

**CHAPTER – 12 – ARRAYS AND STRUCTURES**

**I. Answer in brief(2 marks)**

1. What is Traversal in an Array?
2. What is Strings?
3. What is the syntax to declare two – dimensional array.
4. Define structure .What is its use?
5. What is the error in the following structure definition.  
struct employee{ inteno;charename[20];char dept;}

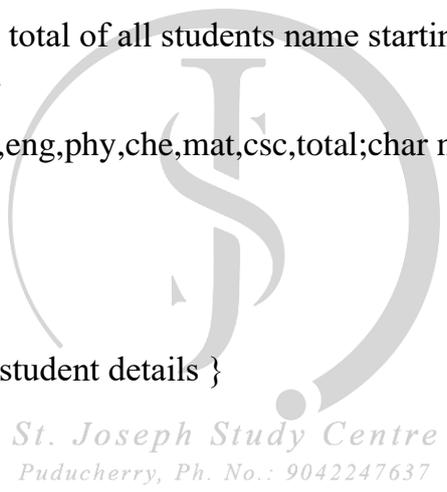
Employee e1,e2;

**II. Answer in a brief(3 marks)**

1. Define an Array ? What are the types?
2. Write note an Array of strings.
3. The following code sums up the total of all students name starting with ‘S’ and display it. Fill in the blanks with required statements.

```
struct student {int exam no,lang,eng,phy,che,mat,csc,total;char name[15];};
int main()
{
student s[20];
for(int i=0;i<20;i++)
{ ..... //accept student details }
for(int i=0;i<20;i++)
{
..... //check for name starts with letter “S”

..... // display the detail of the checked name
}
return 0;
}
```



4. How to access members of a structure? Give example.
5. What is called anonymous structure? Give an example

**III. Answer in a paragraph (5 marks)**

1. Write a C++ program to find the difference between two matrix.
2. Write a C++ program to add two distances using the following structure definition

```
struct Distance{
int feet;
```

```
float inch;
}d1 , d2, sum;
```

3. Write the output of the following c++ program

```
#include<iostream>
#include<stdio>
#include <string>
#include<conio>

using namespace std;

struct books {
char name[20], author[20];
} a[2];

int main()
{ cout<< "Details of Book No " << 1 << "\n";
cout<< "-----\n";
cout<< "Book Name :"<<strcpy(a[0].name,"Programming ")<<endl;
cout<< "Book Author :"<<strcpy(a[0].author,"Dromy")<<endl;
cout<< "\nDetails of Book No " << 2 << "\n";
cout<< "-----\n";
cout<< "Book Name :"<<strcpy(a[1].name,"C++programming" )<<endl;
cout<< "Book Author :"<<strcpy(a[1].author,"BjarneStroustrup ")<<endl;
cout<<"\n\n";
cout<< "=====\n";
cout<< " S.No\t| Book Name\t|author\n";
cout<< "=====";

for (int i = 0; i < 2; i++) {

cout<< "\n " << i + 1 << "\t|" << a[i].name << "\t|" << a[i].author;
}
cout<< "\n=====";

return 0;
}
```

4. Write the output of the following c++ program

```
#include <iostream>
```

```
#include <string>
using namespace std;
struct student
{
    introll_no;
    char name[10];
    long phone_number;
};
int main(){
    student p1 = {1,"Brown",123443},p2;
    p2.roll_no = 2;
    strcpy(p2.name ,"Sam");
    p2.phone_number = 1234567822;
    cout<< "First Student" <<endl;
    cout<< "roll no : " << p1.roll_no <<endl<< "name : " << p1.name <<endl;
    cout<< "phone no : " << p1.phone_number <<endl;
    cout<< "Second Student" <<endl;
    cout<< "roll no : " << p2.roll_no <<endl<< "name : " << p2.name <<endl;
    cout<< "phone no : " << p2.phone_number <<endl;
    return 0;
}
```

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5. Debug the error in the following program

```
#include <istream.h>
structPersonRec
{
    charlastName[10];
    chaefirstName[10];
    int age;
}
PersonRecPeopleArrayType[10];
void main()
{
```

```
PersonRecord people;
for (i = 0; i < 10; i++)
{
cout<<people.firstName<< ' ' <<people.lastName <<people.age;
}
for (int i = 0; i < 10; i++)
{
cout<< "Enter first name: "; cin<<peop[i].firstName;
cout<< "Enter last name: "; cin>>peop[i].lastName;
cout<< "Enter age: "; cin>> people[i].age;}
}
charlastName[10];
chaefirstName[10];
int age;
}
PersonRecPeopleArrayType[10];
void main()
{
PersonRecord people;
for (i = 0; i < 10; i++)
{
co
ut<<people.firstName<< ' ' <<people.lastName <<people.age;
}
for (int i = 0; i < 10; i++)
{
co
ut<< "Enter first name: "; cin<<peop[i].firstName;
co
ut<< "Enter last name: "; cin>>peop[i].lastName;
co
ut<< "Enter age: "; cin>> people[i].age;}
}
```



#### **IV. Additional Questions**

1. How can you access the array element?
2. What is searching?
3. How can you initialize character array ?
4. Write about memory representation of 2-D array.

