



K19P 1376

Reg. No. :

Name :

**III Semester Master of Computer Application (M.C.A.)/ M.C.A. Lateral Entry
Degree (Reg./Suppl./Imp.) Examination, November - 2019**

(2014 Admission Onwards)

**MCA 3C17 : ADVANCED MICROPROCESSORS AND
MICROCONTROLLERS**

Time : 3 Hours

Max. Marks : 80

SECTION - A

Answer any **TEN** questions. Each question carries **THREE** marks.

(10x3=30)

1. What are the features of Intel 8086 microprocessor?
2. How clock signal is generated in 8086?
3. Mention the applications of 80286 microprocessor?
4. Compare and contrast between macro and procedure.
5. Mention the features of 486 microprocessor?
6. Discuss the advantages of microcontrollers over microprocessors in control applications.
7. What is Vectored and Non- Vectored interrupt?
8. How microcontrollers are different from simple processor.
9. What are the significant features of co-Processors?
10. What is program counter? How it will be useful in program execution.
11. Mention the differences between application software and system software.
12. Validate the need of page fault exception in memory management.

P.T.O.

**SECTION - B**

Answer **all** questions. Each question carries **ten** marks.

13. a) Draw and explain pin diagram of 8086 and also explain the concept of memory segmentation in microprocessor with neat diagram. **(10)**
(OR)
b) Briefly explain various addressing modes of 8086 with suitable examples. **(10)**
14. a) Discuss in detail about how the instruction level parallelism achieved in microprocessor. **(10)**
(OR)
b) Explain the real and virtual mode in 80286 and also explain virtual memory with physical memory. **(10)**
15. a) With suitable examples, explain the addressing modes available in Pentium processor? **(10)**
(OR)
b) Briefly explain importance of interfacing strategy of 8251 and 8255 peripherals with advanced 8086. **(10)**
16. a) What are the uses of embedded system? Explain various components of embedded system. **(10)**
(OR)
b) Briefly explain important testing tools used for software development. **(10)**
17. a) Describe the instruction set of PIC microcontroller and explain the programming of PIC microcontroller with suitable examples. **(10)**
(OR)
b) Briefly explain various hardware platforms along with its architecture diagram. **(10)**
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