



UNIVERSITY OF COLOMBO, SRI LANKA



UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)

Academic Year 2007/2008 – 2nd Year Examination – Semester 4

IT4303: Rapid Application Development
Part 1: Multiple Choice Question Paper

7th September, 2008
(ONE HOUR)

Important Instructions :

- The duration of the paper is **1 (one) hour**.
- The medium of instruction and questions is English.
- The paper has **22 questions** and **7 pages**.
- All questions are of the MCQ (Multiple Choice Questions) type.
- All questions should be answered.
- Each question will have 5 (five) choices with **one or more** correct answers.
- All questions will carry equal marks.
- There will be a penalty for incorrect responses to discourage guessing.
- The mark given for a question will vary from 0 to +1 (*All the correct choices are marked & no incorrect choices are marked*).
- Answers should be marked on the special answer sheet provided.
- Note that questions appear on both sides of the paper.
If a page is not printed, please inform the supervisor immediately.
- Mark the correct choices on the question paper first and then transfer them to the given answer sheet which will be machine marked. **Please completely read and follow the instructions given on the other side of the answer sheet before you shade your correct choices.**

1) Rapid Application Development

- (a) always achieves the highest possible level of customer satisfaction.
- (b) allows usable systems to be built within a short period of time.
- (c) addresses some problems in traditional development.
- (d) always develops applications with lowest development costs.
- (e) always develops applications with fewest possible errors.

2) Which of the following is a (are) problem(s) associated with traditional software development methods?

- (a) High turnover of employees
- (b) Schedule overrun
- (c) Cost overrun
- (d) Useful customer feedback
- (e) Well defined requirements at the beginning

3) Consider the following statements.

- (i) Batch processing systems benefit little from prototyping.
- (ii) Prototyping is not effective in analysis and design of transaction processing systems.
- (iii) Joint Application Development (JAD) methodology aims at involvement of the client in the design and development of an application.

Which of the above statements is a/are correct?

- | | | |
|-----------------------|------------------------|-------------------------|
| (a) (i) only | (b) (i) and (iii) only | (c) (ii) and (iii) only |
| (d) (i) and (ii) only | (e) ALL | |

4) Which of the following related to managing software projects would **NOT** affect the productivity of projects badly?

- (a) After realizing that a project is behind schedule, a project manager decides to add more developers to the project.
- (b) In the middle of a software project, a project manager decides not to switch to the new version of the software tool that they use currently.
- (c) In a six-month project, it took three months to meet first two-month milestone and hence the project manager plans to catch up later.
- (d) A project manager accepts funding for a project to be completed in six months without having a sound reason to think that his team could complete it in six months.
- (e) In the middle of the software development process, a client requests a change in the software system due to a change in the business environment.

- 5) For which of the following software projects would the Rapid Application Development model be applicable?

- (a) Air traffic control systems
- (b) A web based Information system for the Ministry of Health including all hospitals and institutes under it
- (c) An inventory control system which must interoperate with the existing Accounting system in the organization
- (d) Control system for a chemical plant
- (e) A stand alone student registration system

- 6) Identify the correct statement(s) related to Function – Point Estimation in software development.

- (a) Function points are a measure of size of a project.
- (b) Function points are determined using requirements specification.
- (c) Number of function points in a program is based on the number of inputs and outputs.
- (d) Number of function points in a program is based on the complexity of inputs and outputs.
- (e) Function points depend on the project scheduling technique.

- 7) Consider the following characteristics of a team.

- (i) Competency team members
- (ii) Interdependence among team members
- (iii) Larger team size
- (iv) Sense of autonomy
- (v) Team members with individual goals

Which of the above are characteristics of a high performance team?

- | | |
|------------------------------|------------------------------|
| (a) (i), (ii) and (iii) only | (b) (iii) and (v) only |
| (c) (i), (ii) and (iv) only | (d) (i), (iii) and (iv) only |
| (e) ALL | |

- 8) Which of the following is a/are characteristic(s) of a good team leader?

- (a) Be fair and impartial towards team members but favour the skilled persons
- (b) Be open to new ideas and information from team members
- (c) Compromise the team's objective with political issues when necessary only
- (d) Exhibit personal commitment to the team's goal
- (e) To get the maximum, heap more schedule pressure on to the team members

- 9) Daily build and smoke test practice in software development

- (a) increases integration risks.
- (b) can be used in projects of any size
- (c) build and test the product daily.
- (d) need not to be an exhaustive testing.
- (e) follows a code review.

10) Which of the following is a /are benefit(s) of software reuse?

