-Ana

10. Why was HTML not used in mobile device? CO5-U

PART – C (5 x 16= 80 Marks)

11. (a) What do you understand by context? Why is context important? CO1- Ana (16)
To develop a navigational system for a car, what type of context information will be necessary?

Or

(b) You have been asked to develop a location aware restaurant guide CO1- U (16)
system for the Restaurant Foundation of India. Describe 4 main functions of this system. Describe how will you implement these 4 functions.

12. (a) What is active RFID? Describe two applications of active RFID CO2- U (16)
and passive RFID. How is active RFID different from passive RFID?

Or

(b) You have been asked by a bank to develop an account enquiry CO2- U (16)
system over telephone. Design the architecture of such a system.

13. (a) What is the challenges one need to keep in mind while designing CO3-Ana (16)
a small footprint device?

Or

(b) What are the elements in a SS#7 signaling network? If we CO3-Ana (16)
compare a SS#7 signaling network with the IP network, which elements are unique and which elements are similar?

14. (a) How pervasive computing can be applied to a healthcare CO4 -U (16)
environment?

Or

(b) Explain any three application examples in pervasive computing. CO4 -U (16)

15. (a) Compare various Speech applications available in the mobile CO5-Ana (16)
pervasive computing.

Or

(b) Write the necessary WML code that accepts product name, rate, CO5-Ana (16)
quantity and calculates the bill amount and displays it to the user.

**53R03**