**RUBRICS: HSSC 1st ANNUAL EXAMINATION 2022**

 **SUBJECT: COMPUTER SCIENCE-II (HA) final by Khalid Sb Mrs Rozina Faheem dated: 14-07-22 at 11: 00 am**

| **Q.# /Part #** | **Criteria**  | **Level 1 (Marks)** | **Level 2(Marks)** | **Level 3 (Marks)** | **Level 4 (Marks)** | **Level 5 (Marks)** | **Level 6 (Marks)** | **Level 7 (Marks)** | **Level 8 (Marks)** | **Level 9 (Marks)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| $$2(i)$$ | Describe programmer | Correct description (1) | Partially correct description (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| Four responsibilities of the programmer | Any four correct responsibilities (2) | Any three correct responsibilities (1.5) | Any two correct responsibilities (1) | Any one correct responsibility (0.5) | Irrelevant/wrong (0) |  |  |  |  |
| $$2(ii)$$ | Reason of functionality of a system  | Correct description of reason (3) | Partially correct description of reason (2) | Any relevant information (1) | Irrelevant/wrong (0) |  |  |  |  |  |
| $$2(iii)$$ | Classify the type of program elements  | Correct classification of all six elements (3) | Correct classification of any five elements (2.5) | Correct classification of any four elements (2) | Correct classification of any three elements (1.5) | Correct classification of any two elements (1) | Correct classification of any one element (0.5) | Irrelevant/ wrong (0) |  |  |
| $$2(iv)$$ | Statement to display variable FBISE | Correct statement (1) | Partially correct statement (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| Statement to get numerical value and place in variable temp | Correct statement (1) | Partially correct statement (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| Name of header file to use setw() | Correct name (1) | Irrelevant/wrong (0) |  |  |  |  |  |  |  |
| $$2(v)$$ | Define process | Correct description/definition (1) | Partially correct description/definition (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| Different process sates with their functions | Description of all correct process states (2) | Description of partially correct process states (1.5) | Some relevant information (1) | Irrelevant/wrong (0) |  |  |  |  |  |
| $$2(vi)$$ | Code to display numbers using do-while loop | Correct code using initialization, decrement, condition, and output statement (3) | Correct code using any three aspects (2) | Correct code using any two aspects (1) | Some relevant code (0.5) | Irrelevant/wrong (0) |  |  |  |  |
| $$2 (vii)$$ | Difference b/w process and thread  | Correct description of difference (3) | Partially correct description of difference (2) | Some relevant information (1) | Irrelevant/wrong (0) |  |  |  |  |  |
| 2 (viii) | Statement to define one-dimensional array | Correct statement (1) | Irrelevant/wrong (0) |  |  |  |  |  |  |  |
| Statement to take elements in array and display it  | Correct statements to take input and output (1) | Correct statements to take input or display output (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| Statement to define array with initialization by given values  | Correct statement (1) | Partially correct statement (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| 2 (ix) | Rows in array  | Correct number of rows (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |  |
| Columns in array  | Correct number of columns (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |  |
| Elements in array  | Correct number of elements (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |  |
| Statement to store the element in last column of last row in the array | Correct statement (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |  |
| Statement to store in 7th column of the 3rd row in the array | Correct statement (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |  |
| Statement to replace value of 7th column of the last row in the array | Correct statement (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |  |
| $2(x$) | Declaration of two overloaded functions | Correct code of both functions (2) | Correct code of any one function (1) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| Reason | Correct reason (1) | Irrelevant/wrong (0) |  |  |  |  |  |  |  |
| $$2(xi)$$ | Significance of empty parenthesis in a function declaration  | Correct reason of significance (1) | Partial correct reason (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| Purpose of using argument names of function declaration  | Correct purpose (1) | Partial correct purpose (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| Number of Values returned from a function  | Correct number of values (1) | Irrelevant/wrong (0) |  |  |  |  |  |  |  |
| $$2(xii)$$ | Code for writing, reading and displaying numbers from file using for loop | Correct code to write, read and display numbers from file using for loop (3) | Correct code of any two aspects (2) | Correct code of any one aspects (1) | Irrelevant/wrong (0) |  |  |  |  |  |
| 2(xiii) | Definition of Pointer variable | Correct definition/ purpose/ usage (1) | Partially correct definition/ purpose/ usage (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| Difference b/w reference operator (& operator) and dereference operator (\*) | Correct differentiation (2) | Partially correct differentiation (1) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| $$2(xiv)$$ | Statement to create object and associate with file | Correct statement (1) | Partially correct statement (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| Write if statement  | Correct statement (1) | Partially correct statement (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| Statement to write single character  | Correct statement (1) | Partially correct statement (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| 2 (xv) | Switch code | Correct statement (1) | Partially correct statement (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| Statement to use conditional operator  | Correct statement (1) | Partially correct statement (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| Expression involving logical operator  | Correct statement (1) | Partially correct statement (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| 2(xvi) | Steps to use a file in a program | Three correct steps (3) | Two correct steps (2) | One correct step (1) | Irrelevant/wrong (0) |  |  |  |  |  |
| 3 (a) (i) | Definition of array | Correct definition/ purpose/ use (1) | Some relevant information (0.5) | Irrelevant/wrong (0) |  |  |  |  |  |  |
| 3 (a) (ii) | Advantages of array | Description of any three correct advantages (3) | Description of any two correct advantages (2) | Description of any one correct advantage (1) | Irrelevant/wrong (0) |  |  |  |  |  |
| 4 | C++ program to develop calculator using switch statement  | Correct program using input, switch statement, loop, Add, Subtract, Multiply, Divide functions, and output (8) | Correct program using any seven aspects (7) | Correct program using any six aspects (6) | Correct program using any five aspects (5) | Correct program using any four aspects (4) | Correct program using any three aspects (3) | Correct program using any two aspects (2) | Correct program using any one aspect (1) | Irrelevant/wrong (0) |
| $$5$$ | C++ program to write power function | Correct code using function definition, variables, and body of the function (4)  | Correct program having any two aspects (3) | Correct program having any one aspect (2) | Some relevant code (1) | Irrelevant/wrong (0) |  |  |  |  |
| C++ code to write main function calling the power function | Correct code of main function using function prototype, correct input, calling a function (4) | Correct program having any two aspects (3) | Correct program having any one aspect (2) | Some relevant code (1) | Irrelevant/wrong (0) |  |  |  |  |
| 6 (a)  | C++ program using class  | Correct code for class declaration, data member declaration, and class constructor (4) | Correct program having any two aspects (3) | Correct program having any one aspect (2) | Some relevant code (1) | Irrelevant/wrong (0) |  |  |  |  |
| 6 (b) | Description of Inheritance with an example | Correct description and example (2) | Partially Correct description and correct example (1.5) | Correct description OR correct example (1) | Some relevant description (0.5) | Irrelevant/wrong (0) |  |  |  |  |
| Description of Polymorphism with an example | Correct description and example (2) | Partially Correct description and correct example (1.5) | Correct description OR correct example (1) | Some relevant description (0.5) | Irrelevant/wrong (0) |  |  |  |  |