

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BCA DEGREE EXAMINATION DECEMEER 2024
(First Semester)

Branch- **COMPUTER APPLICATIONS**
COMPUTER ORGANIZATION AND ARCHITECTURE

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	_____ is register that contains memory address of the next instruction to be fetched and executed. a) Program Counter b) Memory address register c) Memory data register d) Instruction Register	K1	CO1
	2	CISC stands for a) Register Instruction Set Computers b) Reduced Instruction Set Computers c) Reduced Institute Set Computers d) Recurrence Instruction Set Computers	K2	CO1
2	3	Programs written in assembly language can be automatically translated into a sequence of machine instructions by a program called an _____. a) loader b) linker c) assembler d) compiler	K1	CO2
	4	In _____ representation, negative values are obtained by complementing each bit of the corresponding positive number. a) 1's complement b) 2's complement c) 9's complement d) 10's complement	K2	CO2
3	5	The _____ holds the data being transferred to or from the processor. a) address register b) data register c) address decoder d) status register	K1	CO3
	6	An _____ is an event that causes the exception of one program to be suspended and the execution of another program to begin. a) exception b) scheduler c) interrupt d) operating system	K2	CO3
4	7	The term _____ is used to refer to the amount of time it takes to transfer a word of data to or from the memory. a) memory latency b) jitter c) response time d) throughput	K1	CO4
	8	Techniques that automatically move program and data blocks into the physical when they are required for execution is called _____. a) cache memory b) virtual memory c) secondary storage d) RAM	K2	CO4

Cont...

5	9	Which one of the following is a set of processors simultaneously execute different instruction sequences on different data sets? a) SISD b) SIMD c) MISD d) MIMD	K1	CO5
	10	A collection of interdependent uniprocessors or SMPs may be interconnected to form a _____. a) network b) cluster c) zone d) group	K2	CO5

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry **EQUAL** Marks

$$(5 \times 7 = 35)$$

Module No.	Question No.	Question	K Level	CO
1	11.a.	Classify the functional units of a computer.	K2	CO1
		(OR)		
	11.b.	Explain about the booth algorithm.		
2	12.a.	Identify the basic instruction types.	K3	CO2
		(OR)		
	12.b.	Explain about stack and queue.		
3	13.a.	Identify the uses of interrupts.	K3	CO3
		(OR)		
	13.b.	Interpret about multiple bus organization.		
4	14.a.	Examine the static memories.	K4	CO4
		(OR)		
	14.b.	Classify the mapping functions in cache memory.		
5	15.a.	Analyze the MESI protocol.	K4	CO5
		(OR)		
	15.b.	Examine the multicore organization.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks

$$(3 \times 10 = 30)$$

Module No.	Question No.	Question	K Level	CO
1	16	Examine the design of fast adder.	K4	CO1
2	17	Categorize the types of addressing modes.	K4	CO2
3	18	Examine about direct memory access.	K4	CO3
4	19	Classify the types read only memory.	K4	CO4
5	20	Analyze the symmetric multiprocessor system.	K4	CO5

Z-Z-Z END