

## Sample paper 2015

**Time :3hrs**

**M.M 70**

**1(a) What is actual parameter and formal parameter**

**2**

Q1B) Give the Header files to run the following code.

1

```
void main()
{
Char nm[20];
int per;
gets(nm);
per=atoi(nm);
cout<<setw(8)<<" "<<per;
}
```

Q1.C Find the Errors in the following program code and rewrite the correct code.

2

```
Include<iostream.h>
Class hello
{
Int rn;
Char nm[20];
void input()
{
}
};
void main()
{
hello H;
input();
}
```

Q1d) Find the output of the following program:

3

```
#include<iostream.h>
void main()
{
int A[]={10,20,30,40,50},s=0;
int *ptr=A;
while(*ptr<40)
{
ptr++;
*ptr+=5;
}
for(i=4;i>1;i--)
{
cout<<A[i-2]<<"@";
}
}
```

Q1e) Find the output of the following program

2

```
#include<iostream.h>
#include <ctype.h>
struct fun
{
int a,b,c;
};
void showd(fun &f,int x=10)
{
f.a+=x;
f.b-=x;
```

```

f.c=f.a+f.b;
}
void main()
{
fun A={ 14,15,16},B={ 333,440,505};
showd(A);
cout<<A.a<<" " <<A.b<<" " <<A.c;
showd(B,12);
cout<<B.a<<"#" <<B.b<<"#" <<B.c;
}

```

f) void main()

```

{
Int ar[]={ 11,22,33,44,55},*p;
p=ar;
for(i=1;i<=2;i++)
{
X=random(2)+2;
cout<<ar[X]<<" ";
}
}

```

i) 11 22 ii) 22 33 iii) 33 44 iv) 33 33

**Q2.** What is transitive inheritance illustrate with an eg.

2

Q2b) Answer the questions (i) and (ii) after going through the following class :

2

```

class School
{
int m;
float p;
public :
School() { } //Function 1
School(int R,float n) //function 2
{
}
School(School &s) //Function 3
{
}
};

```

(i) Write a statement to call function 1, function 3

(ii) What is Function 3 specifically referred as ? Write the statement to invoke function 3,2.

2c) Define a class Train in C++ with following description: 4

- Private Members
- src of type string
- Tnm of type string

- dest of type string
- charges of float

• A member function Getdata to assign the following values for Charges if dest Mumbai charages 1000, Chennai 2000, kolkutta 2500.

**Public members**

- A function InputData() to allow the user to enter the values
- A function displaydata() to display all and call getdata function

Q2(d) Answer the questions (i) to (iv) based on the following :

4

```

class Country
{
long CID ;
char CName[20] ;
}

```

```

protected :
char Description[40] ;
void Allocate( ) ;
public :
double pci;
Country( ) ;
void Input( ) ;
void Showd( ) ;
};
class State :protected Country
{
int SID ;
char Sname[20] ;
protected :
char datad[40] ;
public :
State( ) ; void instate( ) ; void outstate( ) ;
};
class Zone : public State
{
Long ZID ;
char Znm[20] ;
public :
Zone( ) ;
void EnterZone( ) ;
void DisplayZone( ) ;
};

```

- (i) What is the number of bytes for state class  
(ii) Write the names of data members, which are accessible by objects of class type Zone.  
(iii) What is destructor invocation sequence when we create the object of ZONE Class.  
(iv) What are the members accessible by members of state class

3(a)Write a function SELECTSORT(int ARR[], int Size) in C++ to sort an array using selection sort. 3

(b)An array ar[30][20] is stored in the memory along the row with each of the elements occupying 2 bytes. Find out the memory location of ar[10][15], if the element ar[6][12] is stored at the location 10000. 3

(C )Write a function in C++ to perform Delete operation in Dynamic queue. 4

```

struct Book
{
int bno;
char bnm[20];
Book *Link;
};

```

d) Write a function CHANGEDATA( ) in C++, which accepts a 2d array of integer and its size as parameters The function will find sum of both diagonal elements having values >=10. 2

e) Evaluate the following postfix expression 2  
true, false, and, not, true,false,and,or,not

