PVP 14

Code: IT5T5

III B.Tech - I Semester – Regular/Supplementary Examinations
October 2019

MICROPROCESSORS AND MICROCONTROLLERS
(INFORMATION TECHNOLOGY)

Duration: 3 hours Max. Marks: 70

PART – A

Answer ***all*** the questions. All questions carry equal marks

11x 2 = 22 M

1.

a) What is the purpose of Program Counter register in 8085 processor?
b) Draw the format of Flag register in 8085 processor.
c) What is the purpose of Instruction Pointer register in 8086 processor?
d) Explain about the ROL instruction in 8086 processor.
e) Write the advantages of segmentation in 8086 processor.
f) What are bit clearing and masking instructions in ARM processor?
g) Mention the sizes of internal RAM and internal ROM in 8051 microcontroller.
h) Give the differences between conditional and unconditional branch instructions in 8051.
i) What is the significance of thumb instruction set?
j) Mention different IDE tools.
k) Explain the function of UART.

PART – B

Answer any ***THREE*** questions. All questions carry equal marks.
3 x 16= 48 M

2. a) Draw the architecture of 8085 microprocessor and explain? 8 M

   b) Demonstrate different types of arithmetic instructions in 8085. 8 M

3. a) Discuss the minimum mode operation of 8086 with neat diagram. 8 M

   b) Write an 8086 ALP to find the number of even numbers in a series of given 10 numbers. 8 M

4. a) Explain the memory organization of 8051 relevant diagrams. 8 M

   b) Write short notes on the ports of 8051 and their special functions. 8 M

5. a) Sketch the architecture of 16 bit ARM processor and describe it. 8 M

   b) Classify the Thumb instruction set. 8 M

6. a) Explain about serial peripheral interface I^2C bus. 8 M

b) Illustrate the development tools for ARM processor. 8 M