

(6 pages)

Reg. No. :

Code No. : 8074

Sub. Code : ZCAE 33

M.C.A. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2023

Third Semester

Computer Application – Elective

MOBILE COMPUTING

(For those who joined in July 2021–2022)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. IEEE 802.16 standard refers to _____.
(a) Wi-Fi (b) Bluetooth
(c) WiMAX (d) Hiper LAN
2. A _____ can be considered to form the heart of a GSM network
(a) Base station controller
(b) Operating subsystem
(c) Mobile switching centre
(d) Operating system

3. _____ is an access method in which multiple nodes are allotted different time slots to access the same physical channel.

(a) FDMA (b) CSMA
(c) CDMA (d) TDMA

4. WCMP stands for _____.

(a) WAP Control Message Protocol
(b) Wireless Central Message Protocol
(c) Wireless Control Mobile Protocol
(d) Wireless Control Message Protocol

5. The _____ is mainly used to simplify the installation and maintenance of networked computers.

(a) Distributive host configuration protocol
(b) Dynamic host configuration process
(c) Dynamic host configuration protocol
(d) Dynamic host central protocol

6. Which of the following is not a characteristic of 3G network?

(a) Communication over VoIP
(b) Unparalleled network capacity
(c) Multi-megabit Internet access
(d) LTE based network

Page 2

Code No. : 8074



7. _____ can be ensured through the use of locking and rollback protocols.

- (a) Isolation (b) Atomicity
- (c) Consistency (d) Durability

8. _____ deals with the delivery of data from a data repository (server) to a large number of clients.

- (a) Recovery
- (b) Data dissemination
- (c) Replication
- (d) Rollback

9. The environment to develop applications for Android consists of _____.

- (a) Android SDK
- (b) IDE Eclipse
- (c) Java Development Kit (JDK)
- (d) All of these

10. Who first coined the term mobile commerce

- (a) Kevin Duffey
- (b) Duffer brothers
- (c) Warren Buffet
- (d) Bill Gates

Page 3

Code No. : 8074

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain the Bluetooth technology with its protocol stack.

Or

(b) Explain in detail the three main categories of services provided by GSM.

12. (a) Explain in detail wireless transport layer security.

Or

(b) Sketch the WAP2.0 architecture and explain.

13. (a) Present a brief notes on the following:

- (i) IPv6
- (ii) Problems associated with reverse tunnelling

Or

(b) Elucidate on mobile TCP characteristics with its advantages.

Page 4

Code No. : 8074
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14. (a) What are the issues in transaction processing? Explain.

Or

- (b) Write about the important constraints on mobile operating system.

15. (a) Explain the
(i) Advantages of Android
(ii) Android SDK environment

Or

- (b) Write about B2C applications of M-Commerce.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Elaborate on the components of wireless communication system.

Or

- (b) Describe the system architecture of GSM with diagram.

17. (a) Explain the random assignment schemes and reservation based schemes of MAC protocol.

Or

- (b) What is an I-mode service? Explain the I-mode protocol stack.

18. (a) Write detailed notes on dynamic host configuration protocol.

Or

- (b) What are the various entities and terminologies of mobile IP? Explain.

19. (a) Discuss about the concept behind query processing.

Or

- (b) Describe the evolution and features of Windows mobile operating system.

20. (a) Elaborate on the following
(i) Android application components
(ii) Android software stack structure

Or

- (b) Explain the architecture of mobile commerce.

