

International Islamic University Chittagong
Department of Electronic and Telecommunication Engineering

B. Sc. Engineering in ETE

Midterm Examination, Spring 2022

Course Code: ETE-3545

Course Title: Object oriented Programming with Java

Time: 1 hour 30 minutes

Full Marks: 30

i) Answer any three questions from the followings. The figures in the right-hand margin indicate full marks.

ii) Course Outcomes (COs) and Bloom's Levels are mentioned in additional Columns.

Course Outcomes (COs) of the Questions	
CO1	Define the concept of OOP as well as the purpose and usage principles of inheritance, polymorphism, encapsulation, and method overloading.
CO2	Identify classes, objects, members of a class and the relationships among them needed for a specific problem.
CO3	Develop Java application programs using sound OOP practices (e.g., interfaces and APIs) and proper program structuring (e.g., by using access control identifies, multithreading, error exception handling)

Bloom's Levels of the Questions						
Letter Symbols	R	U	Ap	An	E	C
Meaning	Remember	Understand	Apply	Analyze	Evaluate	Create

What is OOP? Write the features of OOP.

1 a) CO1 R/U 2+3

Write a program that converts Centigrade to Fahrenheit.

1 b) Define class and object. Write a Java program to print first 10 natural numbers. CO1 R/U 2+3

Define variable. What are the rules to declare variables?

Write the output of the following code segments

2 a) CO1 R/A
n 2+3

```
int a=10;
int b=5;
int c=20;
System.out.println(a>b||a<c);
System.out.println(a>b|a<c);
System.out.println(a>b||a++<c);
System.out.println(a); System.out.println(a>b|a++<c);
System.out.println(a);
```

2 b) Define method. Why method is used? How to create a method and how it is called? Explain with example. CO1 R/
U 5

Write a Java program to find the sum of first 10 natural numbers.

Determine the output of the following code segment:

```

3 a)   int a=13;
        do {
            if(a==17){
                a=a+1;
                continue; }
            System.out.println (a);
            a++;
        }while(a<20)
    
```

CO1 U/An 3+2

What is an array? Describe the representation of one-dimensional array with an example.

```

3 b)   Write a program to print the following sequences.
        90,80,70,60,50,40,30
    
```

CO1 U/Ap 2+3

```

4 a)   Define break statement. Define a program to find out whether a given number
        is even or odd by defining your own method.
    
```

CO1 R/Ap 1+4

SL	Marks (%)	Letter Grade	Status
1	80% or above	A+	Excellent
2	75% to less than 80%	A	Very Good
3	70% to less than 75%	A-	
4	65% to less than 70%	B+	
5	60% to less than 65%	B	Good
6	55% to less than 60%	B-	Satisfactory
7	50% to less than 55%	C+	

4 b) CO1 U/Ap 5

Write a program that takes number (last 2 digits of your id) of a subject as input, then prints the letter grade and status according to the table.