

Master's Degree Examination- November 2018
V Semester

Class: III M.C.A.
Major: Computer Applications

Max. Marks: 60
Time: 3 Hours

12MCAC30 Mobile Communications

PART – A

(10 * 0.5 = 5 marks)

Choose the correct answer

- 1) _____ refers to a user who has access to the same or similar telecommunication services at different places
 - a) Device portability
 - b) User mobility
 - c) Portability
 - d) Access Network
- 2) Cellular systems using _____ cells are commonly said to be breathe
 - a) FDM
 - b) CDM
 - c) SDM
 - d) TDM
- 3) CDMA contains _____ codes
 - a) 1
 - b) 2
 - c) 3
 - d) 4
- 4) DECT works at a spectrum of 1880-1900 MHz with a range of _____
 - a) 100-500 m
 - b) 100 -1000m
 - c) 100-700m
 - d) 0-100m
- 5) The _____ is defined as the angle between the center of the satellite beam and the plane described by the satellite orbit.
 - a) plane of satellite orbit
 - b) elevation angle
 - c) perigee
 - d) inclination angle
- 6) All TV and radio broadcast satellites are the examples of _____.
 - a) GEO
 - b) LEO
 - c) MEO
 - d) HEO
- 7) In which network, each node can communicate directly with other nodes?
 - a) Infra red network
 - b) Ad-hoc network
 - c) LAN
 - d) WAN
- 8) The _____ specifies the most famous families of WLAN, in which many products are available.
 - a) IEEE 802.11
 - b) IEEE 803.11
 - c) 804.11
 - d) 805.11
- 9) The behaviour TCP shows after the detection of congestion is called _____.
 - a) slow start
 - b) fast retransmit
 - c) fast recovery
 - d) implications of mobility
- 10) The fundamental design problem in TCP, an error control mechanism is _____ for congestion control.
 - a) use
 - b) misuse
 - c) loss of data
 - d) destroy

PART – B (5 *4 =20)

Answer all the Questions

Answer should not exceed 200 words or one page

- 11) a) Describe the applications of Mobile Communication.
(or)
b) What are signals? Explain the representation of signals.
- 12) a) What are the services provided by GSM? Explain.
(or)
b) Draw the typical TDMA frame structure of TETRA and explain it.
- 13) a) Write down the applications of satellites.
(or)
b) What are the advantages and disadvantages of GEO, LEO and MEO?
- 14) a) What are the advantages and disadvantages of WLAN?
(or)
b) Difference between wired networks and ad hoc wireless networks related to routing.
- 15) a) Compare snooping TCP with Mobile TCP with example network scenarios.
(or)
b) Discuss the characteristics of TCP over 2.5/3G wireless networks.

PART – C (5 *7 =35)

Answer all the Questions

Answer should not exceed 600 words or three pages

- 16) a) What are the advantages and disadvantages of cellular systems? Explain.
(or)
b) What are the two ways of spreading the spectrum? Describe.
- 17) a) Compare SDMA, FDMA and TDMA.
(or)
b) Explain about the UMTS System Architecture.
- 18) a) Discuss the functional architecture of a GSM system.
(or)
b) Explain about the DECT system architecture reference model.
- 19) a) Describe the architecture of an infrastructure based IEEE 802.11.
(or)
b) With a suitable example compare the behavior of DSDV and DSR algorithms with their routing table or cache contents.
- 20) a) Explain the future of mobile computing.
(or)
b) Describe the classical enhancements to TCP for mobility.
