

Code No: 155AK**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year I Semester Examinations, August - 2022****COMPUTER ARCHITECTURE
(Electrical and Electronics Engineering)****Time: 3 hours****Max. Marks: 75****Answer any five questions
All questions carry equal marks**

- 1.a) With a neat sketch, explain the architecture of general computer system.
b) Discuss the hardware implementation of CPU with micro-instructions. [7+8]
- 2.a) What are the functions of general computer system? Discuss.
b) Write a detailed note on microprogramming. [7+8]
- 3.a) Define Cache memory and explain about associative and direct mapping in brief.
b) What are the features of PCI? Explain. [7+8]
- 4.a) What is interrupt? Discuss about Interrupt controllers and its functions.
b) Differentiate between serial and parallel ports. [8+7]
- 5.a) What are the types of instruction supported by 8086 family? Discuss.
b) How I/O addressing is performed in 8086? Explain. [7+8]
- 6.a) What are the various addressing modes of 8086? Explain.
b) Explain the architecture of 8086 with a neat sketch. [8+7]
- 7.a) Define Data Hazards. What is the classification of data hazards? Discuss.
b) Discuss about the advantages of dynamic scheduling in pipelining. [8+7]
- 8.a) Write down the difference between simple superscalar and a VLIW processor.
b) Explain SoC architecture with a neat sketch. [8+7]

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