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**DMI-ST. EUGENE UNIVERSITY**  
**ZAMBIA**

**DEGREE EXAMINATION – DECEMBER 2024**

**Semester: II 351HE15 MICROPROCESSOR & ITS APPLICATION**

**Time: 3:00 Hours**

**Max. Marks: 100**

**Answer any FIVE Questions (5 x 20 = 100 Marks)**

1. a) Draw and explain 8085 pin functional diagram. **(10 Marks)**  
b) Explain the bus organization of 8085. Draw the diagram. **(10 Marks)**
2. a) Explain the available addressing modes of 8085 microprocessor. **(10 Marks)**  
b) Explain stack concept in 8085 with the associated operations. **(5 Marks)**  
c) Give five differences between Maskable and Non-Maskable Interrupts. **(5 Marks)**
3. a) Describe the pin diagram of memory chip with respect to interfacing memory with 8085 microprocessor. **(10 Marks)**  
b) Describe DMA data transfer with block diagram and it's working. **(10 Marks)**
4. a) Describe the Block diagram of an 8253 programmable interval timer. **(10 Marks)**  
b) With the help of a PIN configuration, describe 8253 pins. **(10 Marks)**
5. a) Describe how DMA controller operations are performed and explain three modes of operations. **(10 Marks)**  
b) Explain how to interface ADC with 8085 microprocessor. **(10 Marks)**
6. a) Illustrate DE- multiplexing address from data bus with a neat diagram. **(10 Marks)**  
b) Describe I/O read and I/O write cycle. Give timing diagrams. **(10 Marks)**
7. a) Give a detailed explanation on classifications of instruction set of 8085. **(10 Marks)**  
b) Elaborate on instructions related with interrupt. **(10 Marks)**

