



**NAVRACHANA
UNIVERSITY**

a UGC recognized University

School: School of Engineering and Technology
Program/s: Computer Science and Engineering
 Department
Year: 3rd **Semester:** 5th
Examination: End Semester Examination
Examination year: December - 2021

Course Code: CS307 **Course Name:** Computer Organization and Architecture
Date: 01/12/2021 **Total Marks:** 40
Time: 11:30 am to 01:30 pm **Total Pages:** 02

Instructions:

- Write each answer on a new page.
- Use of a calculator is permitted/not permitted.
- * COs=Course Outcome mapping. # BTL=Bloom's Taxonomy Level mapping

Q. No.	Details	Marks	COs*	BTL#
Q.1	Attempt all objectives	10		
1.	The addressing mode/s, which uses the PC instead of a general purpose register is _____ a) Indexed with offset b) Relative c) Direct d) Both Indexed with offset and direct		CO2	BT1, BT2
2.	Assembly Language is a _____ a) It uses alphabetic codes in place of binary numbers used in Machine Language b) It is the easiest language to write programs c) Need not to be translated into Machine Language d) None of this		CO1	BT1, BT3
3.	The operation executed on data stored in registered is called a) Macro-Operation b) Micro-Operation c) Bit-Operation d) Byte-Operation		CO1, CO2	BT2, BT3
4.	Both the CISC and RISC architectures have been developed to reduce the _____ a) Cost b) Time delay c) Semantic gap d) All of the mentioned		CO3, CO4	BT1, BT3
5.	8. Pipe-lining is a unique feature of _____ a) RISC b) CISC c) ISA d) IANA		CO3, CO4	BT2,
6.	Which of the following is Disadvantages of Multiprocessor Systems? a) Multiprocessor systems is quite expensive b) All the processors in the multiprocessor system share the memory. So a much larger pool of memory is required as compared to single processor systems. c) More complex and complicated operating system is required in multiprocessor systems. d) All of the above		CO1, CO4	BT1, BT2

7.	In how many ways Threads are implemented? a) Two b) Three c) Four d) Five		C02, C05	BT2, BT3
8.	The clustered systems are a combination of hardware clusters and software clusters a) True b) False		C03 C04	BT3, BT4
9.	The addressing mode which makes use of in-direction pointers is ____ a) Indirect addressing mode b) Index addressing mode c) Relative addressing mode d) Offset addressing mode		C01, C02	BT1, BT2
10.	During the Execution of the instruction, a copy of the instructions is placed in the a) Register b) RAM c) Cache d) Virtual		C01, C02, C05	BT2, BT3
Q.2	Attempt all objectives	05		
1.	What is the usage of Conversion Instruction Set ?		C01, C02	BT2, BT3
2.	Define Implicit Multithreading		C03, C04	BT2
3.	What is Hardwired Control Unit ?		C05	BT2, BT4
4.	Write down the advantages for the Graphical Processing Unit		C01, C02	BT2, BT4
5.	What is Dynamic Microprogramming?		C01, C05	BT1, BT2
Q.3	Attempt any 5 Questions	25		
1.	Explain the Direct and Indirect Addressing Mode with diagram		C01, C02	BT1, BT2
2.	What are the types of Parallel Processor Systems? Describing each.		C03, C04	BT1, BT3
3.	Describe the Hardware Performance issues in Multicore Computers.		C01, C05	BT1, BT2, BT3
4.	Mention the approaches for Explicit Multithreading. Explain any two.		C02 C03	BT2
5.	Explain NUMA? Write down their Pros and Cons.		C01, C03, C04	BT1, BT2
6.	What are the Operating System Design issues in Clusters?		C01, C02 C04	BT1, BT2, BT3
7.	How the sequential execution of pipelining works? Explain with diagram?		C02, C03, C04	BT1, BT3

*****End of Question Paper*****