

**MASTER OF COMPUTER  
APPLICATIONS (MCA-NEW)**

**Term-End Examination**

**June, 2025**

**MCS-231 : MOBILE COMPUTING**

*Time : 3 Hours*

*Maximum Marks : 100*

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**Note :** *Question No. 1 is compulsory and carries 40 marks. Attempt any **three** questions from the rest.*

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1. (a) Discuss the design considerations for mobile computing with a focus on operating system considerations and their impact. 10
- (b) Define WDM. Describe its advantages, disadvantages along with applications. 10
- (c) What is Wireless Application Protocol (WAP) ? How does it work ? Discuss WAP Protocol stack. 10

- (d) With reference to Smart Client Architecture, explain the following approaches : 10
- (i) Thick Client Architecture
  - (ii) Thin Client Architecture
2. (a) Describe the working of three-way handshake in TCP-protocol and give its key features. 10
- (b) Draw the diagram to depict the process of End-to-End connection in Mobile TCP. Give advantages of Mobile TCP. 10
3. (a) List and explain mobile device data store methods, briefly. 10
- (b) Define virtual network. Explain the types of virtual network and give its advantages. 10
4. (a) Explain three-tier architecture for mobile computing. 10
- (b) Explain the types of synchronization methods between mobile client and remote server. 10

**[ 3 ]**

5. (a) Compare and contrast the features and advantages of FDM and TDM in the context to mobile communication. 10
- (b) Elaborate the method used for dynamic grouping of mobile devices to improve performance and to optimize the energy consumption. 10

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