(b) Write short note on the Following : (CO5)

(i) Dynamic Source Routing

(ii) Global State Routing

(ii) QoS in Ad Hoc Networks

(c) Explain the working and architecture of the following : (CO5)

(i) Optimized Link State Routing Protocol

(ii) Destination Sequenced Distance Vector Routing

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TOE–811

B. TECH. (CSE) (EIGHTH SEMESTER)

END SEMESTER

EXAMINATION, May, 2023

MOBILE COMPUTING

Time : Three Hours

Maximum Marks : 100

Note : (i) All questions are compulsory.

(ii) Answer any *two* sub-questions among (a), (b) and (c) in each main question.

(iii) Total marks in each main question are **twenty**.

(iv) Each sub-question carries 10 marks.

1. (a) Explain the term Channel Allocation in respect to Mobile Computing. Also

describes different types of channel allocation schemes used in Mobile Computing with specifying their advantages and disadvantages. (CO1)

(b) What do you understand by the term Mobile Computing ? Explain in detail. Also specify and explain various characteristics of Mobile Computing. (CO1)

(c) With respect to mobile and wireless communication, explain the following with the help of an example : (CO1)

(i) CDMA

(ii) GSM

(iii) GPRS

2. (a) What do you mean by Wireless LAN ? How is it different from traditional LAN

Architecture ? With respect to Wireless LAN explain the following : (CO2)

(i) Flexibility and Robustness is the strength of Wireless Networks

(ii) Quality of Services and Low Power are the weakness of Wireless Networks

(b) Explain the WAP Architecture in detail. What are the different layers in WAP Protocol ? Explain them. Also explain the advantages and disadvantages WAP Protocols. (CO2)

(c) What is the importance of IEEE 802.11 standards ? Explain the key features of IEEE 802.11 standards in mobile computing. What are the various issues related to MAC protocols ? Also specify the solution to overcome these issues. (CO2)

3. (a) What do you understand by Adaptive Clustering for mobile wireless networks ? Explain with the help of an example and case study. (CO3)

(b) "Data Management is very difficult in Mobile Networks". Justify the above statement by specifying and explaining the issues related to data management in detail. (CO3)

(c) What do you mean by CODA File System ? How the CODA Architecture is different from AFS Architecture. Explain with the help of diagram. Explain fault tolerance as a disconnected operation in CODA. (CO3)

4. (a) "Mobile Agents plays vital role in the field of Robotics, Traffic Control, Grid Computing and Distributed Computing". Justify the above statement by specifying

the architecture, features and role of mobile agents in these areas. (CO4)

(b) What do you mean by Transaction Processing ? Explain the properties of any transaction. Explain the architecture of traditional transaction processing system and mobile or wireless transaction processing system. (CO4)

(c) Security is very important and challenging task in any mobile network. Comment on the above statement. Specify the types of security challenges that generally occurs during the setup of any mobile network. (CO4)

5. (a) What do you understand by Ad Hoc Networks ? How mobile Computing is similar and different from Ad Hoc Networks ? Specify the areas and application where Ad Hoc Networks and Mobile Computing can be beneficial. (CO5)