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1st ANNUAL EXAMINATION 2024
SUBJECT: COMPUTER SCIENCE HSSC-II (Paper-D)

# / Part #	Criteria	Level 1 (Marks)	Level 2 (Marks)	Level 3 (Marks)	Level 4 (Marks)	Level 5 (Marks)	Level 6 (Marks
2(i)	Features of Multi-user Operating System: 1st Feature	Correctly described 1st Feature (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	2nd Feature	Correctly described 2nd Feature (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	3rd Feature	Correctly described 3rd Feature (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
OR	Description of argument pass by value different from an argument pass by reference	Correct Description(03)	Partially Correct Description(02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
2(ii)	objectives of SDLC: 1st Objective	Any 1st correct Objective (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	2nd Objective	Any 2nd correct Objective (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	3rd Objective	Any 3rd correct Objective (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
OR	Differences between multi-threading and multi-tasking 1st Difference	Any 1st correct difference (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	2nd Difference	Any 2nd correct difference (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	3rd Difference	Any 3rd correct difference (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
2(iii)	Description of any three steps of requirement engineering phase of SDLC 1st Step	Correct Description of any 1st requirement engineering step (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			

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	2nd Step	Correct description of any 2nd requirement engineering step (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	3rd Step	Correct description of any 3rd requirement engineering step (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
OR	Differences between post-tested and pre-tested loops with example. 1st Difference	Any 1st correct difference (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	2nd Difference	Any 2nd correct difference (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	3rd Difference / example	Any 3rd correct difference/example (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
2(iv)	Description: use of string stream in file handling	Correct Description(03)	Partially Correct Description(02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
OR	Responsibilities of project manager : Wrt :planning	Correct Description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	Wrt execution	Correct Description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	Wrt closing of a project	Correct Description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
2(v)	Rewrite the loop into do-while loop	Correctly rewritten(03)	Partially Correct rewritten (02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
OR	Description of two-dimensional array	Correct Description(02)	Partially Correct Description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)		
	Example of two-dimensional array	Correct example (01)	Wrong/Irrelevant answer(0)				

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2(vi)	Purpose of sizeof( ) function in array	Correct Description(03)	Partially Correct Description(02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
OR	Output of given code Output of variable r	Correctly evaluated (3)	Partially evaluated with less mistakes (2)	Partially evaluated with more mistakes (1)	Wrong/Irrelevant answer(0)		
2(vii)	Write a c++ code that prints sum of given array	Correct statements (03)	Partially Correct statements (2)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
OR	Differences between strlen( ) and strcat( ) functions with example. 1st Difference	correct difference (02)	Partially Correct (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)		
	Example	Any correct example (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
2(viii)	Description: how a pointer variable is declared	Correct Description(02)	Partially Correct Description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)		
	Example	Correct example (01)	Wrong/Irrelevant answer(0)				
OR	Write c++ code that shows the use of inline function.	Correct statements (03)	Partially Correct statements (2)	Any relevant statement(1)	Wrong/Irrelevant answer(0)		

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2(ix)	Write code that shows how a string copies into another string using strcpy( ) function.	Correct code (03)	Partially Correct code (2)	Any relevant statement (1)	Wrong/Irrelevant answer(0)		
OR	Given the array definition: float a[5]={1,2,3}; How many elements are there in the array?	Correct identification(01)	Wrong/Irrelevant answer(0)				
	What are the values of the first elements?	Correct identification(01)	Wrong/Irrelevant answer(0)				
	What are the values of the last elements?	Correct identification(01)	Wrong/Irrelevant answer(0)				
2(x)	Differentiate local and global variables	Any three correct differences (03)	Any two correct differences (02)	Any one correct difference (01)	Wrong/Irrelevant answer(0)		
OR	Description of data hiding in c++.	Correct Description(03)	Partially Correct Description(02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
2(xi)	Difference between the following statements if P is a pointer variable: cout<<P; and cout<<*P;	Correct Differentiation (03)	Partially Correct Differentiation (02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
OR	Use of function overloading wrt Number of arguments	Correct Description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	Wrt Datatypes of arguments	Correct Description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	Wrt Return types	Correct Description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
2(xii)	Difference between the constructor and destructor	Correct Differentiation (03)	Partially Correct Differentiation (02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
OR	Write a c++ code that reads 03 characters from user and stores them in a file	Correct statements (03)	Partially Correct statements (2)	Any relevant statement (01)	Wrong/Irrelevant answer(0)		

