

Total No. of Questions – [3]

Total No. of Printed Pages: 4

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PAPER CODE	U111-202A(RE)
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MAY 2022 (INSEM+ ENDSEM) EXAM
F.Y. B. TECH. (SEMESTER - II)
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**

Q.1

Select the correct option for following questions.

[30]

- i) What will be the output of following C code?

[2]

```
#include <stdio.h>
#include <string.h>
int main()
{
    char arr[] = "Onlinegdb.com";
    printf("%d-%d", arr[0], arr[1]);
    return 0;
}
```

(A) O-c

(C) O-O

(B) c-O

(D) 79-110

- ii) What will be the output of following C code?

[2]

```
#include <stdio.h>
int main()
{
    int main = 0;
    printf("%d", main);
    return 0;
}
```

- (A) Compilation error
(B) Code runs without error but no output.
(C) Code runs without error and prints 3.
(D) Code runs infinitely.

- iii) What will be the output of following C code?

[2]

```
#include <stdio.h>
int main()
{
    signed char chr;
    chr = 128;
    printf("%d\n", chr);
    return 0;
}
```

(A) 128

(C) Depends on the compiler

- (B) -128 (D) compilation error
iv) What will be the output of following C code?

```
#include <stdio.h>
```

[2]

```
int main()
{
    int i = 0;
    do
    {
        i++;
        if (i == 2)
            continue;
        printf("In while loop ");
    } while (i < 2);
    printf("%d\n", i);
}
```

- (A) In while loop 2
(B) In while loop in while loop 3
(C) In while loop 3
(D) Infinite loop

- v) What will be the output of following C code?

[2]

```
#include <stdio.h>
```

```
void main()
{
    int a[2][3] = {6,11,45,13,25};
    int i = 0, j = 0;
    for (i = 0; i < 2; i++)
        for (j = 0; j < 3; j++)
            printf("%d", a[i][j]);
}
```

- (A) 6114513250 (C) 611451325
(B) Compilation error (D) 61145132525

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

[2]

```
#include <stdio.h>
```

```
int main()
{
    short int i = 20;
    char c = 97;
    printf("%d, %d, %d\n", sizeof(i), sizeof(c), sizeof(c + i));
    return 0;
}
```

- (A) 2,1,2 (C) 2,1,4
(B) 2,1,1 (D) 2, 2,8

- vii) What will be the output of following C code?

[2]

```
#include <stdio.h>
```

```
int main()
{
    int @p = 99;
    printf("%d", @p);
    return 0;
}
```

- (A) 99 (C) 99@
(B) @99 (D) Compilation Error

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

[2]

```
#include <stdio.h>
```

```
int main()
{
    int x = 5;
    x += 3;
    x += 3;
    printf("%d", x);
}
```

- (A) 5 (C) 6
(B) 3 (D) 11

ix) How many times C++ Programming! is printed?

[2]

```
#include <iostream>
using namespace std;
int i=0;
lbl:
    cout<<"C++ Programming!";
    i++;
    if(i>5)
    {
        goto lbl;
    }
```

- A) Compilation error (C) 5 times
B) 4 times (D) One time

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

[2]

```
#include <iostream>
using namespace std;
void exe(int &x, int y = 300)
{
    int TEMP = x + y;
    x+= TEMP;
    if(y!=300)
        cout<<TEMP<<x<<y<<endl;
}
int main()
{
    int A=50, B=20;
    cout<<A<<B<<"--";
    exe(A,B);
    cout<<A<<B<<"--";
    return 0;
}
```

- (A) 5020--5020-- (C) 5020--70120200--5020
(B) 5020--7012020--12020-- (D) 5020--7050200--5020--

xi) Which operator from the following list can not be overloaded?

[2]

- (A) + (C) *
(B) - (D) ::

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

[2]

```
#include <iostream>
using namespace std;
int main()
{
    int i=0,j=0;
    for(i=1;i<10;i*=3)
    {
        j++;
        cout<<j;
    }
    cout<<j;
    return 0;
}
```

- A) 1234 (C) 0123
B) 1233 (D) 1244

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

[2]

```
#include <iostream>
using namespace std;
void search()
void search()
{
    cout<<"FoP";
}
int main()
```

- ```

 {
 search();
 return 0;
 }

```
- (A) FoP (B) FoP FoP  
 (C) compilation error (D) infinite time printing of FoP
- xiv) What will be the output of following C++ code?

```

#include <iostream>
using namespace std;
int main()
{
 for(int i=1;i<=3;i++)
 {
 for(int j=i;j<=3;j++)
 cout<<i<<"*";
 }
 return 0;
}

```

[2]

- (A) 1\*1\*1\*2\*2\*3\* (C) 1\*1\*2\*  
 (B) 1\*2\*1\* (D) 1\*2\*2\*
- xv) What will be the output of following C++ code?

```

#include <iostream>
using namespace std;
int main()
{
 int x=5;
 if (++x*3<= 15)
 {
 cout<<"Hello";
 }
 else
 {
 cout<<"Bye";
 }
 return 0;
}

```

[2]

- (A) Hello (C) Undefined  
 (B) Bye (D) Compilation Error

Q2

**Solve any three out of four**

- a) List and explain the features of object-oriented programming in detail. [5]
- b) Compare Procedure oriented programming Vs Object oriented programming [5]
- c) Write a C++ program to print the factorial of any given number using parameterized. [5]
- d) Explain the concept of constructor and destructor in detail. [5]

Q.3

**Solve any three out of four**

- a) Define and explain with one example Compile time polymorphism and Run-time polymorphism [5]
- b) Write C++ program to read and print student's information using two classes and simple inheritance. [5]
- c) List and explain types of Inheritance in OOP. [5]
- d) Define virtual function and explain in detail with one example. [5]