

A. (CBCS) DEGREE EXAMINATION, APRIL 2022

Sixth Semester

Computer Applications

Major Elective — MOBILE COMMUNICATION

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

The _____ is responsible for handling traffic and signalling between a mobile phone and network.

- (a) Operation support system
- (b) Mobile station
- (c) Base station subsystem
- (d) Network switching system

Each cell is allocated a predetermined set of voice channels in _____

- a) Dynamic channel assignment
- b) Spectrum channel assignment
- c) Fixed channel assignment
- d) All the above

Which of the following refers to the variation of the signals strength with respect to time or distance?

- a) Delay spread
- (b) Fading
- c) Diffraction
- (d) Reflection

In which attack, the attacker gets the packet before the intended receiver does

- a) Eaves dropping
- b) Traffic analysis
- c) Man-in-middle attack
- d) None

Reduced size cells are called _____

- a) Picocells
- (b) Infocells
- c) Minicells
- (d) Microcells

Bluetooth devices connect and communicate wirelessly through short range devices called _____

- a) Piconets
- b) Petrinets
- c) Scatternets
- d) Piconets and scatternets

2. Which is the protected database that stores a copy of secret key stored in each SIM card
 - (a) AUC
 - (b) EIR
 - (c) VLR
 - (d) MSC
3. An identifier which uniquely identifies an user in an organization is _____
 - (a) Mobile IP
 - (b) Global user number
 - (c) SIM
 - (d) IMEI
4. Orbits assigned to satellites with respect to earth and present in them are called _____
 - (a) Earth orbit satellites
 - (b) Moon orbit satellites
 - (c) Space satellites
 - (d) None
5. MMS stands for _____
 - (a) Multiple Message Service
 - (b) Multiple Media System
 - (c) Multimedia Messages
 - (d) Multiple Media Messages

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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 components of network switching system.
Or
(b) Brief out the need for mobile communication.
12. (a) List out the features of AMPS.
Or
(b) Explain channel assignment methods in detail.
13. (a) Explain the classification of satellites.
Or
(b) Write short notes on third generation global mobile system.
14. (a) Compare adjacent and co-channel interference in cellular communication.
Or
(b) What is SINAD? How will you measure it?

15. (a) Explain the types of intelligent cells.

Or

(b) Write short notes on WAE.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) What is radio wave propagation? Explain its methods in detail.

Or

(b) Describe base station system in detail.

17. (a) Explain the generation of wireless networks.

Or

(b) Define Handoff. Explain its types in detail.

18. (a) Explain mobile data networks in detail.

Or

(b) Describe CDPD architecture with a neat diagram.

19. (a) Explain mobile IP in detail.

Or

(b) Describe security arrangement in CDMA.

20. (a) Illustrate the purpose of bluetooth technology in detail.

Or

(b) Explain WAP in detail.