Please check that this question paper contains 9 questions and 2 printed pages within first ten minutes.

[Total No. of Questions: 09] [Total No. of Pages: 02]

Uni. Roll No. …….

13-01-2022(E)

Program: B.Tech.
Semester: 5
Name of Subject: Microprocessors and Microcontrollers
Subject Code: PCEC-112
Paper ID: 16419

Time Allowed: 02 Hours **Max. Marks: 60**

NOTE:

1) Each question is of 10 marks.
2) Attempt any six questions out of nine
3) Any missing data may be assumed appropriately

Q1. Explain the complete memory organization (SFRs, Internal RAM, Internal ROM) of 8051 microcontroller.

Q2. Construct an assembly-language program to generate a square wave of 10 KHz frequency on Pin P1.0 with crystal frequency equal to 24 MHz.

Q3. Describe the Permanent-Magnet Stepper Motors and its interfacing with 8051 microcontroller.

Q4. Develop a program to arrange an array of data in descending order.

Q5. Discuss the characteristics, operations and programming steps of MODE 1 and MODE 2 of TMOD register.

Q6. Distinguish microprocessor and microcontroller in accordance with their architectural design, processing capabilities, and design constraints.

Q7. Draw the architecture and explain the operation of each block of 8085 µP.

Q8. For 8051, construct a program to add contents of ten memory locations from 20H onwards.

Q9. Analyze the functioning of IDE and assembler directives. Enlist some widely used assembler directives.

****