

CodeNo:153AG

R18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech II Year I Semester Examinations, August/September - 2022

COMPUTER ORGANIZATION AND ARCHITECTURE

(Common to CSE, CSBS, CSIT, CSE(SE), CSE(CS), CSE(AIML), CSE(DS), CSE(N))

Time:3Hours

Max.Marks:75

Answer any five questions All questions carry equal marks

- 1.a) What is the difference between Computer Organization and Computer Architecture?
b) Write a short note on instruction code format. [8+7]
- 2.a) Explain the format of Register reference instructions and their functionalities.
b) Draw and explain the flowchart for the interrupt cycle. [8+7]
- 3.a) Define the following terms:
i) Control memory ii) Address sequencing
b) Explain about the microinstruction format with a neat sketch. [8+7]
- 4.a) Explain about various addressing modes.
b) Briefly explain about General purpose registers and Flag registers. [7+8]
- 5.a) Explain the flow chart for addition operation with sign-magnitude data.
b) Perform $(-25) + (-10)$ in binary with negative numbers in 2's complement. [8+7]
- 6.a) Explain the Booth's algorithm for signed multiplication.
b) Draw the flowchart for floating point division. [8+7]
- 7.a) Explain the block diagram of the I/O interface.
b) Write a short note on Cache memory. [8+7]
- 8.a) Explain about instruction pipelining with an example.
b) Discuss about the serial arbitration technique. [8+7]

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