

**Bangabandhu Sheikh Mujibur Rahman Science and Technology University**

**Department of Computer Science and Engineering**

**2<sup>nd</sup> Year 1<sup>st</sup> Semester B.Sc. Engineering Examination-2014**

**Course No: CSE212**

**Course Title: Object Oriented Programming**

**Full Marks: 70**

**Time: 4 hours**

**N. B.**

i) Answer **SIX** questions, taking any **THREE** from each section.

ii) All questions are of equal values.

iii) Use separate answer script for each section.

SECTION- A			
Q.1	(a)	What is JVM? Why java is called the “Platform Independent Programming Language”?	4
	(b)	Explain the following concept with example: (i) Encapsulation (ii) Polymorphism (iii) Inheritance.	4
	(c)	Write down the output of the following code <pre>class A{ public A(){System.out.print(“hello”);} } class B extends A{ public int sum(){return 5+6;}      public static void main(string[] arg){         B ob=new B();         System.out.println(sum());     } }</pre>	$3\frac{2}{3}$
Q.2	(a)	What do you mean by exception in Java? How do you handle exception in java program?	4
	(b)	Write short note about final, static, this and super with proper example.	4
	(c)	What do you mean by container and component in java? Give some example of container and component class in java.	$3\frac{2}{3}$
Q.3	(a)	What is java Thread? Draw and describe the life cycle of Thread in java.	4
	(b)	What are the access modifiers in java? How the access modifiers affects member function or variable of a class in different situation.	4
	(c)	What are the two ways to start a thread? Explain each of them with brief example.	$3\frac{2}{3}$

Q.4	(a)	Write about network programming in java with proper Example code.	4
	(b)	Describe life cycle of Java Applet with proper diagram?	4
	(c)	Explain java abstract method and abstract class. What are the differences between an Interface and an abstract class?	3 $\frac{2}{3}$
<b>SECTION- B</b>			
Q.5	(a)	What is function overloading and overriding explain them with examples?	4
	(b)	What is constructor and destructor? Why we use constructor and destructor in C++?	4
	(c)	Take a class of cricketer of Bangladeshi cricket team. What are the data member (properties) and function member (method) of the class. Which of them would you like to keep as private and public? Justify your answer.	3 $\frac{2}{3}$
Q.6	(a)	What is the need for template function in C++? What are their advantages?	4
	(b)	Why virtual function is used in C++? What do you mean by compile time and run time polymorphism.	4
	(c)	Describe “has a” and “is a” relation in OOP with proper example.	3 $\frac{2}{3}$
Q.7	(a)	What is STL? Why should you as a C++ programmer be interested in STL? What is name space and write its uses.	4
	(b)	How many way we can inherit in C++. What are the problems with multiple inheritances in C++? Give example.	4
	(c)	What do you mean by Operator Overloading? Write down the rules of operator overloading.	3 $\frac{2}{3}$
Q.8	(a)	Write about memory representation of class, object, method and member variable in C++ and java.	4
	(b)	Write down the properties of object oriented programming language? Why C++ is an Object Oriented Programming Language. What are the differences of C++ and Java.	4
	(c)	Write down differences between structured programming language(C) and Object oriented language (java/C++).	3 $\frac{2}{3}$