

**Q.P. Code : 545902****( 3 Hours)****[ Total Marks :80****N.B. : (1) Q 1 is compulsory. Solve any 3 questions out of remaining**

1. (a) Write features of Pentium microprocessor. 4  
 (b) Differentiate between I/O mapped I/O and Memory Mapped I/O of 8086. 4  
 (c) Describe in brief architecture of 8085 microprocessor. 4  
 (d) Sketch read and write bus cycle of 8086 with example. 4  
 (e) Explain in brief about programmable interval timer 8254. 4
2. (a) Describe the various addressing modes supported by 8086 with examples. 10  
 (b) Explain with suitable examples the following instructions of 8086. 10  
 i) MOVSB ii) LEA iii) ROL iv) CLC v) CBW
3. (a) Write an assembly language program of 8086 to add two 32 bit numbers and also draw Flowchart. 10  
 (b) Discuss the functions of general purpose registers of 8086. Explain the function of each register and instruction support for these functions. 10
4. (a) Describe the function of following pins in 8086 Microprocessor in maximum mode of operations. 10  
 1) TEST 2) RQ/GTO 3) RQ/GT1 4) QS0 and QS 1  
 5) S0, S1, S2  
 (b) Explain pin diagram of ADC 0808/0809 and method of interfacing to 8086 microprocessors with a suitable example. 10
5. Design 8086 microprocessor based system using minimum mode with the following specifications. 20  
 (i) 8086 microprocessors working at 10 MHz.  
 (ii) 128Kb EPROM using 32 k Devices.  
 (iii) 64 Kb SRAM using 16 k devices.  
 Clearly show memory map with address range. Draw the neat schematic.
6. (a) Explain 8086 interrupt structure and its method of interfacing with 8086 microprocessor with a suitable example. 10  
 (b) Describe in brief and compare architecture of 80286 and 80486 microprocessors. 10