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

 **SUBJECT: COMPUTER SCIENCE-II (L) Final by Khalid Sb Mrs Rozina Faheem dated: 18-07-22 at 2: 00 pm**

| **Q.# /Part #** | **Criteria**  | **Level 1 (Marks)** | **Level 2(Marks)** | **Level 3 (Marks)** | **Level 4 (Marks)** | **Level 5 (Marks)** |
| --- | --- | --- | --- | --- | --- | --- |
| $$2(i)$$ | Difference b/w multiprogramming & time-sharing OS | Description of correct differentiation (3) | Partially correct difference (2) | Some relevant information (1) | Irrelevant/wrong (0) |  |
| $$2(ii)$$ | Code to copy the contents  | Correct code using opening of files, reading/writing of files and closing of files (3) | Correct code using any two aspect (2) | Correct code using any one aspect (1) | Irrelevant/wrong (0) |  |
| $$2(iii)$$ | Define Constructor  | Correct definition (1) | Partially correct definition (0.5) | Irrelevant/wrong (0) |  |  |
| Rules/features of naming constructor | Any two correct rules/features (2) | Any one correct rule/feature (1) | Some relevant information (0.5) | Irrelevant/wrong (0) |  |
| $$2(iv)$$ | Define Access specifier  | Correct definition (1) | Partially correct definition (0.5) | Irrelevant/wrong (0) |  |  |
| Enlist types of access specifiers  | Any two correct types (2) | Any one correct type (1) | Irrelevant/wrong (0) |  |  |
| $$2(v)$$ | Purpose/Usage of requirement engineering  | Correct definition/ purpose/ use (1) | Partially correct definition/ purpose/ use (0.5) | Irrelevant/wrong (0) |  |  |
| Difference between types of requirements gathering  | Any two correct differences (2) | Any one correct difference (1) | Irrelevant/wrong (0) |  |  |
| $$2(vi)$$ | Define Ternary operator  | Correct definition/purpose (1) | Partially correct definition/purpose (0.5) | Irrelevant/wrong (0) |  |  |
| Generalized Syntax with an example | Correct syntax with an example (2) | Correct syntax or correct example (1) | Some relevant information (0.5) | Irrelevant/wrong (0) |  |
| $$2 (vii)$$ | Correct Output of first *cout* statement  | Correct output with value of b (1)Ans: b=5 | Irrelevant/wrong (0) |  |  |  |
| Correct Output of second *cout* statement | Correct output with value of b (1)Ans: b=5 | Irrelevant/wrong (0) |  |  |  |
| Correct Output of third *cout* statement | Correct output with value of b (1)Ans: b=6 | Irrelevant/wrong (0) |  |  |  |
| 2 (viii) | Purpose  | Correct purpose of \r, \b, \a (1.5) | Correct purpose of any two (1) | Correct purpose of any one (0.5) | Irrelevant/wrong (0) |  |
| Example | Correct example of \r, \b, \a (1.5) | Correct example of any two (1) | Correct example of any one (0.5) | Irrelevant/wrong (0) |  |
| 2 (ix) | Expressions to test the relationship  | Any three correct expressions (3) | Any two correct expressions (2) | Any one correct expression (1) | Irrelevant/wrong (0) |  |
| $2(x$) | C++ code using strcat()  | Correct code using strcat() and output of S3 (1) | Correct code using strcat() or output of S3 (0.5) | Irrelevant/wrong (0) |  |  |
| C++ code to compare two strings  | Correct code to compare two strings and display (1) | Correct code to compare two strings or display (0.5) | Irrelevant/wrong (0) |  |  |
| C++ code to display length of string | Correct code to find length of string and display (1) | Correct code to find length of string or display (0.5) | Irrelevant/wrong (0) |  |  |
| $$2(xi)$$ | C++ code to find sum of all elements in 4x4 matrix | Correct code using declaration with values, finding sum and display sum(3) | Correct code using any two aspects(2) | Correct code using any one aspect(1) | Irrelevant/wrong (0) |  |
| $$2(xii)$$ | Definition of an Array  | Correct definition/ purpose/ use (1) | Partially correct definition/ purpose/ use (0.5) | Irrelevant/wrong (0) |  |  |
| Syntax of declaration and initialization with example of 2-D array | Correct declaration and initialization with example (2) | Correct declaration or initialization with example (1) | Irrelevant/wrong (0) |  |  |
| 2(xiii) | Description of Features of function overloading  | Description of any three correct features (3) | Description of any two correct features (2) | Description of any one correct feature (1) | Any relevant information (0.5) | Irrelevant/wrong (0) |
