17CS34 COMPUTER ORGANIZATION

Question Bank:

# BASIC STRUCTURE OF COMPUTERS

1. List the steps needed to execute the machine instruction Add LOCA, R0 in terms of transfer between processor and the memory along with some simple control commands. Assume that the instruction itself is stored in the memory at location INSTR and that this address initially in register PC. The first two steps might be expressed as:
   * Transfer the content of register PC to register MAR
   * Issue read command to the memory and then wait until it has transferred the requested word int register MDR. [l1] [l3] [l3] [co1]
2. Explain performance measurement and the overall SPEC rating for the computer in a program suite [l2] [co1]
3. Describe the operational concepts between the processor and memory [l1] [co1]
4. Explain the different functional units of a computer. [l2] [co1]
5. Draw and explain the connection between memory and processor with the respective registers. [l1] [l2] [co1]
6. With a neat diagram, discuss the operational concepts of a computer. [l2][co1]
7. Draw the connection between processor and memory and mention the functions of each component in the connection. [l1] [co1]
8. Write the difference between RISC and CISC processors. [l1] [l2] [co1]

# 

# MACHINE INSTRUCTIONS AND PROGRAMS

1. Define addressing modes. Give the details of different addressing modes. [l1] [l2] [co2]
2. Explain the role of stack and queues in computer programming equations [l2] [co2]
3. Explain shift and rotate instructions with examples [l2] [co2]
4. With a neat diagram, describe the input and output operations [l1] [co2]
5. List four types of operations to be performed by instructions in a computer. Explain with basic types of instruction formats to carry out C 🡨[A] + [B] [l1] [l2] [co2]
6. Explain the following instruction types:
7. Logical instructions
8. Arithmetic instructions
9. Branch instructions
10. Explain about instruction and types of instructions

# INPUT/OUTPUTORGANIZATION

1. Explain how interrupt requests from several IO devices can be communicated to a processor through a single INTR line
2. With neat sketches, explain the various methods for handling multiple interrupt requests.
3. Explain the following wrt interrupts with diagrams. i. Vectored interrupt ii. Interrupt Nesting. iii. Simultaneous request
4. Explain: i) Interrupt hardware; ii) Interrupt disabling; iii) Interrupt enabling.
5. List the functions of an I/O interface.

# 