Reg. No ..... Name **23U432**

B C A DEGREE END SEMESTER EXAMINATION : MARCH 2023

SEMESTER 4 : MOBILE APPLICATIONS AND CLOUD TECHNOLOGY

COURSE : **19U4CRBCA14 : MOBILE DEVICE AND NETWORK ARCHITECTURE**

(For Regular - 2021 Admission and Improvement / Supplementary - 2020/2019/2018/2017/2016 Admissions)

Time : Three Hours Max. Marks: 75

PART A

Answer All (1 mark each)

1. What is dedicated control channel?
2. Which are the functions of boarder gateway?
3. What is MSISDN?
4. What is mean by smart phones?
5. Give the components in core networks.
6. Explain the functions of presentation layer.
7. What is Tx/Rx switch?
8. Define demodulation.
9. List the types of handover in cellular network.
10. List any two vendors of the software framework used in the mobile

(1 x 10 = 10)

PART B

Answer any 8 (2 marks each)

11. Explain about the plain old telephony service.
12. Explain the functions of physical layer in the GPRS network.
13. Which are the contents stored in a SIM?
14. Differentiate between low end phones and featured phones.
15. Explain the importance of HLR and VLR in a mobile network.
16. Explain the keyboard types in Mobile handset.
17. How the phase modulation helps in wireless communication?
18. Describe the functional entities in mobile IP.
19. What is mean by interface management in cellular network? Give the primary source of interfaces in radio access network.
20. What is mean by energy efficient communication?

(2 x 8 = 16)

PART C

Answer any 5 (5 marks each)

21. How the mobility of mobile device is managed in mobile network? Explain the steps involved in updating the location of a mobile device.
22. Differentiate between the features of 3G and 4G network.
23. Describe the characteristics of a mobile handset.
24. Explain the evolution of architecture in mobile hardware.
25. Explain different type of communication models.

26. Explain CDMA (code division multiple access) with necessary diagrams.

27. Explain the functions of the transmission layer and the data link layer in GPRS network

(5 x 5 = 25)

PART D

Answer any 2 (12 marks each)

28. Explain the different types of radio frequency channels associated with a GSM network

29. Explain the different principles associated in wireless communication.

30. Write a note on radio frequency sub system and mobile identity services.

31. What is mean by a protocol stack? Explain the functional layers in a protocol stack of a mobile network.

(12 x 2 = 24)