| $$2(xiv)$$ | Visibility and lifetime of variables x, y, z, and m | Correct visibility and lifetime of Variable **x** (1) | Partially correct visibility and lifetime of Variable **x** (0.5) | Irrelevant/wrong (0) |  |  |
| Correct visibility and lifetime of Variable **y and z** (1) | Correct visibility and lifetime of Variable **y or z** (0.5) | Irrelevant/wrong (0) |  |  |
| Correct visibility and lifetime of Variable **m** (1) | Partially correct visibility and lifetime of Variable **m** (0.5) | Irrelevant/wrong (0) |  |  |
| 2 (xv) | Benefits of array  | Correct description of benefits (1) | Partially correct description of benefits (0.5) | Irrelevant/wrong (0) |  |  |
| Difference b/w one and two dimensional array  | Correct differentiation (2) | Partial correct differentiation (1) | Irrelevant/wrong (0) |  |  |
| 2(xvi) | Definition of Pointer variable  | Correction definition/ purpose/use (1)  | Partially correction definition/ purpose/use (0.5) | Irrelevant/wrong (0) |  |  |
| Difference between reference operator and deference operator  | Correct Differentiation between reference operator and deference operator (2) | Partially Correct Differentiation between reference operator and deference operator (1) | Irrelevant/wrong (0) |  |  |
| 3 (a) |  Process states | Correct description of any three process states (3) | Correct description of any two process states (2) | Correct description of any one process state (1) | Irrelevant/wrong (0) |  |  |
| Labeled diagram | Correct diagram (1) | Partially correct diagram (0.5) | Wrong answer (0) |  |  |  |
| 3 (b)  | Difference between direct vs parallel deployment method | Description of correct differentiation (2) | Description of partially correct differentiation (1) | Some relevant information (0.5) | Irrelevant/wrong (0) |  |
| Difference between phased vs pilot deployment method | Description of correct differentiation (2) | Description of partially correct differentiation (1) | Some relevant information (0.5) | Irrelevant/wrong (0) |  |
| 4 | Code to input number and find whether it is prime or not | Correct code with structure, variables, input and loop to check whether it is prime (4) | Any three correct aspects (3) | Any two correct aspects (2) | Any one correct aspect (1) | Irrelevant/wrong (0) |  |
| Code to input exponent value and print power of the number | Correct code to input exponent and print power of the number (2) | Correct code of any one aspect (1) | Some relevant code (0.5) | Irrelevant/wrong (0) |  |  |
| If number is not prime, code to print factorial of the number | Correct code to print factorial of the number (2) | Partially correct code (1) | Some relevant code (0.5) | Irrelevant/wrong (0) |  |  |
| $$5$$ | Code for main() program  | Correct code with structure and calling functions (2) | Partially correct code with structure and calling functions (1) | Irrelevant/wrong (0) |  |  |
| Code for function overload having single argument (like Area of circle and square) | Correct function code with prototype/definition, body, expression (3) | Any two correct aspects (2) | Any one correct aspect (1) | Irrelevant/wrong (0) |  |
| Code for function overload having two arguments (like Area of rectangle and triangle) | Correct function code with prototype/definition, body, expression (3) | Any two correct aspects (2) | Any one correct aspect (1) | Irrelevant/wrong (0) |  |
| 6 (a) (i) | 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) |
| 6 (a) (ii) | 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) |
| 6 (b) | Steps in file reading in C++ | Correct steps using opening, reading and closing a file (2) | Correct steps using any two aspect (1.5) | Correct steps using any one aspect (1) | Some relevant information (0.5) | Irrelevant/wrong (0) |
| Step in file writing in C++ | Correct steps using opening, writing and closing a file (2) | Correct steps using any two aspect (1.5) | Correct steps using any one aspect (1) | Some relevant information (0.5) | Irrelevant/wrong (0) |

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