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FIRST YEAR (COMPUTER SCIENCE)
24-CELE-12101: COMPUTER ORGANIZATION
(Semester II)

Program: B.Sc.(Comp.Sc.)
Program Specific: B.Sc.(Comp.Sc.)
Course Type:Major
Paper: Computer Organization

Credits: 2
Time: 2 Hours
Max. Marks: 30
SET: A

Instructions to the candidate:

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.
- 3) Draw a well labelled diagram wherever necessary.

Q1) Attempt ANY SIX of the following:

[6 X 2 = 12]

- a) Define capacity of a memory.
- b) What is cache memory?
- c) What is the role of output devices in computer system?
- d) What do you mean by SBC? Name any two SBCs.
- e) Calculate number of address lines and data lines for 512 bytes of memory.
- f) Name different types of system buses in computer system.
- g) What is the difference between Von Nuemann and Harvard architecture of CPU?
- h) List any two input devices of computer system.

Q2) Attempt ANY THREE of the following:

[3 X 4 = 12]

- a) What do you mean by horizontal memory expansion? How many chips are required to build a memory of (256 x 16) capacity, using (256 x 4) capacity memory chip?
- b) Differentiate between RAM and ROM.
- c) Write a short note on ALU.
- d) Explain two level memory hierarchy.
- e) Draw the block diagram of embedded system. Mention any two applications of it.

Q3) Attempt ANY TWO of the following:

[2 X 3 = 06]

- a) What is pipelining concept? Write two disadvantages of it.
- b) Write a short note on special purpose registers of CPU.
- c) Explain the need of I/O interface.
- d) Draw the block diagram of digital computer system and explain the role of each block.
