



Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Examination – June 2021
VI Semester

Class : III UG
Major : Information Technology

Time : 3 Hours
Max. Marks: 100

18BITC27 Mobile Communications

Part A
Choose the Correct Answer

10 x 1 = 10

1. The modulation technique used for mobile communication systems during world war II was CO1 K2
 - a. Amplitude modulation
 - b. ASK
 - c. Frequency modulation
 - d. FSK
2. Mobile Computing allows transmission of data from one wireless-enabled device to another CO1 K1
 - a. Any device
 - b. Wireless-enabled device
 - c. Wired device
 - d. Wired and wireless
3. In TD-SDMA, there is a frame of _____ milliseconds and the frame is divided into _____ time slots. CO2 K2
 - a. 5, 7
 - b. 7, 5
 - c. 2, 5
 - d. 5, 2
4. In which one of the following codes with specific characteristics can be applied to the transmission? CO2 K2
 - a. CDMA
 - b. GPRS
 - c. GSM
 - d. All options
5. 3G W-CDMA is also known as CO3 K2
 - a. UMTS
 - b. DECT
 - c. DCS-1800
 - d. ETAC
6. DECT stands for CO3 K1
 - a. Digital European Cellular Telex
 - b. Digitized Emergency Cellular Telephone
 - c. Digital European Cordless Telephone
 - d. Digital European Cellular Telephone
7. RAKE receiver is CO4 K2
 - a. Several sub receivers
 - b. Several correlators
 - c. Fingers
 - d. Equalization based
8. Trunking in a cellular network refers to CO4K2
 - a. Termination of a call
 - b. Spectrum unavailability
 - c. Accommodating large number of users in limited spectrum
 - d. All of the above
9. The wavelength transmission of infra red light is _____ CO5 K1
 - a. 900 nm
 - b. 800nm
 - c.750nm
 - d. 1000nm
10. BSS stands for CO5 K2
 - a. Basic Service Set
 - b. Base Service Station
 - c. Basic Station Set
 - d. Base Set Station

Part B
Answer ALL questions
Each answer should not exceed 400 words or two pages

5 x 6 = 30

- 11.a. Describe the effect of co-channel interference in mobile communication. How it affect system capacity? CO1 K2
(or)
- 11.b. Summarize wireless communication history CO1 K1
- 12.a. Write a short note on near-far effect in CDMA. CO2 K3
(or)
- 12.b. List the following parameters of 3G-TD-SCDMA system.
i. Bandwidth ii. Data Rate iii. Multiple Access iv. Backward Compatibility CO2 K1
- 13.a. Explain call procedure in GSM for network to mobile terminated call. CO3 K1
(or)
- 13.b. Explain HSCSD for 2.5 G GSM CO3 K4
- 14.a. Explain call procedure in GSM for network to mobile terminated call. CO4 K4
(or)
- 14.b. Compare and contrast GEO, LEO, MEO CO4 K4
- 15.a. Distinguish between infrared vs radio transmission CO5 K2
(or)
- 15.b. Write note on IEEE 802.11 standard? Explain 802.11b, 802.11a CO5 K3

Part C
Answer ALL questions
Each answer should not exceed 800 words or four pages

5 x 12 = 60

- 16.a. Define Multiplexing. Explain i. Space division multiplexing ii. Frequency division multiplexing iii. Time division multiplexing iv. Code division multiplexing CO1 K1
(or)
- 16.b. Describe i. Amplitude shift keying ii. Frequency shift keying CO1 K2
iii. Phase shift keying iv. Advanced frequency shift keying
- 17.a. Compare IS95, WCDMA and CDMA 2000. CO2 K2
(or)
- 17.b. What is SDMA, TDMA, FDMA, CDMA? Compare S/T/F/CDMA CO2 K
- 18.a. Illustrate authentication process in GSM system with the help of appropriate sketch. CO3 K4
(or)
- 18.b. Define UMTS. Explain its releases and standardization, system architecture and radio interface CO3 K1
- 19.a. Discuss on Digital audio broadcasting CO4 K2
(or)
- 19.b. Explain the Digital video broadcasting CO4 K2
- 20.a. Illustrate wireless ATM with neat diagram CO5 K4
(or)
- 20.b. Explain Mobile ad-hoc networks with example CO5 K3