(4). (a) Observer the program segment given below carefully and fill the blank marked as statement 1 and statement 2 using seekg( ) and tellg( ) function for performing the required task: 1

```

#include<fstream.h>
class employee
{

```

```

int eno;
char ename[20];
public:
    int countrec( );           //function to count total no of records
};
int item ::countrec( )
{
    ifstream file;
    file.open("employee.dat",ios::binary | ios::in);
    _____ // statement 1;
    int Bytes = _____ // statement 2;

int Count = Bytes / sizeof(Item);
file.close( );
return Count;
}

```

Q4b Write a udf in c++ to reverse all the words in a text file data.txt and display on output screen 2  
 Eg if the file contains the following data

Hello to all

Output should be

olleH ot lla

Q4c. Following is the structure of each record in a data file named "Colony.dat" 3

struct Colony

```

{ char colony_code[10];      char colony_name[10];
  int no_of_people;
};

```

Copy all the contents of the colony.dat into new file dilshad.dat where colony\_code=110095.

Q5a) What is Cartesian product explain with an eg. 2

Q5b) Write the SQL query commands based on following table 8

**Table: Book**

Book_id	Book name	Author_name	Publisher	Price	Type	Quantity
C0001	Fast Cook	Lata Kapoor	FPB	356	Cookery	5
F0001	The Tears	William Hopkins	First Publi.	503	Fiction	20
T0001	My First c++	Brain & Brooke	FPB	503	Text	10
T0002	C++ Brain works	A.W. Rossaine	TDH	507	Text	15
F0002	Thunderbolts	Anna Roberts	First Publi.	75	Fiction	50

**Table: issued**

Book_Id	Quantity Issued
T0001	7
C0001	5
F0001	2

Write SQL query for (a) to (f)

To show book name, Author name and price of books of First Publi. Publisher.

To list the names and bookname of all the books of type cookery.

To Display the names and price from books in ascending order of their prices.

To increase the price of all books of FPB publishers by 60.

Write a command to all the delete all records with structure of table.

To insert a new row in the table issued having the following data. 'F0003',

Give the output of the following

Select Count(\*),Publisher from Books group by publisher.  
 Select Max(Price) from books where quantity >=15  
 Select book\_name, author\_name from books where publishers='first publi'  
 Select count(distinct publishers) from books where Price>=400

6.(a) State and Verify absorption law Theorem algebraically. 2  
 (b) write SOP for following table

X	Y	Z	F
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	1
1	1	1	1

c) Write the dual of the expression  $(a'+b).(b'+c'+d).(c'+d')$  1

(d) Reduce the following Boolean Expression using K-Map : 3  
 $F(A, B, C, D) = \sum (0, 1, 3, 6, 9, 10, 11, 12, 13, 15)$

7.(a) Compare ring topology and star topology. 1

(b) Give two eg of WEB SITE development softwares 1

c) What is DHTML/CSS? 1

d) give full form of GPRS and ARPANET. 1

e) Freshminds University of India is starting its first campus in Ana Nagar of South India with its center admission office in Kolkata. The University has 3 major blocks comprising of office block, science block and commerce block in the 5 KM area campus. 4

As a network experts, you need to suggest the network plan as per (E1) to (E4) to the authorities keeping in mind the distances and other given parameters. Expected Wire distances between various locations:

- Office Block to Science Block 90 m
- Office Block to Commerce Block 80 m
- Science Block to Commerce Block 15 m
- Kolkata Admission Office to Ana Nagar Campus 2450 KM

Expected number of Computers to be installed at various locations in the university are as follows: 8  
 Office Block 10 Science Block 140 Commerce Block 30 Kolkata Admission Office

(E1) Suggest the authorities, the cable layout amongst various blocks inside university campus for connecting the blocks.

(E2) Suggest the most suitable place (i.e. block) to house the server of this university with a suitable reason.

(E3) Suggest an efficient device from the following to be installed in each of the blocks to connect all the computers:

(i) MODEM (ii) SWITCH (iii) GATEWAY

(E4) Suggest the most suitable (very high speed) device to provide data connectivity between Admission Office located in Kolkata and the Campus located in Ana Nagar from the following options:

Telephone Line , - Fixed- Line Dial-up connection , - Co-axial Cable Network , - GSM , - Leased Line , - Satellite Connection