

Name: \_\_\_\_\_ R. No. \_\_\_\_\_ Class/ Sec: \_\_\_\_\_ Date: \_\_\_\_\_ Invig. Sign \_\_\_\_\_

**ATOMIC ENERGY CENTRAL SCHOOL, NARORA**  
**CLASS XI COMPUTER SCIENCE HALF YEARLY 2018-19**

**MM: 70**

**TIME: 3 Hr.**

**General Instructions:**

- All questions are compulsory and marks are mentioned in front of each question.
- Electronic devices are prohibited to use in the examination.
- Use Blue or Black Pen only.

1. (a) Differentiate between Automatic Type Conversion and Type Casting. 2

(b) Name the header file(s) that shall be needed for successful compilation of the following C++ code. 2

```
void main( )
{
    char str[300];
    gets(str);
    int n;
    cin>>n;
    int i=n*n;
    cout<<setw(20)<<"\n The square of the number entered by you is "<< i;
    cout<<strlen(str);
    getch();
}
```

(c) Rewrite the following program after removing the syntactical errors(if any). Underline each correction. 2

```
#include<iostream.h>
void main()
{
    char character;
    cout>>"\nEnter your character\n";
    cin<<character;
    cout>>"\nEnter character is\n";
    cout<<character;
    return 0;
}
```

(d) Predict the output of the following code: 2

```
#include<iostream.h>
void main( )
{
    int size=10;
    while(size>=0)
```

```

        cout<<--size<<"@";
    getch();
}

```

- (e) Predict the output of the following code if user enters numbers from 1 to 10 : 2

```

#include<iostream.h>
void main( )
{
    int marks[10]; float sum;
    for(int ctr = 0; ctr< size; ctr=ctr+2)
    {
        cin>>marks[ctr];
        sum+=marks[ctr];
    }
    cout<<sum;
}

```

- (f) Find the output of the following code if user enters '98': 2

```

#include<iostream.h>
void main()
{
    int i;
    cin>>i;
    i=i+2;
    cout<<(char)i;
}

```

- 2.(a) Explain Process Control Block(PCB). 2

- (b) Differentiate between break and continue keywords. Also give a suitable C++ example to illustrate both. 2

- (c) Give the output for the following code fragment if user enters 22. 2

```

int Result;
Result = ((A==97)? 3 : 44) ;
cout<<Result*2;

```

- (d) Explain working of exit controlled loop. Also give an example in C++. 2

- (e) Explain Interpreter. 2

- 3.(a) Differentiate between Time Sharing OS and Real Time OS. Also give an example of each. 3

- (b) Do the following conversions. 3

(i)	(CBD10) <sub>16</sub>	=	( ? ) <sub>8</sub>
(ii)	(124) <sub>2</sub>	=	( ? ) <sub>8</sub>
(iii)	(765) <sub>8</sub>	=	( ? ) <sub>16</sub>

- (c) Write a program in C++ to receive any number from the user and check whether the number is odd or even. 3
- (d) Write a program in C++ to generate the following pattern for the 'n' number of lines entered by the user. 3

```
@
@@
@@@
@@@@
@@@@@
@@@@@
```

- 4.(a) Differentiate between local and global variables in C++. Also give an example of each. 3
- (b) Give the output of the following code fragment. Also explain the steps involved in execution. 3
- ```
int sum=6,k;
k=sum++ + ++sum;
cout<<k;
```
- (c) Write a program in C++ to generate equivalent Binary number of any positive integer entered by the user. 3
5. (a) Differentiate between Application Software and System Software. Also give an example of each. 3
- (b) Write a program in C++ to find  $n^{\text{th}}$  root of any number entered by the user. 3
- (c) Differentiate between Round Robin Scheduling and Deadline Scheduling techniques. 3
6. (a) What is virtual memory? Explain. Also list any two virtual memory implementation techniques/approaches. 3
- (b) Differentiate between Single line Comment and Multiline Comment. Also give an example of each. 3
- (c) What do you understand by Cascading of I/O operators. What are its advantages? Also give a suitable example in C++. 3
7. (a) Differentiate between Syntax Error and Symantic Error. Also give an example of each. 3
- (b) With the help of an example explain the problem of fall through while using switch case in C++. How to handle it?. 3
- (e) Define a structure Employee with the following data members. 3
- ```
Emp_id of type integer
Emp_name of type string
Salary of type float
Gender of type character
Address of type string
```

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