

JE. Sem. V Computer

MP

QP Code : 3321

Time 3 hrs

Max Marks 80

Notes: 1. Q. 1 is compulsory

2. From remaining answer any 3 questions.

3. Draw neat diagram wherever necessary

- Q.1 A) Draw and explain timing diagram for write operation in minimum mode of 8086. 5
B) List operating modes of 8253. 5
C) Write down features of Pentium processor. 5
D) Write the instruction issue algorithm used in Pentium. 5
- Q.2 A) Explain protection mechanism used in 80386. 10
B) Write assembly language program for 8086 to reverse a string of 10 characters. 10
- Q.3 A) Design 8086 microprocessor based system with following specification 10
a) Microprocessor 8086 working at 8 MHz in maximum mode
b) 32 KB EPROM using 16 KB chips
c) 16 KB SRAM using 8 KB chips
Explain the design along with memory address map.
B) Explain branch prediction logic used in Pentium. 10
- Q. 4 A) i. Explain different data transfer modes of 8237 DMA controller. 05
A) ii. Explain interfacing of 8259 with 8086 in minimum mode. 05
B) Differentiate between real mode and protected mode. 10
- Q. 5 A) Compare 8086, 80386 and Pentium. 10
B) Draw architecture of Super SPARC processor and explain in short. 10
- Q. 6 Write note on any 4. 20
a) Data cache organization of Pentium.
b) State use of control flags of 8086
c) Data types supported by SPARC processor
d) Advantages of memory segmentation in 8086.
e) Mode 1 of 8255 for input operation