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B.Tech. (CSE) 7th Semester (F-Scheme)
Examination, July-2022
ADVANCED COMPUTER ARCHITECTURE
Paper- CSE-401-F

Time allowed : 3 hours]

[Maximum marks : 100

Note : Q.1 is compulsory Each question carries equal marks (20). Attempt 5 questions in total, selecting atleast one question from each unit.

1. Explain the following: 4×5=20
- (a) Compare hardwired Control with micro-programmed Control.
 - (b) Memory addressing
 - (c) Cache Memory
 - (d) Shared memory multi processor

Unit-I

2. (a) Write a code to implement vector Summation for L/S, R/m and R+m architecture giving a comparison of three architectures. 10
- (b) Explain in detail about Instruction set architecture.
3. WAP in assembly language to add a Constant Value # × to each element of an array in L/s and R/m architecture mode 20

Unit-II

4. (a) Explain venous cache. Write policies. 10
(b) Describe multilevel cache in detail. 10
5. (a) Draw and explain the structure of Direct mapped cache memory. 10
(b) Explain the strategies for line replacement at Miss time. 10

Unit-III

6. Explain in detail about Queueing models. 20
7. (a) Give the model of processor and memory integration. 10
(b) Design a hamming code for a memory data word size of 18 bits. Show the replacement of each bit and give logic equations for its action. 10

Unit-IV

8. (a) Define Concurrent processor. Explain its classification. 10
(b) Describe in detail about vector processor. 10
9. (a) Compare vector processor and multiple issue processor. 10
(b) Explain memory Coherence in shared memory multiprocessor. 10