

SE - sem-IV (CBSGS) ExTc - up and peripherals  
 Microprocessors and peripherals  
 Q.P. Code : 545901  
 (3 Hours) [ Total Marks :80  
 8/12/16

N.B. : (1) Q 1 is compulsory. Solve any 3 questions out of remaining

1. (a) Write features of 80486. 4  
 (b) Differentiate between minimum and maximum modes of 8086. 4  
 (c) Describe pin diagram of 8085 microprocessor. 4  
 (d) Sketch read and write bus cycle of 8086 with example. 4  
 (e) Explain in brief about programmable peripheral interface 8255. 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) CBW ii) TEST iii) LAHF iv) XLAT v) LEA
3. (a) Write an assembly language program of 8086 to find out factorial of number N 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. 10  
 1) NMI 2) READY 3) ALE 4) QS0 and QS1 5) S0, S1, S2  
 (b) Explain pin diagram of ADC 0808/0809 and method of interfacing to 8086 microprocessors. 10
5. Design 8086 microprocessor based system using minimum mode with the following specifications. 20  
 (i) 8086 microprocessors working at 10 MHz  
 (ii) 32Kb EPROM using 8 k Devices  
 (iii) 32 Kb SRAM using 8 k devices  
 Clearly show memory map with address range. Draw the neat schematic.
6. (a) Explain direct memory access (DMA) controller 8257 and its method of interfacing with 8086 microprocessor with a suitable example. 10  
 (b) Describe in brief and compare architecture of 80286 and 80386 microprocessors. 10