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2(xiii)	Difference between the binary file and text file	Correct Differentiation (03)	Partially Correct Differentiation (2)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
OR	Description of polymorphism	Correct Description(02)	Partially Correct description(01)	Wrong/Irrelevant answer(0)			
	Daily life example of polymorphism	Correct example(01)	Wrong/Irrelevant answer(0)				
2(xiv)	Rewrite the code by using the conditional operator:	Correctly rewritten(03)	Partially Correct rewritten (02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
OR	output of the code	Correctly evaluated (03)	Partially evaluated (02)	Any relevant evaluated (01)	Wrong/Irrelevant answer(0)		
03	Importance of feasibility study	Correct Description (01)	Partially Correct description(0.5)	Wrong/Irrelevant answer(0)			
	Types of feasibility study 1st Type	Correct description (01)	Partially correct description (0.5)	Wrong/ Irrelevant answer (0)			
	2nd Type	Correct description (01)	Partially correct description (0.5)	Wrong/ Irrelevant answer (0)			
	3rd Type	Correct description (01)	Partially correct description (0.5)	Wrong/ Irrelevant answer (0)			
	4th Type	Correct description (01)	Partially correct description (0.5)	Wrong/ Irrelevant answer (0)			

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OR	Description of type casting	Correct Description(02)	Partially Correct description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)		
	Description of types of casting 1st Type	Correct description (01)	Partially correct description (0.5)	Wrong/ Irrelevant answer (0)			
	2nd Type	Correct description (01)	Partially correct description (0.5)	Wrong/ Irrelevant answer (0)			
	Example of Type casting	Correct example (01)	Wrong/Irrelevant answer(0)				
04	Write C++ program: Correct input() Member Function:	Correct statements (02)	Partially Correct statements(01)	Wrong/Irrelevant answer(0)			
	show() Member Function	Correct statements (02)	Partially Correct statements(01)	Wrong/Irrelevant answer(0)			
	Overall Program Correctness and Structure	Correct statements (01)	Partially Correct statements(0.5)	Wrong/Irrelevant answer(0)			
OR	Purpose of setw in c++	Correct Description(02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)			
	Compare setw() and endl manipulators in c++.	Correct comparison (03)	Partially Correct comparison(2)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		

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05	Description of exit( ) function in c++	Correct Description with syntax (04)	Correct Description without syntax (03)	Partially Correct Description (02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)	
	Example of exit( ) function	Correct example (01)	Wrong/Irrelevant answer(0)				
OR	Write C++ program: Statement for header file / declaring variable	Correct statement (01)	Wrong/Irrelevant answer(0)				
	Statement for finding positive odd numbers	Correct statement (01)	Wrong/Irrelevant answer(0)				
	Statement for finding numbers divisible by 5	Correct statement (01)	Wrong/Irrelevant answer(0)				
	Use of continue statement	Correct statement (01)	Wrong/Irrelevant answer(0)				
	Statement to display results/output	Correct statement (01)	Wrong/Irrelevant answer(0)				
06	Concept of function	Correct Description(02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)			
	Explain the use of following components of function: Function definition:	Correct Description(01)	Any relevant statement(01)	Wrong/Irrelevant answer(0)			
	Function call:	Correct Description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	Example	Correct example (01)	Wrong/Irrelevant answer(0)				
OR	List any four functions of Operating system	Correct list of four functions (02)	Correct list of three functions (1.5)	Correct list of two functions (01)	Correct list of one function (0.5)	Wrong/Irrelevant answer(0)	
	Description of Operating system function 1st Function	Correct description (1.5)	Partially Correct Description (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)		
	2nd Function	Correct description (1.5)	Partially Correct Description (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer (0)		

Note: All the markers must know the solutions of all the question items of the question paper before starting marking.

