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

Faculty of Engineering
End Sem (Odd) Examination Dec-2018
IT3CO15 / IT3OE14 Computer Programming-II

Programme: B.Tech.   Branch/Specialisation: IT

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.

Q.1 i. Which integral type in java has the exact range from -2147483648 (-2^{31}) **1**
to 2147483647 ($2^{31}-1$), inclusive?
(a) Byte   (b) Short   (c) Int   (d) Long

ii. Given the following declaration, which expression returns the size of the **1**
array, assuming the array has been initialized?
(a) array[].length ()   (b) array.length()
(c) array[].length   (d) array.length

iii. Given a class named Book, which one of these is a valid constructor **1**
declaration for the class?
(a) Book (Book b){}   (b) Book Book(){}
(c) private final Book (){}   (d) void Book() {}

iv. How restrictive is the default accessibility compared to public, **1**
protected, and private accessibility?
(a) Less restrictive than public
(b) More restrictive than public but less restrictive than private
(c) More restrictive than protected but less restrictive than private
(d) More restrictive than private

v. Which of these operators can be used to concatenate two or more string **1**
objects?
(a) +   (b) +=   (c) &   (d) ||

vi. Which of these packages contain classes and interfaces used for input **1**
and output operations of a program?
(a) java.util   (b) java.lang   (c) java.io   (d) All of these

vii. Which of the keywords is not a part of exception handling? **1**
(a) Try   (b) Finally   (c) Catch   (d) Thrown

viii. What is the default value of priority variable MIN_PRIORITY and MAX_PRIORITY in multithreading? **1**
(a) 0 & 256   (b) 0 & 1   (c) 1 & 10   (d) 1 & 256

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

x. What does AWT stands for? **1**
(a) All Window Tools   (b) All Writing Tools
(c) Abstract Window Toolkit (d) Abstract writing Toolkit

Q.2 i. Differentiate between JDK and JRE. **2**

ii. Write a program that asks the user to enter two integers obtains them from user and prints their sum, product, difference and quotient. **3**

iii. What do you mean by scope and life time of variables? Explain scope and life time of different types of variables used in java program. **5**

OR iv. Write a program to read the ages of all members of a family, store them in one dimensional array and display the age of eldest and the youngest persons. **5**

Q.3 i. Explain any one use of this and super keyword. **2**

ii. With the help of one suitable program explain method overloading and overriding. **8**

OR iii. How do we create and access a package in java? Discuss with suitable program. **8**

Q.4 i. What is the difference between == and .equals()? **3**

ii. Why strings are called Immutable? Explain replace(), toString() and concat() methods with the help of a program. **7**

OR iii. Write a program to accept a string and count total capital small letters and special characters in a string. **7**

Q.5 i. What do you mean by exception handling in java? Write a program which demonstrates the handling of ArrayIndexOutOfBoundsException. **4**

ii. What is thread? What is the difference between pre-emptive scheduling and time slicing? Explain using suitable example. **6**

OR iii. Explain life cycle of thread in details. **6**

Q.6   Write short notes on any two:
i. Applet Architecture **5**
ii. AWT **5**
iii. Applet life cycle. **5**

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Marking Scheme

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Q.1 i. Which integral type in java has the exact range from -2147483648 (-2^{31}) **1**
to 2147483647 ($2^{31}-1$), inclusive?
(c) Int

ii. Given the following declaration, which expression returns the size of the **1**
array, assuming the array has been initialized?
(d) array.length

iii. Given a class named Book, which one of these is a valid constructor **1**
declaration for the class?
(a) Book (Book b){ }

iv. How restrictive is the default accessibility compared to public, protected, **1**
and private accessibility?
(b) More restrictive than public but less restrictive than private

v. Which of these operators can be used to concatenate two or more string **1**
objects?
(a) +

vi. Which of these packages contain classes and interfaces used for input and **1**
output operations of a program?
(c) java.io

vii. Which of the keywords is not a part of exception handling? **1**
(d) Thrown

viii. What is the default value of priority variable MIN_PRIORITY and **1**
MAX_PRIORITY in multithreading?
(c) 1 & 10

ix. Which of these methods can be used to output a string in an applet? **1**
(b) drawString()

x. What does AWT stands for? **1**
(c) Abstract Window Toolkit

Q.2 i. At least two differences between JDK and JRE. **2**
1 mark for each   (1 mark * 2)

ii. Program that asks the user to enter two integers obtains them from user **3**
and prints their sum, product, difference and quotient.
Step wise marking

iii. Scope and life time of variables   2 marks   **5**

Program   3 marks

OR iv. Program to read the ages of all members of a family, store them in one **5**
dimensional array and display the age of eldest and the youngest persons.
Step wise marking

Q.3 i. Any one use of this and super keyword.   **2**

ii. Method overloading and overriding.   **8**
Explanation   3 marks
Program   5 marks

OR iii. Creating and accessing a package in java   2 marks   **8**
Program.   6 marks

Q.4 i. Difference between == and .equals()?   **3**

ii. Strings are called Immutable   1 mark   **7**
Methods with program.   6 marks

OR iii. Program   6 marks   **7**
Output   1 mark

Q.5 i. Exception handling in java   2 marks   **4**
Program   2 marks

ii. Thread   1 mark   **6**
Difference b/w pre-emptive scheduling and time slicing   3 marks
Example.   2 marks

OR iii. Life cycle of thread   **6**

Q.6   Write short notes on any two:
i. Applet Architecture   **5**
ii. AWT   **5**
iii. Applet life cycle.   **5**

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