

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, PESHAWAR

Higher Secondary School Certificate (H.S.S.C.) Examination

COMPUTER SCIENCE

PR – XII (A-I-A) (24)

Class: 12th (Inter Part-II)**Year:** 2024**SECTION - A****Time:** 20 Min **Marks:** 15

1. Four circles are given against every question; fill only the circle of the correct answer. 2. Use a blue or black pen to shade (fill) the circles. 3. Filling more than one circle for an answer will make that answer wrong.

- 1) In ___ type of operating system does the processor remain idle when a process waits for an input.
☐ Multi Programming ☐ Batch Processing
☐ Real Time ☐ Time Sharing
- 2) When deleting a picture on your Mobile Phone, if the process stops for an Input Certificate ("Do you want to delete it?"), the process shifts from ___ to ____.
☐ Running, blocked ☐ Blocked, Ready ☐ Running, Ready ☐ Blocked Running
- 3) A dispatchable unit of a process is called ____.
☐ Task ☐ Program ☐ Thread ☐ Plug-in
- 4) A set of activities that are followed in an organized way for developing a software system is termed as ____.
☐ Design ☐ SDLC ☐ Analysis ☐ Documentation
- 5) Pointer is a variable that stores ____.
☐ Value ☐ Boolean Value
☐ Address of another variable ☐ IP address of computer
- 6) The ternary operator/conditional operator among the following is ____.
☐ (? :) ☐ (; ;) ☐ (/ :) ☐ (@ :)
- 7) For single-line comments ___ is used.
☐ Single slash (/) ☐ Double slash (//)
☐ Slash and asterisk (/...*/) ☐ Slash and asterisk (/...*/)
- 8) In C++ language, for the Float Data type ___ bytes are reserved in memory.
☐ 8 ☐ 4 ☐ 2 ☐ 01
- 9) For new line ___ escape sequence is used.
☐ /L ☐ /n ☐ /N ☐ /NL
- 10) Else body is executed when ____.
☐ Else condition is true ☐ If condition is true
☐ If condition is false ☐ None of these
- 11) The default statement in switch statement is ____.
☐ Mandatory ☐ Optional ☐ Enforced ☐ Cannot
- 12) Statement terminator in C++ is ____.
☐ Colon (:) ☐ Semi colon (;) ☐ Comma (,) ☐ Full stop (.)
- 13) The ___ header file shall be included for file handling.
☐ iostream ☐ conio ☐ fstream ☐ filestream
- 14) The operator used for finding the size of an array is ____.
☐ Length () ☐ Size of () ☐ Array size () ☐ Count of ()
- 15) Concatenating or joining two strings together ___ built-in function can be used.
☐ string cat () ☐ strcat () ☐ string concat () ☐ str concat ()

SECTION - B**Q2: Answer any TEN parts. Each part carries FOUR marks.****Note:** Time allowed for Section-B and Section-C is 2 Hours and 40 minutes.

- 1) Define operating. List down at-least three functions of operating system.
- 2) Elaborate Multiprocessor Operating System. Explain its advantages.
- 3) Explain the 5-states process model that an operating system applies to manage the execution of processes.
- 4) Differentiate between Multitasking and Multiprogramming Operating System.
- 5) Consider the following algorithm. Draw flowchart representing the steps outlined in the algorithm.
(i) Read three (03) inputs from user (ii) Add the values
(iii) Average = sum/3 (iv) Display the Average
- 6) Write down at-least four differences between the constructor and destructor.
- 7) Describe the setw manipulator in C++. Specify the header file required for setw and demonstrate its usage with C++ program.
- 8) Discuss Member Access Specifiers in C++ language.
- 9) Define Function in C++ list three essential components for using the user-defined function.
- 10) Describe the concept of inheritance in C++ language and provide a C++ program to illustrate its implementation.
- 11) Discuss if-else structure. Write its syntax; create a flowchart for if-else.
- 12) Write a C++ program with a user-defined function named sum(), for adding two values and returns the result to main () functions.
- 13) Discuss function overloading. Provide an example in C++ language.

SECTION - C

Note: Attempt any TWO questions. All questions carries equal marks.

- Q3:** (a) Define loop in C++ language. Write syntax for while loop and for loop.
(b) Write a C++ program to display the multiplication table of a given number upto ten (10).

Sample:

```
2×1 = 2
2×2 = 4
— — —
— — —
2×10 = 20
```

- Q4:** (a) Define Array and discuss its two main types. Describe how to declare and initialize both types.
(b) Write a C++ program based on the following instructions.
(i) Take Six (06) integer values from user
(ii) Store them in Array (iii) Display the sum
- Q5:** (a) Define class and object.
(b) Write a C++ program with the following specification;
(i) Create a class "Marks" with three data members for storing marks of three subjects.
(ii) Create three member functions;
(a) Input () to enter marks of 3 subjects
(b) Sum () to add and return total marks
(c) avg () to find and return average of three subject marks

Notes on this transcription

- Typeset transcription of the original Board question paper, reset for legibility. No answer key is included; in the source scan the correct bubbles are already shaded, and the options are reproduced here unmarked.
- The objective sheet prints its instructions in Urdu; they are given above as an English rendering.
- The paper prints no group label — Peshawar Board sheets do not carry one.
- **Q.7 of Section A prints its third and fourth options identically** — both read "Slash and asterisk (/ *....*/)". Reproduced as printed; the fourth option lies partly under the source watermark and was read at high magnification.
- Q.9 prints its escape-sequence options with forward slashes (/L, /n, /N, /NL) rather than backslashes — reproduced as printed.
- Section B and Section C print no mark totals on the sheet; from the printed part marks they come to 40 and 20 respectively.
- Q.2 part 5 prints its four algorithm steps in two columns on the sheet; they are given here in the same order.
- Board spellings and slips kept verbatim: "Doubel slash", "Input Certificate", "Define operating.", "demonstrate its usage", "Sum () to add", "All questions carries equal marks".