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2(i)	Mention one application of following operating systems: a. Time-sharing	Correct description of any one application (01)	Wrong/Irrelevant answer(0)				
	b. Real time	Correct description of any one application (01)	Wrong/Irrelevant answer(0)				
	c. Embeded	Correct description of any one application (01)	Wrong/Irrelevant answer(0)				
OR	Differences between process and thread. 1st Difference	Any 1st correct difference (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	2nd Difference	Any 2nd correct difference (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	3rd Difference	Any 3rd correct difference (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
2(ii)	Importance of protection system in an operating system	Correct Description(03)	Partially Correct Description(02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
OR	Responsibilities of system analyst: 1st responsibility	Any 1st correct responsibility (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	2nd responsibility	Any 2nd correct responsibility (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	3rd responsibility	Any 3rd correct responsibility (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			

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2(iii)	Description of any three types of deployment phase 1st Deployment phase	Correct Description of any 1st Deployment phase (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	2nd Deployment phase	Correct Description of any 2nd Deployment phase (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	3rd Deployment phase	Correct Description of any 3rd Deployment phase (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
OR	Description of the five states of process.	Correct Description of five states(2.5)	Correct Description of four sates(02)	Correct Description of three sates(1.5)	Correct Description of two states (01)	Correct Description of one state(0.5)	Wrong/Irrelevant answer(0)
	Process states diagram	Correct Diagram (0.5)	Wrong/Irrelevant answer(0)				
2(iv)	Differences between if-else-if and switch statements. 1st Difference	Any 1st correct difference (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	2nd Difference	Any 2nd correct difference (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	3rd Difference	Any 3rd correct difference (01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
OR	Description of Functional and non-functional requirements	Correct Description(03)	Partially Correct Description(02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
2(v)	Output of given code Output of i	Correctly evaluated (01)	Wrong/Irrelevant answer(0)				
	Output of j	Correctly evaluated (01)	Wrong/Irrelevant answer(0)				
	Output of k	Correctly evaluated (01)	Wrong/Irrelevant answer(0)				

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OR	Output of given code	Correctly evaluated (03)	Partially correct (2)	Any relevant statement(1)	Wrong/Irrelevant answer(0)		
2(vi)	Output of given code	Correctly evaluated (03)	Partially correct (2)	Any relevant statement(1)	Wrong/Irrelevant answer(0)		
OR	Output of given code Output of a	Correctly evaluated (1.5)	Partially correct (1)	Wrong/Irrelevant answer(0)			
	Output of b	Correctly evaluated (1.5)	Partially correct (1)	Wrong/Irrelevant answer(0)			
2(vii)	Statement that replaces value 19 with value 50 in an array	Correct statement (03)	Partially correct (2)	Any relevant statement(1)	Wrong/Irrelevant answer(0)		
OR	Program that inputs a string and displays the number of character in it Statement for input	Correct statement (1.5)	Partially correct (1)	Wrong/Irrelevant answer(0)			
	Output: No. characters/ use of function.	Correct statement (1.5)	Partially correct (1)	Wrong/Irrelevant answer(0)			
2(viii)	Fill in the following table 1st row	1st row correctly filled(01)	Wrong/Irrelevant answer(0)				
	2nd row	2nd row correctly filled(01)	Wrong/Irrelevant answer(0)				
	3rd row	3rd row correctly filled(01)	Wrong/Irrelevant answer(0)				
OR	Determine the following for array: int arr[8]; a. How many elements are	Correctly determine (01)	Wrong/Irrelevant answer(0)				

	there in the array?						
	b. Determine the highest index of the array.	Correctly determine (01)	Wrong/Irrelevant answer(0)				
	c. Determine the lowest index of the array.	Correctly determine (01)	Wrong/Irrelevant answer(0)				
2(ix)	Discerption of strings	Correct Description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	Explain how to declare a string	Correct description with example (02)	Correct description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)		
OR	Differentiate between local and static variables	Any three correct differences (03)	Any two correct differences (02)	Any one correct difference (01)	Wrong/Irrelevant answer(0)		
2(x)	Compare binary files with text files	Any three correct comparisons (03)	Any two correct comparisons (02)	Any one correct comparison (01)	Wrong/Irrelevant answer(0)		
OR	Describe any three modes of file opening in c++. 1st Mode Description	Correct Description(01)	Partially Correct description(0.5)	Wrong/Irrelevant answer(0)			
	2nd Mode Description	Correct Description(01)	Partially Correct description(0.5)	Wrong/Irrelevant answer(0)			
	3rd mode Description	Correct Description(01)	Partially Correct description(0.5)	Wrong/Irrelevant answer(0)			
2(xi)	Use of reference operator (&) in pointers	Correct Description(03)	Partially Correct description(2)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
OR	Description: how array is different from simple variable	Correct Description(02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)			
	Example	Correct example (01)	Wrong/Irrelevant answer(0)				

