



**BRAINWARE UNIVERSITY**

**Term End Examination 2018 - 19**

**Programme – Bachelor of Technology in Computer Science & Engineering**

**Course Name – Object Oriented System**

**Course Code – BCSE402**

(Semester – 4)

**Time allotted: 3 Hours**

**Full Marks: 70**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

**Group –A**

(Multiple Choice Type Question)

10 x 1 = 10

1. *Choose the correct alternative from the following*
  - (i) Which of these can be overloaded?
 

a. Methods	b. Constructors
c. All of the mentioned	d. None of the mentioned
  - (ii) Which of the following events will cause a thread to die?
 

a. The method sleep( ) is called	b. Execution of the start( ) method ends
c. Execution of the run( ) method ends	d. Execution of the run() method is called
  - (iii) What is true about constructor?
 

a. It can contain return type	b. It can have any non-access modifiers
c. It can take any number of parameters	d. Constructor cannot throw an exception
  - (iv) Which of these operators is used to allocate memory for an object in java?
 

a. malloc	b. calloc
c. new	d. static
  - (v) Given a class named Book, which one of these is a valid constructor declaration for the class?
 

a. Book(Book b) { }	b. Book Book() { }
c. private final Book() { }	d. void Book() { }
  - (vi) Which of these is used to access a member of class before object of that class is created?
 

a. public	b. private
c. static	d. protected

- (vii) Which of the following keywords is used for throwing exception manually?
- |            |          |
|------------|----------|
| a. finally | b. try   |
| c. catch   | d. throw |
- (viii) Which of these standard collection classes implements a dynamic array?
- |              |                |
|--------------|----------------|
| a. ArrayList | b. LinkedList  |
| c. ArrayList | d. AbstractSet |
- (ix) Which one of the following is not true?
- |   |   |
|---|---|
| a. A class containing abstract methods is called an abstract class. | b. An abstract class cannot have non-abstract methods.                                |
| c. Abstract methods should be implemented in the derived class.     | d. A class must be qualified as 'abstract' class, if it contains one abstract method. |
- (x) Which of the following classes can catch all exceptions which cannot be caught?
- |                     |                    |
|---------------------|--------------------|
| a. RuntimeException | b. ParentException |
| c. Exception        | d. Error           |

### Group – B

(Short Answer Type Questions)

3 x 5 = 15

Answer any *three* from the following:

- |   |       |
|---|-------|
| 2. (a) What is Exception Handling?  | [2]   |
| (b) How many types of exception can occur in a java program?                  | [3]   |
| 3. (a) What is nested class? Give an example.                                 | [2+2] |
| (b) Is there any difference between nested classes and inner classes?         | [1]   |
| 4. (a) What is thread?  | [2]   |
| (b) Briefly describe the lifecycle of a thread.                               | [3]   |
| 5. (a) What is Exception Handling?  | [2]   |
| (b) What is the base class for Error and Exception?                           | [1]   |
| (c) What is the difference between Checked Exception and Unchecked Exception? | [2]   |
| 6. (a) What is the interface?   | [2]   |
| (b) What are the differences between abstract class and interface?            | [3]   |

**Group – C**

(Long Answer Type Questions)

3 x 15 = 45

Answer any *three* from the following

7. (a) What are the difference between method overloading and method overriding? [4]
- (b) Explain dynamic method dispatch with suitable example. [4]
- (c) What is generics? Write a java program to show the use of Generics. [2+5]
8. (a) What is multithreading? What is the difference between creation of user thread by extending thread class and implementing runnable interface? [2+2]
- (b) What is thread synchronization? Why is it needed? [4]
- (c) What is copy constructor? Explain with an example. [2+5]
9. (a) How does String class differ from StringBuffer? Explain suitable example. [3+2]
- (b) Explain dynamic method dispatch with suitable example. [4]
- (c) Write a program to access static variable and static method to explain static keyword properly. [6]
10. (a) Write a program to show the use of user defined exception. [6]
- (b) What is the difference between final, finally and finalize in java? [3]
- (c) What do you understand by garbage collection in java? [2]
- (d) What is the use of super keyword? Describe with suitable example. [4]
11. (a) What do you mean by collection framework in java? [2]
- (b) How 'LinkedList' class is used to store data? Explain with proper java code. [2+3]
- (c) What is JDBC? [2]
- (d) Discuss different types of JDBC driver available in JAVA. [6]

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