

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

Term-End Examination

June, 2026

MCS-231 : MOBILE COMPUTING

Time : 3 Hours

Maximum Marks : 100

Note : (i) *Question No. 1 is compulsory and carries 40 marks.*

(ii) *Attempt any **three** questions from the rest.*

1. (a) Explain the purpose of multiplexing in mobile communication. Describe the types of multiplexing. 10
- (b) Discuss the features and services offered by General Packet Radio Service (GPRS). 10

- (c) Explain the types of virtual network and give their advantages. 10
- (d) Discuss the advantages of data synchronization in mobile devices and explain common data synchronization formats. 10
- 2. (a) Describe the process of establishing communication via call from mobile to PSTN and mobile to mobile. 10
- (b) Discuss the design considerations for mobile computing in view of operating system and its impact on application development. 10
- 3. (a) Explain components of IP Security (IP-Sec.). How it enhances the security in mobile networks ? 10
- (b) Describe the improvements, 4G bring to mobile networks. Discuss advantages of 4G. 10

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4. (a) Discuss the challenges associated with mobile device database management. Describe mobile device data storage methods. 10
- (b) Explain how VoIP works and its significance in mobile networks. 10
5. (a) Draw diagram for End to End TCP connection and explain the steps of snooping TCP. 10
- (b) Describe Smart Client Architecture with the help of a diagram and explain its key principle. 10

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