Enrollment No....................................

Faculty of Engineering / Science

End Sem Examination Dec-2023

CS3CO32 / BC3CO37 Java Programming

Programme: B.Tech. /   Branch/Specialisation: All / Computer

B. Sc.   Science

Duration: 3 Hrs.   **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

Q.1	i.	In which case automatic type casting is possible?	1
		(a) Int to Long (b) Long to Int	
		(c) Double to char (d) Float to short	
	ii.	Which of the following is not a valid identifier in java?	1
		(a) java_var (b) _javaVar (c) 1javaVar (d) $javaVar	
	iii.	What is the output of following program?	1

abstract class MyAbstract {

abstract void myMethod ();}

class MyClass extends MyAbstract {

void myMethod () {

System.out.println("Successfully implemented");}

Public static void main (String [ ] args)

{MyAbstract obj = new MyClass ();

Obj.myMethod();}}

(a) Runtime exception   (b) Successfully implemented

(c) MyClass   (d) Runtime Error

	iv.	Which of the following is correct way of importing an entire package 'pkg'?	1
		(a) import pkg. (b) Import pkg.	
		(c) import pkg.* (d) Import pkg.*	
	v.	What is the result of String s= "Hello", s.substring(1,4)?	1
		(a) Hel (b) H (c) ell (d) llo	

vi. What is the output of the following- **1**
String str= "Hello";
Str += "world";
System.out.println(str.length());
(a) 5   (b) 10   (c) 11   (d) 12

vii. What is the output of following program? **1**
Class test {
public static void main (String [ ] args) {
String s= null;
System.out.println (s.length()); }
(a) null   (b) NullPointerException
(c) 1   (d) 0

viii. What is the purpose of the join () method in java threads? **1**
(a) It synchronizes threads
(b) It resumes a paused thread
(c) It waits for a thread to complete its execution before moving on
(d) It starts a new thread

ix. Which of these methods can be used to output a string in an applet? **1**
(a) display ()   (b) print()
(c) drawstring()   (d) transient()

x. Which is the container that does not contain title bar and MenuBars but it can have other components like button, textfield etc? **1**
(a) Window   (b) Frame   (c) Panel   (d) Container

Q.2   i.   Write basic structure of java program with example, also give command to compile & execute program from terminal. **4**

ii. Define different types of variables used and its scope & lifetime throughout the program with example. **6**

OR   iii.   What do you understand by JDK, JRE & JVM? Explain in detail. **6**

Q.3   i.   Differentiate package from header file? **2**

ii. Why java does not support multiple inheritance? Explain with example. **3**

iii. What do you understand by term Interface. Why it is used? Write a program to demonstrate it. **5**

OR   iv.   What do you understand by static & dynamic binding explain with example. **5**

Q.4   i.   Differentiate between String Buffer class and StringBuilder class. **4**

ii. Write a program with output for the following string operations: **6**
(a) To convert string into uppercase and lowercase.
(b) To find size of string.
(c) To replace the string with another string.

OR   iii.   Why String class is immutable? Explain with example. **6**

Q.5   i.   Define types of exception in java. **4**

ii. Write a program to handle arithmetic exception in java. **6**

OR   iii.   Define lifecycle of a thread with example. **6**

Q.6   Attempt any two:
i. Write a program to read and write bytes in file. **5**
ii. Write a program to create checkbox using AWT class in java. **5**
iii. Define lifecycle of java applet in java with example. **5**

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Marking Scheme
Java Programming-CS3CO32(T)-BC3CO37(T)

Q.1	i)	a) Int to Long		**1**
	ii)	c) 1javaVar		**1**
	iii)	1 Mark to all		**1**
	iv)	c) import pkg.*		**1**
	v)	c) ell		**1**
	vi)	b) 10		**1**
	vii)	b) NullPointerException		**1**
	viii)	c) It waits for a thread to complete its execution before moving on		**1**
	ix)	c) drawstring ()		**1**
	x)	c) Panel		**1**

Q.2	i.	Basic structure -	2 Marks	**4**
		To compile	1 Marks	
		To run	1 Mark	
	ii.	Instance variable-2 marks, class variable-2 marks, local variable-2 marks.		**6**
OR	iii.	JDK-	2 Marks	**6**
		JVM-	2 Marks	
		JRE-	2 Marks	

Q.3	i.	Two differences	(As per explanation)	**2**
	ii.	Reason-	1 Mark	**3**
		Example –	2 Marks	
	iii.	Interface	1 Mark,	**5**
		why-	1 Mark,	
		program -	3 Marks	
OR	iv.	Static with program –	1.5 Marks	**5**
		Dynamic with program	1.5 Marks	

Q.4	i.	4 difference -	(1 Mark*4)	**4**
	ii.	Program for a,b,c -	(2 Marks *3)	**6**
OR	iii.	Immutable-	3 Marks	**6**
		Example	3 Marks	

Q.5	i.	4 types-	(1 Mark *4)	**4**
	ii.	Program	(As per explanation)	**6**

OR	iii.	Lifecycle-	4 Marks	**6**
		Example-	2 Marks	

Q.6				
	i.	Program-	(As per explanation)	**5**
	ii.	Program-	(As per explanation)	**5**
	iii.	Lifecycle-	4 Marks	**5**
		Example-	1 Mark	

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