



K20P 1265

Reg. No. :

Name :

III Semester Master of Computer Application (M.C.A.)/M.C.A. (Lateral Entry) Degree (CBSS – Reg./Suppl. (Including Mercy Chance)/Imp.) Examination, November 2020 (2014 Admission Onwards)
MCA3C17 : ADVANCED MICROPROCESSORS AND MICROCONTROLLERS

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **any ten** questions. **Each** question carries **three** marks :

1. Explain the function of M/IO in 8086.
2. How interrupt vectors are differ from simple interrupt ?
3. What are the features of 80286 microprocessor ?
4. Mention the applications of 80386 microprocessor.
5. What are the key roles of microprocessor in a system ?
6. Discuss the criteria for selecting a microcontroller device.
7. List few features of 8051 microcontrollers.
8. Why interfacing is needed for I/O devices ?
9. Write the special functions carried by the general purpose registers of 8086.
10. Mention the differences between application software and system software.
11. List out the various design issues of embedded system.
12. Mention the merits of various hardware platforms. (10×3=30)

P.T.O.



SECTION – B

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

13. a) What do you understand by addressing mode and what is data flow architecture of microprocessor ? **10**
OR
b) Draw and explain pin diagram of 8086 and also explain the concept of memory segmentation in microprocessor with neat diagram. **10**
14. a) Write all instruction set using in 80386 with complete description. **10**
OR
b) With suitable example explain the architecture and features of 8086. **10**
15. a) Classify and explain the different group of instructions in Pentium processor. **10**
OR
b) Briefly explain importance of interfacing strategy of 8255 and 8257 peripherals with advanced 8086. **10**
16. a) Discuss the various software tools essential for embedded operating system. **10**
OR
b) Briefly explain important testing tools used for software development. **10**
17. a) What are the architectural features of PIC microcontrollers and also explain the interrupt structure of PIC microcontrollers ? **10**
OR
b) Discuss in detail the organization of program and data memory of PIC microcontrollers. **10**

(5×10=50)