Reg. No ..... Name **25U434**

B C A DEGREE END SEMESTER EXAMINATION - MARCH 2025

SEMESTER 4 : MOBILE APPLICATIONS AND CLOUD TECHNOLOGY

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

(For Regular 2023 Admission and Improvement/Supplementary 2022/ 2021/2020/2019/2018/2017/2016 Admissions)

Time : Three Hours Max. Marks: 75

PART A

Answer All (1 mark each)

1. Define encoding.
2. What is mobile IP?
3. Explain the working of a mobile phone without SIM.
4. What is an analog signal?
5. What is MSISDN?
6. Which are the functions of GGSN in GPRS network?
7. Give the components in core networks.
8. Explain the functions of mobile switching center.
9. What is GPS?
10. List any two vendors of the chipset used in the mobile handset.

(1 x 10 = 10)

PART B

Answer any 8 (2 marks each)

11. Give the advantages of frequency reuse.
12. Which are the components associated with GPRS backbone.
13. Describe the functions of PCU (packet control unit).
14. Differentiate between low end phones and featured phones.
15. Which are the elements used to represent mobile identity?
16. Describe about the processor evolution in mobile handset.
17. What is mean by interface management in cellular network? Give the primary source of interfaces in radio access network.
18. Differentiate between smart phones and featured phones.
19. List the layers in OSI reference model.
20. What is mean by multiplexing in wireless communication?

(2 x 8 = 16)

PART C

Answer any 5 (5 marks each)

21. Explain the architectural trends in CPU design.
22. Differentiate between the features of 3G and 4G network.
23. Explain different type of communication models.
24. Describe the session initiation protocol to implement dialog control.
25. What is meant by frequency reuse in cellular networks? Give advantages of frequency reuse.
26. Explain mobile network protocol layers.
27. Describe the characteristics of a mobile handset.

(5 x 5 = 25)

PART D

Answer any 2 (12 marks each)

28. Explain the ISO OSI reference model.
29. Explain the architecture of a mobile handset.
30. Draw and explain SMS network architecture.
31. Draw and explain the GSM protocol stack.

(12 x 2 = 24)