

333832(33)

**BE (8th Semester)
Examination, April-May 2021**

Mobile Computing and Application

Time Allowed : 3 hours

Maximum Marks : 80

Minimum Pass Marks : 28

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- Note :** (i) Part (a) of each question is compulsory. Attempt any **two** parts from (b), (c) and (d).
(ii) The figures in the right-hand margin indicate marks.
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1. (a) What is frequency reuse? [2]
(b) Explain basic architecture of cellular communication with their components. What are the advantages of cellular communication? [7]
(c) What is interference? What are the different mechanisms used in cellular system to avoid interference? [7]
(d) Explain hand-off. What are the different types of hand-off? [7]

2. (a) What are the different interfaces used in GSM? [2]
- (b) Draw the architecture of GSM network and explain its working in detail. [7]
- (c) Draw and explain personal access communication system architecture and its working. [7]
- (d) What are the limitations of GSM networks? How DECT is better than GSM? What are the limitations of DECT? [7]
3. (a) What types of transmission techniques are generally used in wireless LAN? [2]
- (b) What is HIPERLAN? Discuss the deployment scenarios for various HIPERLAN standards. [7]
- (c) Explain the system architecture of IEEE 802.11 WLAN. What are the different MAC techniques are used in 802.11 standards? [7]
- (d) What is WLL? Explain radio interface structure required for WLL. [7]
4. (a) What is the difference between care of address and co-located care of address? [2]
- (b) Explain DHCP protocol. When is the DHCP used? How does DHCP server bind a mobile node with an IP address? [7]
- (c) Describe the registration of a visiting mobile node on handover. How is the binding between the home agent and the foreign agent? [7]

- (d) What is mobile TCP? What are the basic differences between I-TCP and snooping TCP? [7]
5. (a) What are the different technologies used in 3G wireless communication? [2]
- (b) Why are XML-based languages used in mobile application? Give example of Synchronized ML and SMIL tags to explain the tags and attributes. [7]
- (c) What is WAP? Discuss the principle of WAP component integration in detail. [7]
- (d) What are the quality of services in 3G wireless systems? What are the challenges of 3G systems? What enhancements are required in 4G systems? [7]
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