

N22-2110220197A

| Reg.No     | <br> | <br> |      |      | <br>•• |  |      | ٠. |  |
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## DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE – NOVEMBER - 2022

## **COMPUTER ORGANISATION**

(Maximum Marks : 75) [Time : 3 hours]

#### PART-A

**I.** Answer **all** the following questions in one word or one sentence. Each question carries 1 mark.

(9x1=9 marks)

| 1 | W. I. A. C.              | Outcome | level |
|---|--|---------|-------|
| 1 | TILL I CD LID  |         |       |
| 1 | Write the expansion of RAID.                                 | M 1.09  | R     |
| 2 | What is EEPROM?  | M 1.05  | R     |
| 3 | Printers are usually classified as eitherortype.             | M2.05   | R     |
| 4 | PCI stands for   | M2.04   | R     |
| 5 | Write any two registers essential for instruction execution. | M3.02   | U     |
| 6 | State the purpose of microprogram counter.                   | M3.03   | R     |
| 7 | Define control word.   | M3.03   | R     |
| 8 | Mention the role of a microprocessor in microcomputers.      | M4.01   | U     |
| 9 | List the pointer registers in 8086.                          | M4.02   | R     |

#### PART - B

II. Answer any Eight questions from the following. Each question carries 3 marks.

(8x3=24marks)
Module Cognitive

|    |   | Outcome | level |
|----|---|---------|-------|
| 1  | Differentiate DRAM and SRAM.  | M 1.05  | U     |
| 2  | List any three RAID Levels.   | M 1.09  | R     |
| 3  | Give any three features of USB.   | M2.04   | R     |
| 4  | Give the control sequences for the implementing unconditional branch instruction. | M3.02   | U     |
| 5  | Outline the principle of pipelining.  | M3.04   | U     |
| 6  | Explain micro operations involved in a fetch cycle.                               | M3.02   | R     |
| 7  | Mention the two phases of instruction execution.                                  | M3.01   | R     |
| 8  | List any three features of 8086.  | M4.01   | R     |
| 9  | Differentiate homogeneous and heterogeneous multicore processors.                 | M4.04   | U     |
| 10 | Mention the purpose of different control flags of 8086.                           | M4.02   | U     |



## PART - C

Answer all questions from the following. Each question carries 7 marks.

# (6x7=42marks)

|      |   | Module<br>Outcome | Cognitive level |
|------|---|-------------------|-----------------|
| III  | Describe various functional units of a computer system with a               | M1.01             |                 |
|      | diagram   |                   |                 |
|      | OR  |                   |                 |
| IV   | Outline the memory hierarchy with respect to speed, size and cost           | M1.06             | 6 U             |
|      | with neat diagram.  |                   |                 |
| V    | Explain the concept of a virtual memory with a neat sketch.                 | M1.08             | B U             |
|      | OR  |                   |                 |
| VI   | Write about the physical characteristics of the hard disk.                  | M1.09             | U               |
| VII  | Explain I/O interfacing with memory mapped I/O and program controlled I/O.  | M2.01             | U               |
|      | OR  |                   |                 |
| VIII | Explain the working of interrupts.  | M2.02             | 2 U             |
| IX   | What is DMA? Illustrate the role of DMA controller.                         | M2.03             | 3 R             |
|      | OR  |                   |                 |
| X    | Explain about flat panel displays.  | M2.05             | 5 R             |
| XI   | Draw the single bus organization of the data path inside a processor.       | M3.01             | U               |
|      | OR  |                   |                 |
| XII  | Explain the functioning of microprogrammed control unit with a neat sketch. | M3.03             | 3 U             |
| XIII | Describe the general purpose registers of 8086.                             | M4.02             | 2 R             |
|      | OR  |                   |                 |
| XIV  | Describe the general architecture of Pentium processor.                     | M4.03             | B R             |

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