28/5/24

DOON UNIVERSITY, DEHRADUN
Program Name: B.Tech / B.Sc. Hons. with research (Computer Science)
School Of Technology (SoT), Computer Science
End Semester Examination (Academic Year 2023-24)
Course Code with Title: CEC151/CSC151, Computer Architecture

Time Allowed: 02 Hours **Maximum Marks: 30**

Section A

Note: Attempt all questions. (Each question carries 2 marks)

6. Differentiate between computer architecture and computer organization.
7. Explain about the multicore systems.
8. Explain about Instruction-level parallelism.
9. What are the different types of data dependency.
10. What is cache coherence problem.

Section B

Note: Attempt all questions (Each question carries 4 marks)

3. Explain the Flynn's Classification for computer systems in detail.
4. Discuss the Memory Hierarchy in computer system with regard to Speed, Size and Cost.

Section C

Note: Attempt all questions (Each question carries 6 marks)

3. Consider a fully associative cache memory with 4 lines that implements LRU & FIFO cache replacement policy. For the following block requests 1, 2, 3, 4, 2, 1, 5, 6, 2, 1, 2, 3, 7, 6, 3, 2, 1, 2, 3, 6 find the Miss and Hit ratio in both LRU and FIFO policy.
4. Show the systematic multiplication process of (-15) × (-16) using Booth's Algorithm.