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]**

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