Code: AT68   Subject: JAVA & WEB PROGRAMMING

AMIETE – IT (NEW SCHEME)

Time: 3 Hours   **DECEMBER 2011**   Max. Marks: 100

NOTE: There are 9 Questions in all.
- **Please write your Roll No. at the space provided on each page immediately after receiving the Question Paper.**
- **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. Java runs on _____

   (A) Windows   **(B)** Unix/Linux
   (C) Mac   **(D)** All of the above

b. Which will legally declare, construct, and initialize an array?

   (A) int [] myList = {"1", "2", "3"};   **(B)** int [] myList = (5, 8, 2);
   (C) int myList [] [] = {4,9,7,0};   **(D)** int myList [] = {4, 3, 7};

c. If you want your conditional to depend on two conditions BOTH being true, what is the proper notation to put between the two Boolean statements?

   (A) &   **(B)** &&
   (C) | **(D)** ||.

d. Which of the following may be part of a class definition?

   (A) instance variables.   **(B)** instance methods
   (C) constructors   **(D)** all of the above

e. What is the name of the method used to start a thread execution?

   (A) init()   **(B)** start()
   (C) run()   **(D)** resume()

f. What is an Applet?

   (A) Type of computer
   (B) A Java program that is run through a web browser
   (C) An interactive website
   (D) A type of fruit

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g. What does AWT stands for?

  (A) Advanced Window Toolkit   **(B)** Abstract window Toolkit
  (C) Adjust Window Toolkit   **(D)** None of these

h. XHTML is almost same as which version of HTML?

  (A) HTML 1.0   **(B)** HTML 2.01
  (C) HTML 3.0   **(D)** HTML 4.01

i. What is JavaScript?

  (A) Another name for Java
  (B) A scripting language mostly for the web
  (C) When you use Java without compiling
  (D) None

j. Which HTML tag is used to define an internal style sheet?

  (A) <css>   **(B)** <script>
  (C) <style>   **(D)** <css script>

PART A
Attempt any THREE questions. Each question carries 16 marks.

Q.2 a. Discuss three OOPs principles giving suitable examples.   **(4)**

  b. List differences and similarities between JAVA and C++.   **(4)**

  c. List out the 8 basic data types used in java. Explain these with examples. **(8)**

Q.3 a. What is a constructor? How do we invoke a constructor in Java? Give a
     small Java program making use of different constructors. List special
     properties of a constructors.   **(6)**

  b. What is inheritance? How does it create new classes?   **(5)**

  c. What is an abstract class? Explain with example.   **(5)**

Q.4 a. What is an exception? Explain the exception handling mechanism with an
     example program.   **(8)**

  b. What is thread priority? How is it assigned? Give appropriate Java code. **(8)**

Q.5 a. Explain the construct of a simple "Hello world" applet. Also explain how to
     display an applet using html tags.   **(8)**

  b. Explain about String class, String constructor, and different String methods
     using a suitable Java program.   **(8)**

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Q.6 a. What is the Collections API? Discuss various interfaces defined in the collection framework. **(10)**

b. Write a brief note on AWT. **(3)**

c. Explain two key features of Swing. **(3)**

PART B
Attempt any TWO questions. Each question carries 16 marks.

Q.7 a. Discuss the hardware, software and protocols required to design a web. **(6)**

b. How to build a "Hello World" page with XHTML? **(5)**

c. Write the XHTML code to generate a Web Page with the following considerations.
(i) Background colour of the page should be "Cyan".
(ii) Text style should be Comic Sans MS and colour should be Red.
(iii) Picture used in the page is the file "activity.jpg"
(iv) Use the concept of nested lists for creating the list given in the web page with specified bullets.
(v) Pages linked to: • Indoor Activities as "in.html" • Outdoor Activities as "out.html" **(5)**

Q.8 a. How to define tables using HTML tags. Give a small example program. **(5)**

b. What is a frameset? What are the advantages of using HTML frames? How do you create frames? **(5)**

c. Explain Website Architectures. **(6)**

Q.9 a. What is CCS? Why do we require it? Show by an appropriate example how CCS is used. Discuss Internal and External style sheets. **(10)**

b. Write a Javascript program which accepts a text, then prints the count of number of characters and words in the text. **(6)**