Code: AT68   **Subject: JAVA & WEB PROGRAMMING**

AMIETE – IT (Current Scheme)

Time: 3 Hours   **DECEMBER 2015**   **Max. Marks: 100**

PLEASE WRITE YOUR ROLL NO. AT THE SPACE PROVIDED ON EACH PAGE IMMEDIATELY AFTER RECEIVING THE QUESTION PAPER.

NOTE: There are 9 Questions in all.

- **Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.**
- **The answer sheet for the Q.1 will be collected by the invigilator after 45 minutes of the commencement of the examination.**
- **Out of the remaining EIGHT Questions, answer any FIVE Questions, selecting THREE questions from Part A and TWO questions from Part B. Each question carries 16 marks.**
- **Any required data not explicitly given, may be suitably assumed and stated**

Q.1   **Choose the correct or the best alternative in the following:**   **(2×10)**

a. Which class cannot be a subclass in java
   (A) Abstract class   **(B)** Parent class
   (C) Final class   **(D)** None of these

b. Suspended thread can be revived by using
   (A) start() method   **(B)** Suspend() method
   (C) resume() method   **(D)** yield() method

c. Which of the following is the correct way for writing Java Script array?
   (A) var salaries = new Array(1:39438, 2:39839 3:83729)
   (B) var salaries = new (Array1=39438, Array 2=39839 Array 3=83729)
   (C) var salaries = new Array(39438, 39839,83729)
   (D) var salaries = new Array() values = 39438, 39839 83729

d. Methods that have same name, but different parameter list and different definition known as
   (A) Overriding   **(B)** Constructor
   (C) Overloading   **(D)** None of these

e. String is the predefined
   (A) Method   **(B)** Class
   (C) Variable   **(D)** Object

f. Which class is base class for all exceptions?
   (A) String   **(B)** Error
   (C) Throwable   **(D)** RuntimeException

g. Which of the following statement is false in view of the applets in Java?
   (A) Applets do not need a main() method
   (B) Applets must be run under an applet viewer or a java-compatible browser
   (C) User I/O is not accomplished with Java's stream I/O classes. Instead, applets use the interface provided by the AWT
   (D) All are true

h. What is the default priority of a thread in Java?
   (A) 10   **(B)** 5
   (C) 3   **(D)** 1

i. Which of these class is used to create an object whose character sequence is mutable?
    (A) String()   **(B)** StringBuffer()
    (C) Both of the mentioned   **(D)** None of the mentioned

j. How to define the link should open in new page in HTML?
    (A) Click Here
    (B) Click Here
    (C) Click Here
    (D) Click Here

PART A
Answer any THREE Questions. Each question carries 16 marks.

Q.2 a. List and explain the three OOP principles.   **(4)**

b. Explain why the main function is declared as **"public static void main(String args[])"**?   **(4)**

c. List and explain any 8 Java Buzzwords.   **(8)**

Q.3 a. Explain the following keywords:
    (i) Garbage Collection   (ii) finalize() method   **(4)**

b. Explain the different uses of Super keyword.   **(4)**

c. Create an Interface called as Convert which has two functions convertDollors() and convertPounds(). Both function takes one argument and returns the amount into indian rupees. Write a class to implement the interface.   **(8)**

Q.4 a. Bring out the differences between throw & throws.   **(4)**

b. Explain the different ways of creating threads in java with syntax.   **(4)**

c. Write a Java class called as SavingsAccount with members as AccountNo and Balance. Provide depositAmount() & withdrawAmount() functions. If user tries to withdraw more money than his balance, then throw a User Defined Exception.   **(8)**

Q.5 a. Compare byte stream class and character stream class.   **(4)**

b. Write a program to illustrate BufferedInputStream and BufferedOutputStream.
                                                                                   (4+4)

c. Give the syntax of four StringBuffer constructors and give their application.
                                                                                     (4)

Q.6 a. Bring out the differences between AWT & Swings.   **(4)**

b. Explain any two layouts in AWT.   **(4)**

c. Write a Java Swing program to create a UI which has a textbox and two buttons. One button will convert the text in the textbox from Upper case to Lower case and other resets the textbox.   **(8)**

PART B
Answer any TWO Questions. Each question carries 16 marks.

Q.7 a. What are the name servers? Explain **(4)**

      b. Bring out the differences between HTML & XHTML. **(6)**

      c. List different concrete steps to Information Architecture. Explain how this can be helpful to reveal true objective of the site. **(6)**

Q.8 a. What is design? Explain the Elements of Design. **(6)**

      b. Explain Webpage Layout Grids. **(10)**

Q.9 a. Describe the structure of CGI program. **(8)**

      b. Explain different data types used in JavaScript. **(8)**