

**MAYOOR SCHOOL, AJMER**  
**Computer Science / XI Science / Annual Exam / Thursday / 5<sup>th</sup> Mar, 2009**  
**(Time allowed: 3 Hours)**

**BRS- 32**

**XI-Sc. – BRS**

**MM- 70**

Instructions:

- (i) All Questions are compulsory
- (ii) Please check that this question paper contains 3 printed sheets
- (iii) Please check that this question paper contains 15 questions
- (iv) Please write down the serial number of the question before attempting it
- (v) Programming Language: C++

- 1 (a) What is the difference between run-time error and syntax error? 1  
 (b) What is the portability of a program? 1  
 (c) What do you understand by testing and debugging of program? 1  
 (d) What is Modularity? What benefits does it offer? 1
- 2 (a) Write short note on :- 4  
 (i) Recycle Bin (ii) Windows Explorer  
 (iii) Task Bar (iv) Booting up
- (b) Distinguish between : 3  
 (i) Application software & System software  
 (ii) Interpreter & Compiler  
 (iii) Digital & Analog computer
- (c) Explain the use of the following DOS commands with example :- 3  
 (i) RD (ii) PROMPT (iii) COPY
- 3 (a) Name the header file to which the following function belong: 2  
 (i) exit() (ii) strcmp() (iii) tolower() (iv) getch()
- (b) Write short note on :- 4  
 (i) Encapsulation (ii) Data Abstraction  
 (iii) Inheritance (iv) Polymorphism
- (c) What is the difference between 'a' and "a" in C++ 1
- 4 (a) Evaluate the following expression for a= 10, b =5, c = 11 2  
 (i) (a >=b) || (!c == b) && (c > a)  
 (ii) ++a + b++ + ++c
- (b) What are C++ Short hand operator? 1  
 (c) Write any two unary operator. 1  
 (d) What is the difference between '=' and '==' operator in C++ ? 1  
 (e) What is conditional operator? 1  
 (f) What is the difference between break and continue statement? 1

5 Find the errors in the following (assume the header files are included): 3

(i)	(ii)	(iii)
<pre>void main() {     int a=5,sum;     cout&lt;&lt;a is :&lt;&lt;a;     sum+=a;     cout&lt;&lt;sum; }</pre>	<pre>void main() {     char x     x = a;     cout&lt;&lt;++x; }</pre>	<pre>void main() {     int x,y;     for(x = 0;y = 5;x&lt;5;x++,y--)         cout&lt;&lt;y; }</pre>

6 Convert the following :-

2

(i) to switch case	(ii) to while loop
<pre> if (a == 1) cout&lt;&lt;"One"; else if (a == 2) cout&lt;&lt;"Two"; else if (a == 3) cout&lt;&lt;"Three"; else if (a ==4) cout&lt;&lt;"Four"; else cout&lt;&lt;"Invalid";                     </pre>	<pre> for(int i =0; i&lt;10; ++i) cout&lt;&lt;5 * i;                     </pre>

7 Give the output of the following: (assume that all the header files are included)

6

<pre> void main() { int i,j,k,x = 0; for(i=0;i&lt;5;++i) for(j=0;j&lt;i;++j) { k=(i+j-1); if( k%2 ==0) x+=k; else if(k%3= =0) x+=k-2; } cout&lt;&lt;"\n"&lt;&lt;x; }                     </pre>	(i)	<pre> void main() { int i=0,x=0; for(i=1;i&lt;10;i*=2) { x++; cout&lt;&lt;x; } }                     </pre>	(ii)	<pre> void main() { for (int k = 1; k &lt;= 5; k++) { cout&lt;&lt;endl; for (int j= 0; j&lt;=k; j++) cout&lt;&lt;"*"&lt;&lt;"\t"; } }                     </pre>	(iii)
<pre> void main() { int i,j,x=0; for(i=0;i&lt;5;++i) for(j=0;j&lt;i;j++) { x+=(i+j-1); } cout&lt;&lt;endl&lt;&lt;x; }                     </pre>	(iv)	<pre> void square(int,int); void main() { int i=4,j=10; square(i,j); cout&lt;&lt;i&lt;&lt;endl; cout&lt;&lt;j; } void square(int i,int j) { i=i*j; j=j*j; }                     </pre>	(v)	<pre> void main() { int f1(int b); int a,i; for(i=1;i&lt;=5;i++) { a=f1(i); cout&lt;&lt;a; } } int f1(int b) { int x; x= b*b; return (x); }                     </pre>	(vi)

8 Convert the following:

8

(i)  $(FACE)_{16} = (?)_2$

(ii)  $(273.375)_{10} = (?)_2$

(iii)  $(1001101.1001)_2 = (?)_{10}$

(iv)  $(356)_{16} = (?)_{10}$

9 (i) What is the difference between Array and Structure?

1

(ii) What is the use of typedef?

2

(iii) What is # ? Write any two uses of it with example.

3

10 Rewrite the corrected code for the following program. Underline each correction (if any). 3

```
# include<iostream.h>
structure club
{
    int mem number;
    char name[20];
    char memtype[] ="XYZ";
};
void main()
{
    club mem1,mem2;
    cin<<"Member Number :";
    cin>>memnumber.mem1;
    cout<<"Member Name :";
    cin>>mem1.name;
    mem1.memtype="ABC";
}
```

11 Write a program to store information of 50 employees using structure and to display information of an employee depending upon the employee number given. 3

12 Write a program to produce the following output : 3

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

13 Write a program to print the row sum of a matrix. 3

14 Differentiate between call by value and call by reference in function with example. 2

15 Write a function that intakes two arguments : a character and an integer and prints the character given number of times. If, however, the integer is missing, the function prints the character twice. 3