

Total No. of Questions – [3]

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PAPER CODE	U111-202A (RE)
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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) What will be the output of following C code?

[2]

```
#include <stdio.h>
int main()
{
    int a=2;
    switch(a)
    {
        case 1: printf("One ");
        case 2: printf("Two ");
        case 3: printf("Three "); break;
        default: printf("Four ");
    }
}
```

- (A) One
- (B) One Two Three
- (C) Two Three
- (D) Two

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

[2]

```
#include <stdio.h>
int main()
{
    int a;
    switch(a);
    {
        printf("DEER ");
    }
    printf("LION");
}
```

- (A) DEER
- (B) DEER LION
- (C) Compiler error
- (D) None of the above

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

[2]

```
#include <stdio.h>
int main()
{
    char code='K';
    switch(code)
    {
        case 'A': printf("ANT ");
        case 'K': printf("KING ");
        default: printf("NOKING "); break;
    }
    printf("PALACE");
}
```

- (A) KING PALACE

- (B) KING NOKING
 (C) KING NOKING PALACE
 (D) Compiler time error for using break statement with default
 iv) What will be the output of following C code?

```
#include "stdio.h"
int main()
{
    int a = 10;
    int b = 15;
    a=b++;
    printf("%d %d %d %d ",a++,b++,a,b);
    return 0;
}
```

[2]

- (A) 15 16 15 17
 (B) 15 16 16 16
 (C) 16 16 16 17
 (D) 15 16 16 17

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

```
#include <stdio.h>
int main()
{
    int a=20, b=30, c=40;
    b=a++;
    c=++a;
    printf("%d %d ", ++a, b++);
    return 0;
}
```

[2]

- (A) 23 20
 (B) 23 21
 (C) 23 22

- (D) Compile Time Error

- vi) Which one of the following statement is best suitable?

- (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

[2]

- vii) Which one of the following statement is best suitable?

- (A) High Level Language is Platform independent Language
 (B) High Level and Scripting Level Languages are Platform independent Language
 (C) High Level Languages is platform dependent Language and Scripting Level Languages is Platform independent Language
 (D) High Level and Scripting Level Languages are Platform Dependent Language

[2]

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

```
#include <stdio.h>
int main()
{
    int x;
    for(x=10; x>=1; x--)
    {
        if(x==3)
        {continue;}
        printf("%d ",--x);
    }
    return 0;
}
```

- (A) 9 7 5 2 0

- (C) 9 7 5 3 1

(B) 10 8 6 3 1

(D) 10 9 8 7 6 5 4 3 2 1

[2]

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

```
#include <iostream>
using namespace std;
int main()
{
    int m=4;
    m=++m + ++m;
    cout<<"value of m is : "<< m;
    int n=4;
    n = n++ + n++;
    cout<<" value of n is : "<< n<<endl;
    return 0;
}
```

(A) value of m is : 10, value of n is : 8

(B) value of m is : 10, value of n is : 10

(C) value of m is : 9, value of n is : 12

(D) value of m is : 12, value of n is : 9

[2]

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

```
#include <iostream>
using namespace std;
int main()
{
    int x = 5;
    if(x++ == 5)
        cout<<"Five "<<endl;
    else
        if(++x == 6)
            cout<<"Six"<<endl;
    return 0;
}
```

(A) Five Six

(C) Six

(B) Five

(D) None of these

[2]

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

```
#include <iostream>
using namespace std;
int a=10;
int main()
{
    int a =20;
    cout<<a<<::a;
}
```

(A) syntax error

(C) 2010

(B) 1020

(D) 2020

[2]

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

```
#include <iostream>
using namespace std;
int main()
{
    int a = 1;
    switch(a)
    {
        case 1: cout<<"One ";
        case 2: cout<<"Two ";
        case 3: cout<<"Three ";
        default: cout<<"Default";
    }
    return 0;
}
```

(A) One

- (B) One Two Three
- (C) Default
- (D) One Two Three Default

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

[2]

```
#include <iostream>
using namespace std;
int main()
{
    int new = -10;
    cout<<"new is: "<<new;
    return 0;
}
```

- (A) new is: -10
- (B) new is: 10
- (C) Compilation Error
- (D) new is: 0

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

[2]

```
#include <iostream>
using namespace std;
int main()
{
    cout<<"C++ Program";
    return 0;
}
```

- (A) Compilation Error
- (B) Runtime Error
- (C) C++ Program
- (D) C++ Program;;;

xv) How many times 'C++ program' is printed here?

[2]

```
#include <iostream>
int main()
{
    for(int i=0; i< 5; i++);
    std::cout<<"C++ program";
    return 0;
}
```

- (A) Compilation Error
- (B) 1
- (C) 4
- (D) 5

Q2

Solve any three out of four

[15]

- a) Enlist and describe the features of object oriented programming. [5]
- b) Discuss Memory Allocation for Objects (data members and member function). [5]
- c) Compare Procedural Oriented Programming and Object Oriented Programming. [5]
- d) Define Constructor and Destructor. Distinguish Constructor and Destructor.

Q.3

Solve any three out of four

[15]

- a) Define inheritance? Enlist the categories of 'mode of inheritance'. Write a program for 'public' mode of inheritance with correct syntax and output. [5]
- b) Identify the role of 'inline function' in C++. Give correct syntax. Write two advantages and two disadvantages of Inline function. [5]
- c) Define 'function overriding'. Write a C++ program for function overriding with correct syntax and output. [5]
- d) Write a C++ program for overloading of operators using friend function with correct syntax and output. [5]