ARMY PUBLIC SCHOOLS & COLLEGES SYSTEM APSACS
I SHALL RISE AND SHINE

Answer Sheet No. _____

Sign. of Candidate: _____

Sign. of Invigilator _____

COMPUTER SCIENCE HSSC – II
SECTION – A (Marks 15)
Time allowed: 20 Minutes

Section-A is compulsory. All parts of this section are to be answered on this page and handed over to the Invigilator. Deleting/overwriting is not allowed. **Do not use lead pencil.**

Q.1. Write the correct answer a/b/c/d in the space provided.

(1) Which Operating system was developed in 1970s when microcomputer was introduced?

A.	Windows	O	(B) DOS	O
C.	Macintosh's OS X	O	D. UNIX/LINUX	O

(2) Which part of operating system manages the allocation of computer resources to various processes in the memory?

A.	Memory management	O	(B) Process management	O
C.	File management	O	D. I/O management	O

(3) Which function of operating system loads multiple programs, threads, task, and processes in main memory and executes them at the same time by rapidly switching the CPU amongst them?

A.	Multithreading	O	(B) Multitasking	O
C.	Multiprogramming	O	D. Multiprocessing	O

(4) The organized process or set of steps that need to be followed to develop an information system is known as:

A.	Analytical cycle	O	B. Design cycle	O
C.	Program specification	O	(D) System development life cycle	O

(5) Which is used to assess the strengths and weaknesses of a proposed software/system and present direction of activities?

A.	Defining phase	O	B. Planning phase	O
(C)	Feasibility study	O	D. Analysis phase	O

Class: XII   Page: 2 of 5   Subject: **Computer Science**

The first step in the system development life cycle is:

A.   Analysis   O   B.   Design   O

C.   Problem Identification   O   D.   Development and   O
                                       Documentation

(7)   What is the range of unsigned short integer?

A.   -2147483648 to 2147483647 O   B.   0 to 4294967295   O

C.   -32768 to 32767   O   D.   0 to 65535   O

(8)   Which of the following is an arithmetic operator?

A.   &&   O   B.   %   O

C.   <=   O   D.   ++   O

(9)   The number of bytes reserved for a variable of data type 'float' is:

A.   2   O   B.   4   O

C.   6   O   D.   8   O

(10)   How is a multiple statement for loop terminated?

A.   with a colon   O   B.   with a right brace   O

C.   with a right bracket   O   D.   with a semicolon   O

(11)   In which situation a do while loop is more appropriate to use?

A.   when the body of the loop is to be executed at least once   O

B.   when the loop terminates unexpectedly   O

C.   when the program executes at least once   O

D.   when the number of loop iterations are known in advance   O

(12)   Which of the following transfers control to the beginning of the loop, skipping the remaining statements?

A.   exit function   O   B.   continue statement   O

C.   expansion slot   O   D.   memory slot   O

(13)   Which of the following identifies the first element in array named temp?

A.   temp[0]   O   B.   temp[1]   O

C.   temp(1)   O   D.   temp(0)   O

(14)   Given the following:

int k[3][5] = {{3,10,12,27,12},{21,20,18,25,1},{15,16,17,44,4}}

What is in k[1][3]?

A.   12   O   B.   18   O

C.   25   O   D.   15   O

(15)   What is the index number of the last element of an array with 30 elements?

A.   0   O   B.   30   O

C.   29   O   D.   Programmer defined   O

Class: XII   Page: 3 of 5   Subject: **Computer Science**

15/02/2023 18:28

COMPUTER SCIENCE HSSC-I

allowed: 2: 40 Hours

Total Marks: 60

Note: Answer any twelve parts from Section 'B' and attempt any two questions from Section 'C' on the separately provided answer book. Write your answers neatly and legibly.

SECTION – B (Marks 36)

Q.2. Attempt any **TWELVE** parts from the following. All parts carry equal marks.(12×3=36)

i. State any three DOS commands with their functionality. (3)

ii. Write any three differences between process and thread. (3)

iii. Describe Time-sharing Operating system and their working. How they give the impression to each user of having their own CPU? (3)

iv. State three primary objectives of SDLC. (3)

v. Describe the key roles of a System analyst in system development life cycle. (3)

vi. Differentiate between Direct and Phased implementation method in software development. What happens to the old system in both methods? (3)

vii. Define reserved words. Give example with description of any two. (3)

viii. What is the purpose of using header file in a program? Explain using an example with syntax. (3)

ix. State whether the following variable names are valid or invalid. State the reason for invalid variable names: A345, _dfgh, 5yhn, hunt, C$fg, cin (3)

x. Write down a program that reads a number and prints whether it is even or odd number. (3)

xi. Differentiate between if-else and else-if statements. (3)

xii. Describe the usage of continue statement in for loop with a C++ program as an example. (3)

xiii. Differentiate between one dimensional and two dimensional array with one example of their declaration. (3)

xiv. What is the purpose of size of() function? Elaborate with one example. (3)

xv. State the structure of a C++ program. (3)

xvi. Elaborate the use of setw manipulator with its syntax. Which header file is required to use it? (3)

SECTION – C (Marks 24)

NOTE: Attempt any **TWO** questions. All questions carry equal marks. (2×12=24)

Q.3. a. Define process in an operating system and describe its five stages. (6)

b. Describe the purpose of the following functions with an example. (6)

i. getch()   ii. getche()   iii. gets()

Q.4. a. Write the nested loops that will print the following patterns.   (5+3)

   i.   1 2 3 4 5
       1 2 3 4
       1 2 3
       1 2
       1

ii.
```
*
* *
* * *
* * * *
* * * * *
```

b. Write a program that reads ten numbers in an array and print them in reverse order.   (6)

Q.5. a. Explain the purpose of switch statement and write its syntax. Give one example of using switch statement in C++ program.   (3+3)

b. Write program that calculates and prints the sum of the following sequence of numbers: 40, 44, 48, 52, ... ,80.

Use both for and while loop.   (3+3)