

Total No. of Questions : 8]

SEAT No. :

P650

[Total No. of Pages : 2

[5869]-279

S.E. (Computer)

MICROPROCESSOR

(2019 Pattern) (Semester - IV) (210254)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Neat diagrams must be drawn whenever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume suitable data if necessary.

Q1) a) With the help of a neat diagram, explain the Page Translation Process in 80386. [6]

b) Draw and explain General Selector Format. [6]

c) What is a Logical address, Linear address and Physical address? [6]

OR

Q2) a) Explain the use of following instructions in detail : [6]

i) SGDT ii) LIDT iii) SLDT

b) Explain the Segment Translation Process with a neat diagram of 80386. [6]

c) Enlist various types of system and non-system descriptors in the 80386. Explain their use in brief. [6]

Q3) a) Write a short note on CPL, DPL, and RPL. [6]

b) Explore the role of various fields in Page Level Protection. [6]

c) List and explain various Privilege Instructions. [5]

OR

P.T.O.

- Q4)** a) What is call gate? Explain how it is used in calling functions with higher privilege levels. [6]
b) Define the functions of Type Checking and Limit Checking in protection. [6]
c) Explain different levels of protection? State the rules of protection check. [5]

- Q5)** a) Explore the role of Task Register in multitasking and the instructions used to modify and read Task Register. [6]
b) Draw and Explain the Task State Segment of 80386. [6]
c) Difference between Real Mode and Virtual 8086 Mode. [6]

OR

- Q6)** a) Explain the TSS descriptor of 80386 with a neat diagram. [6]
b) Explore memory management in the Virtual 8086 Mode. [6]
c) List and explain various features of virtual 8086 Mode. [6]

- Q7)** a) Explain the process of Enabling and Disabling Interrupts in 80386. [6]
b) Differentiate and Explain the Interrupt gate and Trap gate descriptor. [6]
c) Differentiate between Microprocessor and Microcontroller. [5]

OR

- Q8)** a) With the help of the necessary diagram, explain the structure of IDT in 80386. [6]
b) Explain different types of exceptions in 80386 with suitable examples. [6]
c) Draw and Explain the Architecture of a Typical Microcontroller. [5]

