

SPPU-SE-COMP-CONTENT – KSKA Git

Total No. of Questions : 8]

SEAT No. :

P1534

[Total No. of Pages : 2

[6002]-163

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) Figures to the right indicate full marks.

- Q1)** a) Enlist various types of system and non - system descriptors in the 80386. Explain their use in brief. [6]
- b) Explain the use of following instructions in detail: [6]
- i) LGDT
 - ii) LIDT
 - iii) SIDT
- c) With the necessary flowchart, explain the complete address translation process in 80386. [6]

OR

- Q2)** a) Explain the page translation process in 80386. [6]
- b) Draw and explain the general descriptor format available in various descriptor tables. [6]
- c) Differentiate and explain GDTR, LDTR, and IDTR. [6]
- Q3)** a) Explore five aspects of protection applied in segmentation. [6]
- b) What is DPL, EPL and IOPL? Explain in brief. [6]
- c) Explore the need for a protection mechanism in 80386. [5]

OR

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- Q4)** a) Explain how control transfer instructions are executed using the call gate in the system? [6]
b) List and explain various Privilege Instructions. [6]
c) Elaborate on the concept of combining segment protection and page level protection in 80386. [5]

- Q5)** a) Explain the structure of a V86 Task in detail. How is protection provided within the V86 task? [6]
b) Draw and explain the Task State Segment of 80386. [6]
c) With the necessary diagram, explain entering and leaving the virtual mode of 80386. [6]

OR

- Q6)** a) Explain the TSS descriptor and its role in multitasking. [6]
b) List and explain various features of virtual 8086 mode. [6]
c) Define Task Switching and explain the steps involved in task switching operation? [6]

- Q7)** a) How interrupts are handled in protected mode? Explain with the help of a neat diagram. [6]
b) Elaborate about enabling and disabling interrupts in 80386. [6]
c) List and elaborate on different applications of microcontrollers. [5]

OR

- Q8)** a) Explain the following exceptions in brief. [6]
i) Divide error
ii) Invalid Opcode
iii) Overflow
b) How interrupts are handled in protection mode. Explain with the help of a neat diagram. [6]
c) Explain various features of the 8051 Microcontroller. [5]

