

(6 pages)

Reg. No. : \_\_\_\_\_

Code No.: 20261 E Sub. Code: SECA 6 C /  
AECA 6 3

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

Sixth Semester

Computer Application – Major Elective

MOBILE COMMUNICATION

(For those who joined in July 2017–2020)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which component in a cellular network provides switching to other wired and wireless networks?
  - (a) Base Terminal Station (BTS)
  - (b) Mobile Switching Centre (MSC)
  - (c) Base Station Controller (BSC)
  - (d) Visiting Location Register (VLR)

6. Which of the following feature makes impossible to eavesdrop on GSM radio transmission?
  - (a) SIM
  - (b) On the air privacy
  - (c) SMS
  - (d) Packet switched traffic
7. SINAD stands for
  - (a) Signal to noise and distortion ratio
  - (b) Signal to noise and distribution ratio
  - (c) Signal to noise and distance ratio
  - (d) Signal to noise and difference ratio
8. Identify the following which one is not a wireless threat
  - (a) Eavesdropping
  - (b) Communication jamming
  - (c) Rogue client
  - (d) HLR
9. The frequency of broad band WLL is around
  - (a) 28 kHz
  - (b) 28 MHz
  - (c) 24 GHz
  - (d) 28 MHz

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2. Which radio propagation effect produces diffused wave transmission in IR communication?
  - (a) Reflection
  - (b) Scattering
  - (c) Diffraction
  - (d) Multipath fading
3. Which organization developed the Global System for Mobile communication (GSM)?
  - (a) Federal Communications Commission (FCC)
  - (b) International Telecommunication Union (ITU)
  - (c) Institute of Electrical and Electronics Engineers (IEEE)
  - (d) World Wide Web Consortium (W3C)
4. Who sets the standards of CSM?
  - (a) ITU
  - (b) AT and T
  - (c) ETSI
  - (d) USDC
5. Which type of cordless telephone system allows users to have multiple conversations simultaneously using different channels?
  - (a) Wireless Private Box Exchange
  - (b) Multichannel Cordless Telephone System
  - (c) Cordless Telephone Home
  - (d) Cellular Digital Part data (CDPD) System

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10. The coding scheme used in 802.11 specification is
  - (a) Hamming code
  - (b) convolutional code
  - (c) Reed Solomon code
  - (d) turbo code

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).  
Each answer should not exceed 250 words.

11. (a) What are the properties of the wireless medium. Explain.  
Or  
(b) Explain the radio Propagation mechanism in mobile communication.
12. (a) Explain the key differences between first-generation and second-generation wireless networks.  
Or  
(b) Describe the architecture of the Global System for Mobile communication (GSM).
13. (a) Write a Brief note on Geosynchronous Earth Orbit Satellites.  
Or  
(b) Explain Global Satellite communication in detail.

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14. (a) What is SINAD? Explain.

Or

(b) Discuss about fading?

15. (a) Explain the need of Ad hoc Network in detail.

Or

(b) Discuss the features of 4 G Technology.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)  
Each answer should not exceed 600 words.

16. (a) Explain the functions of different stages in MSC.

Or

(b) Discuss the advantages of digital switching technique.

17. (a) Write a brief note on SIM card.

Or

(b) Discuss various radio access technique in detail.

18. (a) Explain various classification of Mobile Data Networks in detail.

Or

(b) Write a Brief note on Cellular Digital Packet Data System.

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19. (a) Write a brief note on wireless threat.

Or

(b) Bring out the role of important parameters of the base station

20. (a) Explain WAP architecture in detail.

Or

(b) Explain various applications of Bluetooth technology

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