

Group B

- 4.a) Explain the multitasking achieved in processors like 80286 and upwards, with reference to the “onion-skin” organisation of the memory. [6]
- b) What precautions are to be taken for working in a multi-tasking environment? [2]
- c) Write a program in ALL for the 8086 microprocessor to move a string of data having N bytes residing at memory location M1 to be shifted to M2. Use specific instructions for this purpose. [6]
- 5.a) Draw the block diagram of the 8051 microcontroller. [5]
- b) Specify the type of architecture this microcontroller has and its contrast with respect to the ADSP 2101 microcontroller. [4]
- c) Write a program to take in the data from Port 1 of the 8051 microcontroller and output it through port2 [5]
- 6.a) Draw the base architecture of the ADSP 2101. [5]
- b) Which part of the DSP is most suited to carry out the digital filtering techniques. Explain with suitable reason. [4]
- c) Write a program to logically AND two data. One coming from Port1 and the other data stored in memory location M1. Display the output from Port2. [5]
- 7 a) Write a program in the ADSP 2101 ALL to compute the following sum
- $$S = 1^2 + 2^2 + 3^2 + \dots \text{for } N \text{ nos.}$$
- Draw a flowchart for the above computation. [10]
- b) What do you mean by the term ‘effective address’ in 8086? How is this address generated? [4]
- 8) Write short note on (any two) [7x2]
- a) The Prom Decoder chip and its applications.
- b) The PLA and PAL configurations and their applications.
- c) The formation of virtual memory with descriptor table.