R16

SET - 1

III B. Tech I Semester Supplementary Examinations, Dec/Jan – 2022-23
COMPUTER ARCHITECTURE AND ORGANIZATION
(Electronics and Communication Engineering)

Time: 3 hours   Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**
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PART –A   **(14 Marks)**

1. a) Give the functional units of a computer.   [2M]
   b) Difference between stack and queue.   [2M]
   c) Define instruction. Give its format   [2M]
   d) Explain hardware interrupts.   [3M]
   e) Difference between PROM and EPROM.   [3M]
   f) Define micro program.   [2M]

PART –B   **(56 Marks)**

2. a) Give the classification of Bus structure used in Computer. Explain its   [7M]
      interconnectivity with a neat diagram.
   b) Write the difference between RISC and CISC.   [7M]

3. a) Define an addressing mode. Explain about various addressing modes.   [10M]
   b) What is a stack frame? Explain a commonly used layout for information in a   [4M]
      subroutine stack frame.

4. a) Explain arithmetic and branch instructions with examples.   [7M]
   b) Briefly explain about the input and output instructions along with their formats.   [7M]

5. a) Explain about Direct Memory Access in detail.   [9M]
   b) What is daisy chaining? Explain with neat sketch.   [5M]

6. a) What are the different types of Mapping Techniques used in the Cache   [7M]
      Memory? Explain.
   b) Explain about organization of secondary storage devices.   [7M]

7. a) Compare and contrast micro-programmed control with hard wired control.   [7M]
   b) Describe the process of execution of a complete instruction with a neat diagram   [7M]

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