Roll No. ..... Total Pages : 2

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BT-7/DX

ADVANCED MICROPROCESSORS

Paper : ECE-423/425(E)

Time : Three Hours] [Maximum Marks : 100

Note : (i) Attempt *five* questions.

(ii) Select at least *one* question from each unit.

UNIT–I

1. (a) What is Memory segmentation ? Discuss its advantages. What do you understand by 'Non–overlapping' and 'Overlapping' segments ?

   (b) Explain the functions of the following pins of 8086 :

   (i) $\overline{TEST}$

   (ii) MN/$\overline{MX}$

   (iii) DT/$\overline{R}$

   (iv) $\overline{DEN}$. 10+10

2. What do you understand by Real Addressing Mode and Protected Virtual Address Mode (PVAM) with reference to 80286 ? How the physical address is calculated in PVAM ? 20

UNIT–II

3. Draw the internal block diagram of 80286 and explain the function of each block. 20

4. (a) Explain task switch operation supported by 80286.

(b) Discuss the function of following assembler directives :

(i) DQ.

(ii) ASSUME.

(iii) EQU.

(iv) LABEL. 10+10

UNIT–III

5. Discuss the internal architecture of 80287 with the help of block diagram. 20

6. (a) Explain the status and control words of 80287.

   (b) Discuss the functions of following 80287 instructions :

   (i) FLD.

   (ii) FSTP.

   (iii) FCOM.

   (iv) FADD. 10+10

UNIT–IV

7. Discuss the architecture of 80387. What are its additional features over 80287 ? 20

8. Write short notes on the following :

   (a) Salient features of 80487.

   (b) Segment descriptors. 10+10