

**FACULTY OF INFORMATICS****B.E. 2/4 (IT) II – Semester (Main) Examination, June 2014****Subject : Computer Organization & Microprocessors****Time : 3 hours****Max. Marks : 75****Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.****PART – A (25 Marks)**

- 1 List the various types of computers and list any two features of each type of computer. 3
- 2 What is the addressing capability of a processor with 12-bit address bus and 8-bit data bus? 3
- 3 Write an ALP to add two 8-bit numbers. 3
- 4 Write any three primary features of 8259A. 3
- 5 Write the differences between SRAM and DRAM. 3
- 6 Define SPEC rating. 2
- 7 What is the average access time if the cache access time is 15 ns and memory access time is 1000ns with hit ratio as 80%. 2
- 8 Write the logical operations that can be performed in 8085. 2
- 9 What is an memory-mapped I/O? 2
- 10 Write the functions of 8253. 2

**PART – B (50 Marks)**

- 11 a) Write the importance of Direct Memory Access. 5  
b) Explain in detail about the interrupt service mechanism. 5
- 12 a) Write the usage of virtual memories. 5  
b) Write short notes on secondary storage devices. 5
- 13 a) Write an ALP to perform the division operation of two numbers (8-bit). 7  
b) List any three addressing modes of 8085 microprocessor and explain. 3
- 14 a) List the features of successive approximation A/D converter. 5  
b) Design a circuit to interface an 8-bit D/A converter with the 8085 microprocessor and verify the analog output. 5
- 15 a) Explain the functions of handshake signals. 5  
b) What are the instructions that initiates the 8279 in a given mode? 5
- 16 a) Explain the programming model of 8085 microprocessor. 5  
b) With a neat diagram explain the working of a SRAM cell. 5
- 17 Write short notes on :  
a) Programmable Peripheral Interface (8255PPI). 5  
b) 8085 instruction set. 5

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