- | | |
|-----------------------------|----------------------------------|
| (a) reduced cost | (b) effective use of specialists |
| (c) accelerated development | (d) increased tool support |
| (e) reduced process risk | |

11) Identify the correct statement(s) in relation to the best practice known as *miniature milestones* in software development,

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|--|
| (a) well-suited for use with the daily build and smoke test |
| (b) speedup the software development process |
| (c) milestones are binary |
| (d) does not require a detailed schedule |
| (e) can be used only in the later stages of software development |

12) Excessive schedule pressure

- | |
|---|
| (a) affects the quality of development of the software product. |
| (b) drops the motivation of developers. |
| (c) reduces creativity of developers. |
| (d) causes less voluntary turn over. |
| (e) narrows down the gap between developers and managers. |

13) Consider the following class in the NetBeans source editor.

```
public class test {  
    private String country;  
    public static void main(String[] args) {  
        String s = "Adam was here" ;  
        int x = 123456789;  
        test test1 = new test();  
        test1.country = "Brazil";  
        System.out.println("End");  
    }  
}
```

If a break point is set at the line `test1.country = "Brazil";` and a debugging session is initiated, what is the value of the variable `country` in the local variables window?

- | | | |
|------------|------------------------|----------|
| (a) Brazil | (b) null | (c) test |
| (d) End | (e) no value displayed | |

14) Select the correct statement(s) in relation to NetBeans Integrated Development Environment (IDE).

- | |
|---|
| (a) NetBeans is an open source software. |
| (b) One needs JDK installed on the computer to run NetBeans . |
| (c) Participation in NetBeans project is open to any one. |
| (d) Source code is available to any one to reuse under the terms of CDDL and GNU license. |
| (e) NetBeans platform and IDE are free for educational purposes only. |

15) Which of the following is an /are open source RAD tool(s)?

- | | | |
|---------------------|-------------|--------------|
| (a) JBuilder | (b) Eclipse | (c) NetBeans |
| (d) VisualBasic.net | (e) C# | |

16) Consider the following statements.

- (i) .NET framework is a software technology that is available with Windows and Linux.
 - (ii) CLR(Common Language Runtime) allows integration of code written in different .NET languages.
 - (iii) Eclipse is open source software.
 - (iv) NetBeans runs on windows only.
- Which of the above statements is (are) correct?

- | | | |
|-------------------------|------------------------------|------------------------|
| (a) (ii) and (iii) only | (b) (i) and (ii) only | (c) (ii) and (iv) only |
| (d) ALL | (e) (i), (ii) and (iii) only | |

17) Which of the following UML diagrams cannot be created using NetBeans?

- | | |
|---------------------------|----------------------|
| (a) Usecase diagram | (b) Class diagram |
| (c) Deployment diagram | (d) Sequence diagram |
| (e) Collaboration diagram | |

18) Select the correct short cut keys to Build a main project in NetBeans IDE and run it respectively.

- | | | |
|-------------|-------------|------------|
| (i) F5, F6 | (b) F4, F5 | (c) F6, F7 |
| (d) F11, F6 | (e) F6, F11 | |

19) Consider the following statements related to testing applications in NetBeans.

- (i) NetBeans provides support for JUnit testing via Ant build files
 - (ii) Code is compiled in the background while typing.
 - (iii) Test results cannot be viewed directly within the NetBeans IDE.
- Which of the above statements is (are) correct?

- | | | |
|-------------|------------------------|------------------------|
| a) (i) only | (iv) (i) and (ii) only | c) (ii) and (iii) only |
| d) ALL | e) None of the above | |

20) Consider the incomplete statement given below.

Automatic code completion is the NetBeans source editor's ability to supply the name of a partially entered without having to finish typing in all the characters of the name.
NetBeans IDE supports C/C++ applications.

Fill in the blank with suitable word(s).

- | | | |
|-------------|------------|---------------|
| (a) Package | (b) class | (c) interface |
| (d) method | (e) member | |

21) Which of the following is(are) supported by NetBeans IDE?

- | | |
|---------------------------|---------------------|
| (a) Version control | (b) GUI building |
| (c) Testing and Debugging | (d) Code generation |
| (e) Scheduling | |

22) Consider the following actions carried out in sequential order using NetBeans IDE.

- In the Projects list, right-click on the <default package> node and choose New JFrame Form from the pop-up menu.
- Enter *second* as the Name.
- Click the Finish button.

Which of the following is (are) the possible outcome(s)?

- | |
|---|
| (a) A panel will be added to the previous existing form. |
| (b) It creates a new form. |
| (c) It opens the form named <i>first</i> in the GUI builder. |
| (d) It opens a palette containing list of available components. |
| (e) It creates a class named <i>second</i> in the application. |
