

Roll No. ....

Total Pages : 3

12344

BSIT/D-12

**MICROPROCESSOR ARCHITECTURE AND  
PROGRAMMING-III**

Paper-BSIT-505

[Time Allowed : 3 Hours]

[Maximum Marks : 45]

Instructions : Attempt five questions in all, selecting at least one question from each Unit. Question No. 1 is compulsory.

**(Compulsory Question)**

- (a) Discuss the role of Stack in calling a Sub-routine and returning from Sub-routine. 2
- (b) Explain important difference between Static RAM interfacing and dynamic RAM interfacing. 3
- (c) Discuss the key features of Multiport memory configurations. 2

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(d) Bring out salient features of 80286 in real address mode. 2

### UNIT-I

2. (a) Explain interrupt structure of 8086 in detail. 5

(b) Define a Macro "SQRT" that calculates square root of a number. 4

3. (a) Explain, how parameters are passed to Macro. 5

(b) Write ALP to generate 10 sec. delay using a microprocessor system that runs at 50 MHz. 4

### UNIT-II

4. (a) Discuss the procedure of interfacing static RAM with CPU. 4

(b) Interface two 4K RAM chips and two 2K EPROM chips with 8088 so as to form a completely working system configuration.

5. (a) Explain the control word format of 8255 in I/O mode.

(b) Interface an 8×8 keyboard using two 8255 ports.

### UNIT-III

6. (a) Interface a typical 12-bit DAC with 8255.

(b) Write a program to generate square wave of period 1 m sec. using CPU that runs at 10 MHz. 4

Discuss Architecture of numeric processor 8087 in detail. 9

### UNIT-IV

(a) What do you mean by Swapping in and Swapping out? 5

(b) What are the salient features of protected virtual address mode? 4

Discuss design issue of RISC processor in detail. 9