

Total No. of Questions – [3]

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G.R. No.	
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PAPER CODE	0111-202A
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DECEMBER 2021 (INSEM+ ENDSEM) EXAM
F.Y. B. TECH. (SEMESTER - I)
COURSE NAME: FUNDAMENTALS OF PROGRAMMING
COURSE CODE: CS10202A
(PATTERN 2020)

Time: [2Hr]

[Max. Marks: 60]

(*) Instructions to candidates:

- 1) Figures to the right indicate full marks.
- 2) Use of scientific calculator is allowed
- 3) Use suitable data where ever required
- 4) Write correct syntax while writing program

Q.1 Select the correct option for following questions.

[30]

i) Which of the following is NOT a character constant

[2]

- (A) 'Thank You'
- (B) 'Enter values of P, N, R'
- (C) '23.56E-03'
- (D) All the above

ii) Which of the following statement is wrong?

[2]

- (A) `mes = 123.56 ;`
- (B) `con = 'T' * 'A' ;`
- (C) `this = 'T' * 20 ;`
- (D) `3 + a = b ;`

iii) If a is an integer variable, `a = 5 / 2 ;` will return a value

[2]

- (A) 2.5
- (B) 3
- (C) 2
- (D) 0

iv) What will be the value of d if d is of float data type for the operation
`d = 2 / 7.0`

[2]

- (A) 0
- (B) 0.2857
- (C) Cannot be determined
- (D) 2

v) Which one of the following statement is best suitable?

[2]

- (A) Machine Level Language is Hardware independent Language
- (B) Machine Level and Assembly Languages are Hardware Independent Language
- (C) Assembly Languages are platform independent
- (D) Machine Level and Assembly Languages are Hardware Dependent Language

vi) What will be the output of following C code?

[2]

```
main()
{
    int p = 8, q = 20 ;
    if (p == 5 && q > 5)
        printf ( "Why not C" );
}
```

```

else
printf ( "\nDefinitely C !" ) ;
}

```

- (A) Why not C
- (B) Definitely C
- (C) Compile time error
- (D) Runs fine

vii) What will be the output of following code

[2]

```

#include <iostream>
using namespace std;
int main()
{
int n1 = 10;
float n2 = 10;
cout << sizeof(n1 + n2);
return 0;
}

```

- (A) 20
- (B) 4
- (C) 40
- (D) 8

viii) What will be the output of following C++ code?

[2]

```

#include <iostream>
using namespace std;
int main()
{
main()
{
int i = -4, j, num ;
j = ( num < 0 ? 0 : num * num ) ;
cout<<j ;
}
}

```

- (A) 0
- (B) Error
- (C) -4
- (D) None

ix) What is the output of the following code snippet in C++?

[2]

```

#include <iostream>
using namespace std;
int main()
{
int i = 0 ;
while(++i <= 10)
cout<<i ;
}

```

- (A) 1...10
- (B) 1...9
- (C) 2...10
- (D) 0...10

x) What will be the output of following C++ code?

[2]

```

#include <iostream>
using namespace std;
int main()
{
int x = 1 ;
while ( x == 1 )

```

```

{
    x = x - 1;
    cout<<x;
}

```

- (A) 0
- (B) 1
- (C) Error
- (D) No output

xi) **What will be the output of following C++ code?**

[2]

```

#include <iostream>
using namespace std;
int main()
{
    int x = 4, y = 0, z;
    while (x >= 0)
    {
        if (x == y)
            break;
        else
            cout<<x<<y<<"\n";
        x--;
        y++;
    }
}

```

- (A) 4 0
3 1
- (B) 3 1
4 0
- (C) All 0
- (D) compilation error

xii) **Which of the following is a predefined function**

[2]

- (A) date()
- (B) timestamp()
- (C) log()
- (D) roundoff()

xiii) **Which operators we use get value out of address in pointers?**

[2]

- (A) De-referencing operator
- (B) Value at the address operator
- (C) Modulus operator
- (D) address of another variable

xiv) **What is the output of following code**

[2]

```

#include <iostream>
using namespace std;
int main()
{
    int l = 0;
    cout<<l++<<"\t"<<++l;
    return 0;
}

```

- (A) 0 0
- (B) 0 1
- (C) 1 1
- (D) 0 2

xv) **which data type is used to store value having 12 digits**

[2]

- (A) Long
- (B) Int
- (C) Long int
- (D) Double

Q.2

Solve any three out of four

[15]

a) Compare C language and C++ language?

[5]

b) Define classes and object. With real world examples.

[5]

c) Write a C++ program to calculate area of circle, triangle and rectangle using classes and object.

[5]

d) Compare Constructor and functions.

[5]

Q.3

Solve any three out of four

[15]

a) Compare run time polymorphism and compile time polymorphism.
Explain function overloading with suitable example.

[5]

b) List out advantages of friend function with an example.

[5]

c) Define inheritance. Enlist the types of inheritance. Describe function overriding with suitable example.

[5]

d) Write a C++ program to overload increment operator (++) with correct syntax and expected output.

[5]