Printed Pages: 02 **Subject Code: NEE504**

Paper Id: **120518** **Roll No:** | | | | | | | | | | |

BTECH
(SEM V) THEORY EXAMINATION 2018-19
MICROPROCESSOR & ITS APPLICATIONS

Time: 3 Hours ***Total Marks:100***

Notes: *Assume any Missing Data.*

SECTION – A

1 . Attempt all of the following questions: **10 x 2 = 20**

(a) Specify the type of addressing mode used in following

(i)MOVEAX, [2050H].

(ii) INAX, DX.

(b) What are interfacing logical devices?

(c) How does the microprocessor differentiate between data and instruction?

(d) Explain the need of memory segmentation in 8086.

(e) Compare RET and POP instruction in microprocessor.

(f) Define instruction cycle and machine cycle in microprocessor.

(g) What is microprocessor? Give the power supply and clock cycle of 8085.

(h) Explain different types of interrupts in 8085.

(i) Draw flag register of 8085.

(j) Write about types of addressing modes in 8086.

SECTION – B

2. Attempt any three of the following questions: **3x 10 = 30**

(a) With the neat and block diagram and describe the internal architecture of 8085.state the function of each block shown.

(b) Describe the various addressing mode of 8086 with suitable example of each.

(c) What do you understand by DMA controller? With the help of block diagram explain the working of 8237.

(d) Explain the role of interrupts in programming. Explain the interrupts used in 8085.List out all the vectored interrupts of 8085 and give their vector address.

(e) Discuss the mode of operation of 8253 programme, internal times with its control format.

SECTION – C

3. Attempt any one part. **1 x 10 = 10**

(a) Explain how 8253/8254 can be used as a square wave generator.

(b) Draw architecture of 8086 explain its different unit. What do you mean by pipelining and explain the concept of memory segmentation.

4. Attempt any one part. **1 x 10 = 10**

(a) Explain assembler level programming and draw the flowchart of assembler level programming?

(b) Give a block diagram and describe the used of microprocessor to control the temperature of an electric oven. With the help of flow chart explain the algorithm used for temperature control.

5. Attempt any one part. **1 x 10 = 10**

(a) Draw explains the memory and I/O read cycle of 8085.

(b) Explain minimum and maximum operating modes of 8086 with timing diagram

6. Attempt any one part. **1 x 10 = 10**

(a) Draw and explain block diagram and pin configuration of IC-8253.

(b) Write an assembly language program to generate a delay of 1msec.Also show the calculation of time delay. Assume that the crystal frequency of 8085 is 6 MHz.

7. Attempt any one part. **1 x 10 = 10**

(a) Explain the interrupts sequence and types of interrupt in 8086.

(b) Explain different modes of operation of 8259.