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2(xii)	syntax of using the BOF function	Correctly syntax(03)	Partially Correct (2)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
OR	Description :concept of data hiding in classes	Correct Description(02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)			
	Example	Correct example (01)	Wrong/Irrelevant answer(0)				
2(xiii)	Advantages of Function overloading. 1st Advantage	Correct Description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	2nd Advantage	Correct Description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
	Disadvantage of Function overloading.	Correct Description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
OR	Description of followings a. Size of array	Correct Description(01)	Partially Correct description (0.5)	Wrong/Irrelevant answer(0)			
	b. Name of array	Correct Description(01)	Partially Correct description(0.5)	Wrong/Irrelevant answer(0)			
	c. Index	Correct Description(01)	Partially Correct description(0.5)	Wrong/Irrelevant answer(0)			
2(xiv)	Description of role of Project manager	Correct Description(03)	Partially Correct description(2)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
OR	Use of break statement in c++	Correct Description(03)	Partially Correct description(2)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
03	Write C++ program that finds the area and perimeter of a square. Statement for header file /	Correct statement (01)	Wrong/Irrelevant answer(0)				

	declaring variable						
	Statement for input	Correct statement (01)	Wrong/Irrelevant answer(0)				
	Statement to calculate area	Correct statement (01)	Wrong/Irrelevant answer(0)				
	Statement to calculate perimeter	Correct statement (01)	Wrong/Irrelevant answer(0)				
	Statement to display results/output	Correct statement (01)	Wrong/Irrelevant answer(0)				
	Description of pointers	Correct Description(03)	Partially Correct description(02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)		
OR	Difference between pointer variable declaration and initialization	Correct description (1)	Partially correct description (0.5)	Wrong/ Irrelevant answer (0)			
	Example.	Correct example (01)	Wrong/Irrelevant answer(0)				
	Write C++ program: Correct Class Definition:	Correct statement (01)	Wrong/Irrelevant answer(0)				
	Data Members Initialization	Correct statement (01)	Wrong/Irrelevant answer(0)				
04	Member Function avg() Implementation	Correct statement (01)	Wrong/Irrelevant answer(0)				
	Object Creation and Usage	Correct statement (01)	Wrong/Irrelevant answer(0)				
	Code basics and Syntax	Correct statement (01)	Wrong/Irrelevant answer(0)				

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OR	Difference between constant and variable	Correct thee differences (03)	Correct two differences (02)	Correct one difference (01)	Wrong/ Irrelevant answer (0)		
	Programming examples.	Correct program example(02)	Any relevant statement (01)	Wrong/ Irrelevant answer (0)			
05	Description of Continue statement	Correct Description(02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)			
	Example of Continue statement	Correct example (0.5)	Wrong/Irrelevant answer(0)				
	Description of Exit function	Correct Description(02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)			
	Example of Exit function	Correct example (0.5)	Wrong/Irrelevant answer(0)				
OR	Importance of using functions in c++.	Correct Description(02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)			
	Explain the following components of function: Function definition:	Correct Description(02)	Any relevant statement(01)	Wrong/Irrelevant answer(0)			
	Function call:	Correct Description(01)	Any relevant statement(0.5)	Wrong/Irrelevant answer(0)			
06	Write C++ program that inputs a positive integer and prints whether it is prime or composite' Statement for header file / declaring variable	Correct statement (01)	Wrong/Irrelevant answer(0)				
	Statement for input	Correct statement (01)	Wrong/Irrelevant answer(0)				

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	Statement to find prime	Correct statement (01)	Wrong/Irrelevant answer(0)				
	Statement to find composite	Correct statement (01)	Wrong/Irrelevant answer(0)				
	Statement to display results/output	Correct statement (01)	Wrong/Irrelevant answer(0)				
OR	Description of function signature	Correct description (1)	Any relevant statement (0.5)	Wrong/Irrelevant answer(0)			
	Advantages of using functions in c++ 1st Advantage	Correct description (1)	Any relevant statement (0.5)	Wrong/Irrelevant answer(0)			
	2nd Advantage	Correct description (1)	Any relevant statement (0.5)	Wrong/Irrelevant answer(0)			
	3rd Advantage	Correct description (1)	Any relevant statement (0.5)	Wrong/Irrelevant answer(0)			
	4th Advantage	Correct description (1)	Any relevant statement (0.5)	Wrong/Irrelevant answer(0)			

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