

BACHELOR IN INFORMATION TECHNOLOGY

Term-End Examination

December, 2010

**CSI-03 : SOFTWARE CONSTRUCTS
AND TOOLS**

Time : 2 hours

Maximum Marks : 60

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

SECTION - A

1. The minimum number of worksheets in an Excel workbook is : 1
 - (a) 3
 - (b) 2
 - (c) 0
 - (d) 1

2. Dates in an Excel sheet are stored as numbers starting from : 1
 - (a) 1st January, 1 A.D.
 - (b) 1st January, 2001.
 - (c) 1st January, 1900.
 - (d) 1st January, 4000 B.C.

3. In an Excel workbook, some cells in a worksheet "first" access some cells in another sheet "second". If we delete the worksheet "second", what would appear in those cells of "first" ? **1**
- (a) blank (b) error
(c) # NAME (d) # REF
4. The cell IV46 in an Excel sheet contains the number 27936. What happens if you try to insert a column before IV? **1**
- (a) contents of IV 46 are lost.
(b) contents now appear in column IW.
(c) contents of IV 46 are copied to another sheet in the workbook.
(d) Excel gives an error message.
5. Which of the following is NOT a Java separator ? **1**
- (a) [] (b) ;
(c) , (d) ?
6. Which of the following is *not* available as a built in function in Excel ? **1**
- (a) Mean (Arithmetic)
(b) Maximum
(c) Mode
(d) Sum

7. On deleting the contents of an Excel worksheet cell that has been highlighted in yellow, the highlight colour becomes : 1
- (a) Remains yellow
 - (b) White
 - (c) Black
 - (d) Green
8. In a two dimensional array in Java where the first dimension has size 5, each second dimension array 1
- (a) must have the same size
 - (b) can have a different size
 - (c) must have size ≥ 5
 - (d) must have size ≤ 5
9. In a try block in Java if both a superclass and subclass exception are being caught, the subclass exception must be placed lexically : 1
- (a) before the superclass exception.
 - (b) after the superclass exception.
 - (c) can be before or after the superclass exception.
 - (d) superclass and subclass exceptions cannot both be caught in the same try block.

10. In a Java program, colours is an object of type colours, and surname is an object of type string. In a method invocation, which is true : 1
- (a) colours is passed by reference
 - (b) colours is passed by value
 - (c) surname is passed by value
 - (d) an int variable is passed by reference
11. (a) Write a Java program to print out all possible. Permutations of a string consisting of 4 letters. Use recursion. 10
- (b) In a software project, we wish to log all issues that arise. For each issue we must record the issue identification number, date, description, severity and date of resolution. There is a norm that any high severity issue must be resolved in 3 days. Median severity in 7 days and low severity in 15 days. Design an Excel sheet to highlight in red issues not solved in time and in green issues that are solved in time. Also find the average resolution time for each issue type. 10

SECTION - B

Answer *any two* questions from this section.

12. Distinguish between the following : 15
- (a) double and Double
 - (b) I and II operators
 - (c) while and do-while loops
 - (d) break and labelled break statements
 - (e) catch and finally
13. (a) Describe the various formatting options available in Excel to align the contents of cells. For each explain how you would actually set that alignment. 9
- (b) Explain briefly : 6
- (i) this keyword
 - (ii) finalize method
 - (iii) % operator
14. (a) Write a Java program to input a current time in 24 - hour format, such as 08:25:43, and also a time interval such as 14:04:19 in hours, minutes and seconds. Now output the time after this interval has passed, such as 22:30:02 in this example. Ignore date changes. 8

- (b) (i) In an Excel sheet, cell C 23 = C 21 + C 22. Cell C 21 shows 80 while C 22 shows 9, but C 23 shows 90. How can this be possible? 2
- (ii) In Excel how can you make negative numbers appear without a sign, but in red? 2
- (iii) The cell C 22 in an Excel sheet contains the date 25th Dec, 2009. What formula would you put in cell D 22 so that it displays the corresponding day of the week? 3
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