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**NORTHWEST ACCREDITATION COMMISSION, USA
HIGH SCHOOL DIPLOMA (Sr. Secondary/12TH) 2018-2019**

Subject- COMPUTER SCIENCE (PRACTICAL)

Question Paper No. :

C	P	2	8
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Subject Code : PCS1214

Question Paper Code:

C	P	0	9
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Total Time: 01.30 Hours.

Total Marks: 30

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:

- a) The number of the printed page in the Question-Booklet is the same as mentioned on the cover page of the Booklet and
- b) 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:

- a) 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.
- b) Fill up his/her Roll Number on the First Answer Sheet and on each Supplementary Answer Sheet, if taken.
- c) 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.

- a) This Question Paper includes five questions. All questions are compulsory.
- b) All questions are carrying six 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

- Question 1.** Write a function in C++ to perform Delete operation on a dynamically allocated Queue containing Members details as given in the following definition of NODE:

```
struct NODE
{
    long Mno           //Member Number
    char Mname[20];   //Member Name
    NODE *Link;
};
```

OR

Write SQL commands for the following statements:

- To display details of all Items in the Stock table in ascending order of Stock Date.
- To display Item No and Item name of those items from Stock table whose Unit Price is more than Rupees 10.
- To display the details of those items whose dealer code (D code) is 102 or Quantity in Stock (Qty) is more than 100 from the table Stock.
- To display Maximum Unit Price of items for each dealer individually as per D code from the table Stock.

- Question 2.** An array MAT [20] [10] is stored in the memory along the row with each element occupying 4 bytes of memory. Find out the base address and the address of element MATE[10][5] if the location of MAT [3][7] is stored at the address 1000.

OR

Write a function in C++ which accepts an integer array and its size as arguments and replaces elements having even values with its half and elements having odd values with twice its value.

Example : if an array of five elements initially contains the elements as

3, 4, 5, 16, 9

then the function should rearrange the content of the array as

6, 2, 10, 8, 18

Question 3. Introduction class stack

```
{ int data [10];
```

```
int top;
```

```
public:
```

```
stack() { top=-1 }
```

```
void push(); //to push an element into the stack
```

```
void pop(); //to pop an element from the stack
```

```
void Delete(int ITEM); //To delete all elements which are equal to ITEM
```

```
};
```

Complete the class with all function definitions. Use another stack to transfer data temporarily.

OR

What is circular queue? How is it different from simple queue?

Write a function in C++ to perform Delete operation in dynamically allocated Queue containing names of students.

Question 4. (a) What is VoIP?

(b) What is the difference between Type Casting and Automatic Type conversion? Also, give a suitable C++ code to illustrate both.

(c) Differentiate between Constructor and Destructor function with respect to Object Oriented Programming.

OR

(a) What is a Candidate Key?

(b) Following is the structure of each record in a data file named "VEHICLE.DAT".

```
struct VEHICLE
```

```
{ char Vehicle_Code [10];
```

```
char Vehicle_Name[10];
```

```
float cost;
```

```
};
```

Write a function in C++ to update the tile with a new value of cost for a particular Vehicle.

The value of Vehicle_Code and cost are read during the execution of the program.

Question 5. Write PUSH (Books) and POP (Books) methods in python to add Books and remove Books considering them to act as Push and Pop operations of Stack.

OR

Write a complete program in c++ to implement a dynamically allocated Stack containing names of Countries.

Sample Paper

END OF THE QUESTION PAPER

Sample Paper

Sample Paper