ECE:UG1 (IC)

Duration: 90 Mins (09:15 - 10:45 AM)

Date: 02-12-2024

Max. Marks: 25

Roll No: S2024001002o

Instructions:

1. All questions are compulsory
2. Write the answers legibly
3. Make the necessary assumptions if required.
4. Electronic gadgets are not allowed.

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1. a) Write the advantages of cellular communications?
   b) List the mobile computing devices? Write about anyone? [1]
   c) Explain the simple wireless communication system with a suitable neat diagram? [1.5]
   [2.5]

2. a) Why do we need handover in the cellular system? [1]
   b) Write the umbrella cell approach with a suitable diagram? [1.5]
   c) List the multiple access technique? Explain anyone with a suitable neat diagram? [2.5]

3. a) What is the controller area network? [1]
   b) Write the difference between Piconet and Scatternet? [1.5]
   c) Explain different types of registers in 8085 microprocessors. [2.5]

4. a) What will be the content of flag register after executing 3rd and 5th instructions in the following program: [2M]

   ```
   MVI A, 35H

   MVI B, 1AH

   ADD B

   MVI C, 08H

   SUB C

   HLT
   ```

   b) Write the process of execution of an 8085-program considering the role of special purpose registers. Explain with the help of one example. [3M]

5. a) Write a simple 8085 program to add two numbers stored in memory locations 2000H and 2001H, and store the result in memory location 2002H. [2M]

b) What will be the content of Accumulator register and carry flag bit after the execution of following instructions set: [3M]

Address	Instructions
4000H	XRA A
4001H	MVI B, 1BH
4003H	MVI A, 03H
4005H	RAL
4006H	DCR B
4007H	JNZ 4005
400AH	HLT