

**Code No: 153AG****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B.Tech II Year I Semester Examinations, March - 2022****COMPUTER ORGANIZATION AND ARCHITECTURE****(Common to CSE, CSBS, CSIT, CSE(SE), CSE(CS), CSE(AIML), CSE(DS), CSE(N))****Time: 3 Hours****Max. Marks: 75**

**Answer any five questions**  
**All questions carry equal marks**

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- 1.a) Explain in detail computer design and computer architecture.
- b) Explain in detail life cycle of instruction. [9+6]
2. Explain the following.
  - a) Register transfer.
  - b) Input-Output and interrupt. [7+8]
3. Explain in detail various types of addressing modes with examples. [15]
- 4.a) Explain in detail about data transfer instructions.
- b) Discuss the various types of instruction formats. [7+8]
- 5.a) Explain floating point representation of decimal numbers.
- b) Explain the decimal addition operation with a neat diagram. [7+8]
- 6.a) Explain the subtraction operation with signed 2's complement data.
- b) Explain in brief fixed point data representation. [6+9]
- 7.a) Explain the working process of DMA.
- b) Compare cache and main memory. [9+6]
- 8.a) Explain in brief inter-processor communication.
- b) Discuss the characteristics of multi-processors. [8+7]

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