

Roll No. ....

**24487**

**B. Tech. 7th Semester (CSE)  
Examination – February, 2022  
ADVANCED COMPUTER ARCHITECTURE  
Paper : CSE-401-F**

*Time : Three Hours ]*

*[ Maximum Marks : 100*

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :** Attempt *five* questions in all, selecting *one* question from each Unit. Question No. 1 is *compulsory*. All questions carry equal marks.

1. Explain the following :

4 × 5 = 20

- (a) Addressing
- (b) Cache reference per instruction
- (c) Physical memory
- (d) Multiple issues machines

### UNIT - I

2. (a) Differentiate between hardwired control decoding with microprogrammed control decoding. 8  
(b) Explain in detail about instruction set architecture. 12
3. (a) What are various parameters to be considered in a processor project? 10  
(b) What do you mean by time, area and instruction set? Explain. 10

### UNIT - II

4. (a) Explain set-associative mapping scheme for a Cache Memory. 10  
(b) Explain the line replacement strategies at MISS Time. 10
5. (a) What is the importance of multilevel Cache? Justify your answer. 10  
(b) Define the concept of overlapping the T-cycle in V-R translation. 10

### UNIT - III

6. Differentiate between open, close and mixed queue models. 20

7. Explain Heller man's stricker's and rav's memory model in detail. 20

### UNIT - IV

8. (a) Define concurrent processor. Explain its classification. 10  
(b) Discuss the four bus-based Coherency protocols following invalidate strategy. 10
9. What is the importance of memory coherency in shared memory multiprocessor? Explain. 20