

ADIT/BIT PROGRAMME

Term-End Examination

December, 2010

CST-301 : INTERNET TECHNOLOGIES

006996

Time : 2 hours

Maximum Marks : 50

Note : All questions from Section-A are compulsory. All objective type questions carry one mark each. Answer any two questions from Section-B.

SECTION-A

In question 1 to 10 if you feel that none of the choices offered is correct, then mark "0" as your answer.

1. Which of the following are the Boolean literals in Java ? 1
 - (a) false, 1
 - (b) 0, 1
 - (c) true, 0
 - (d) false, true

2. Which of the following is true for the conditional test part of a for loop ? 1
 - (a) cannot be empty
 - (b) must use the loop control variable
 - (c) can have comma separated conditions
 - (d) none of the above

3. A meaningful recursive method must have : 1
- (a) a for loop
 - (b) an if statement
 - (c) a println statement
 - (d) all of the above
4. A call to a final method : 1
- (a) can be resolved at compile time
 - (b) cannot be resolved at compile time
 - (c) must be resolved at compile time
 - (d) none of the above
5. Which of the following packages is implicitly imported by the Java compiler for all programs ? 1
- (a) java. io
 - (b) java. util
 - (c) java. lang
 - (d) java. math
6. Class A has two subclasses B and C, with a, b and c being defined as objects of type A, B and C respectively. Which of the following is false ? 1
- (a) b instance of A
 - (b) b instance of B
 - (c) b instance of C
 - (d) none of the above

7. Which of the following is not likely to be a problem when using native methods ? 1
- (a) Loss of portability
 - (b) Security
 - (c) Slower execution
 - (d) None of the above
8. In a windows machine, in which folder must you store a package called pkg 1. pkg 2. pkg 3 ? 1
- (a) pkg 1 (b) pkg 3
 - (c) does not matter (d) pkg1\pkg 2\pkg3
9. Which of the following is true ? 1
- (a) All inner classes are nested classes
 - (b) All nested classes are inner classes
 - (c) An inner class is static
 - (d) Both (a) and (c)
10. Which of the following is true for an applet ? 1
- (a) It does not have a main () method
 - (b) It cannot use native methods
 - (c) It can be run in a browser
 - (d) All of the above

11. Write HTML code to display flight information. 10
- (a) The user enters the flight number and origin, which are validated for correctness
 - (b) The scheduled and expected time of arrival are displayed.
 - (c) The user can go to a page that gives a table showing all flights to and from that city. Make and state any needed assumptions.

SECTION - B

Answer *any two* questions from this section.

12. (a) The card game of bridge is played by 4 9
players. There are 4 suits in cards - spades, hearts, diamonds and clubs, and each suit has 13 cards. In ascending order of value, they are 2, 3, 4, 5, 6, 7, 8, 9, J, Q, K, A. A game may have one of the suits as a trump. At each turn, a player plays a card. This is known as a trick, and the following rules are used to determine the winner of a trick.
- (i) If all players play the suit of the first player, the one who plays the highest card wins.
 - (ii) A player must play a card of the suit of the first player, if he has one. Otherwise he can play any card which may or may not be a trump. In this case the player who plays the highest card of the trump suit wins.

- (iii) If no player plays a card of the first player's suit or a trump, the first player wins.

Write a Java program to input 4 cards and print the winner.

- (b) Write HTML code to show a website of an author. It should have pages that give a biographical sketch, complete list of books written and year of publication, and some chapters from a forthcoming book. Assume your content. 6

13. Distinguish between the following with appropriate examples : 5x3=15

- (a) equals () and compare To () methods of the string class.
- (b) notify () and notify All ()
- (c) constructors and finalize ()
- (d) casts and automatic type conversion
- (e) checked and unchecked exceptions

14. (a) Write HTML code to show the webpage of a TV channel. This should have a numbered list of all programs every day, category wise. The news programs should be in blue while soaps should be in red. The others should be in black. Assume your content. 5

- (b) Write an applet that displays a blue or red circle depending on whether 1 or 2 is typed on the keyboard. Pressing any other key should erase the circle. 5
- (c) Write a Java program to input the final score of a team in a 20-20 cricket match, and also the score and number of overs and balls bowled in the second innings. Now print out the asking run rate for over that the second team needs to win from 6 ball overs. For example, if the first team has made 146 and the second team has 80 runs in 12 overs and 3 balls the asking rate is 8.93. 5
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