

Roll No.: Date: **NORTHWEST ACCREDITATION COMMISSION, USA
HIGH SCHOOL DIPLOMA (Sr. Secondary/12TH) 2018-2019**

Subject- COMPUTER SCIENCE (THEORY)

Question Paper No. :

C	S	2	7
---	---	---	---

Subject Code : CS1214

Question Paper Code:

C	T	0	9
---	---	---	---

Total Time: 03.00 Hours.

Total Marks: 70

GENERAL INSTRUCTIONS**1. OPENING AND CHECKING OF THE QUESTION-BOOKLET**

Break open the seal of the Question-Booklet only when the announcement is made by the Invigilator. After breaking the seal and before attempting the questions, student should immediately check for:

- The number of the printed page in the Question-Booklet is the same as mentioned on the cover page of the Booklet and
- Any printing error in the Booklet pages, if any.
Any discrepancy or error should be brought to the notice of the Invigilator who will then replace the Booklet. No additional time will be given for this.

2. No student, without the permission of the Superintendent or the Invigilator concerned, is to leave his/ her seat or the Examination Room.

3. FILLING UP THE REQUIRED INFORMATION ON QUESTION-BOOKLET AND ANSWER SHEET

After breaking open the seal and checking the Booklet, student should:

- Fill up the **Question Paper No.** and **Question Paper Code** (mentioned on the cover of Question-Booklet) in the space provided on the First Answer Sheet.
- Fill up his/her Roll Number on the First Answer Sheet and on each Supplementary Answer Sheet, if taken.
- Student should mention the total number of **Supplementary Answer Sheet**, if taken, in the space provided on the First Answer Sheet and also fill up the Serial Number mentioned on each **Supplementary Answer Sheet** along with his/her Roll Number in the register maintained by the Invigilator. Student must tie all the Answer Sheets with the thread provided by the Invigilator.

4. INSTRUCTIONS ABOUT QUESTION PAPER

This Question Paper is divided into three Sections – A, B and C. All Sections are compulsory. Attempt all Sections as per instructions.

- Section A contains 4 questions which are very short carrying 3 marks each in approximately 20-30 words.
- Section B contains 7 questions which are short carrying 4 marks each in approximately 30-50 words.
- Section C contains 5 questions which are long carrying 6 marks each in approximately 80-120 words.

5. Student found in possession of Cellular Phone / Mobile Phone / Pager or any other Communication Device and/or any Book/Note whether using or not, will be liable to be debarred for taking examination(s) either permanently or for specified period or/and dealt with as per law or/and ordinance of the School/SERI according to the nature of offence, or/and he/she may be proceeded against and shall be liable for prosecution under the relevant provision of the Statutory Law.

THE ANSWER SHEET IS TO BE RETURNED ON COMPLETION OF THE TEST

This Question Paper MUST be attached with Answer Sheet

SECTION A

Total number of questions: 4	Marks allocated to each question: 3	Total marks: 12
------------------------------	-------------------------------------	-----------------

Question 1. Observe the following C++ code and write the name(s) of the header file(s), which will be essentially required to run it in a C++ compiler:

```
void main()
{
    char CH,STR[20];
    cin>>STR;
    CH=toupper(STR[0]);
    cout<<STR<< " starts with " <<CH<<endl;
}
```

Question 2. Name the header file to which the following belong:

- (i) gets()
- (ii) open()

Question 3. State and verify Associative Law.

Question 4. What is the difference between Multilevel and Multiple Inheritance in context to object oriented programming?

SECTION B

Total number of questions: 7	Marks allocated to each question: 4	Total marks: 28
------------------------------	-------------------------------------	-----------------

Question 5. Evaluate the following postfix notation of expression:

25 83 - / 6 * 10 +

Question 6. Write a function to count the number of VOWELS present in a text file named "PARA.TXT".

Question 7. (a) What is the significance of Cyber law?

(b) Expand the following terms with respect to Networking:

- (i) CDMA
- (ii) WLL
- (iii) FTP
- (iv) HTML

- Question 8.** State De Morgan's Theorems and verify the same using truth table.
- Question 9.** Describe any three potential applications of genetically modified plants.
- Question 10.** An array A[20][30] is stored along the row in the memory with each element requiring 4 bytes of storage. If the base address of array A is 32000, find out the location of A[15][10]. Also, find the total number of elements present in this array.
- Question 11.** Evaluate the following postfix expression. Show the status of stack after execution of each operation separately:
T, F, NOT, AND, T, OR, F, AND

SECTION C

Total number of questions: 5	Marks allocated to each question: 6	Total marks: 30
------------------------------	-------------------------------------	-----------------

- Question 12.** Write a function PUSHBOOK() in C++ to perform insert operation on a Dynamic Stack, which contains Book_no and Book_Title. Consider the following definition of NODE, while writing your C++ code.

```
struct NODE
{
    int Book_No;
    char Book_Title[20];
    NODE *Next;
};
```

- Question 13.** Write SQL statements for the following:
- To display TEACHERNAME, PERIODS of all teachers whose periods are more than 25.
 - To display all the information from the table SCHOOL in descending order of experience.
 - To display DESIGNATION without duplicate entries from the table ADMIN.
 - To display TEACHERNAME, CODE and corresponding DESIGNATION from tables SCHOOL and ADMIN of Male teachers.

Question 14. Define a class named HOUSING in C++ with the following descriptions:

Private members

REG_NO integer(Ranges 10 — 1000)

NAME Array of characters(String)

TYPE Character

COST Float

Public Members

- Function Read_Data() to read an object of HOUSING type
- Function Display() to display the details of an object
- Function Draw Nos () to choose and display the details of 2 houses selected randomly from an array of 10 objects of type HOUSING Use random function to generate the registration nos. to match with REGNO from the array.

Question 15. Write a function in C++ to perform Insert: operation on a dynamically allocated Queue containing Passenger details as given in the following definition of NODE.

```
struct NODE
{
    long Pno; //passenger Number
    char Pname[20]; //passenger Name
    NODE *Link;
};
```

Question 16. Define a class Candidate in C++ with following description:

Private Members

- A data member RNo (Registration Number) of type long
- A data member Name of type string
- A data member Score of type float
- A data member Remarks of type string
- A member function AssignRem() to assign Remarks as per the Score obtained by a candidate. Score range and the respective Remarks are shown as follows:

Score	Remarks
>=50	Selected
less than 50	Not selected

Public Members

- A function ENTER () to allow user to enter values for RNo, Name, Score & call function AssignRem() to assign the remarks.
- A function DISPLAY () to allow user to view the content of all the data members.

END OF THE QUESTION PAPER

Sample Paper

Sample Paper