



UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY  
*Academic Year 2009/2010 – 2<sup>nd</sup> Year Examination – Semester 4*

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

**15<sup>th</sup> August, 2010**  
**(ONE HOUR)**

**Important Instructions :**

- The duration of the paper is **1 (one) hour**.
- The medium of instruction and questions is English.
- The paper has **20** questions and **5 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) There are good reasons and bad reasons to use RAD. What is (are) a **good** reason(s) to use Rapid Application Development?

- (a) RAD avoids cost overruns.
- (b) RAD helps to reduce development time since the development team is disciplined in cost management.
- (c) RAD prevents runaway schedules.
- (d) Beneficial for clients since a design is given in a short period of time so that he can check whether it is affordable and acceptable.
- (e) Quality of the software is not important for the client.

- 2) Which of the following sentence(s) is (are) **true** about Sensible Rapid Application Development?

- (a) Development time is less than average, costs less than average and product quality is better than average.
- (b) Development time is less than average, costs are little more than average and quality is little less than average.
- (c) Possibly fastest time schedules, costs are more than average and quality is better than average.
- (d) Software development with the fastest possible schedules with less priority on economy and quality.
- (e) Software development with high concerns on quality with the fastest possible schedules and less priority on economy.

- 3) Consider the following statements.

- (i) Smoke tests help to capture all the defects in a system.
- (ii) Daily builds should pass smoke test to verify that the build is good.
- (iii) When the deadlines are reaching and the schedule pressure is increasing, daily builds have to be avoided for faster development.

Which of the above statements is/are **correct**?

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

- 4) Which of the following related to daily build and smoke tests are **not** true?

- (a) Smoke test need not be done daily.
- (b) Any kind of project can use daily builds.
- (c) Developers should add all the source codes everyday and the daily build should be successful.
- (d) Daily builds ensure a working system everyday and hence it produces a morale boost during project recovery.
- (e) A member from quality assurance team is required to be in charge of the smoke test.

- 5) For which of the following software projects would the Rapid Application Development model be **not** applicable?

- (a) Computer vision based system to detect cancer cells of an MRI scan.
- (b) A camera driver software to be published in the internet.
- (c) Stock management system for an electronic equipment seller.
- (d) Online channelling system for a private hospital.
- (e) A 3D modelling software application (CAD).

6) Identify the **correct** statement(s) related to SCRUM.

- (a) Any change of requirements is allowed and considered in a sprint providing the full flexibility of agile projects.
- (b) A burndown chart shows the remaining work against the calendar.
- (c) Scrum is to distribute the implementation workload among team members.
- (d) Scrum helps for working in a decentralized manner.
- (e) Product backlog has the dynamic requirement list and the product owner's objectives.

7) Which of the following is/are **true** statements about teams?

- (a) Chief programmer teams are centralized around one key person who can be more productive than others at times.
- (b) Tactical execution teams are good for engineering type projects since bureaucratic restrictions are eliminated.
- (c) Tech lead of a business team is not an active technical contributor.
- (d) SWAT stands for "Special Weapons and Tactics" with regard to types of software teams.
- (e) Theater teams have a strong direction among members of the team.

8) Consider the following characteristics of a team.

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

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

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

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

- (i) accelerated development
- (ii) more specific
- (iii) cost reduction
- (iv) reduce process risk
- (v) increased tool support

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

10) With **Timeboxing**,

- (a) the software is always accepted.
- (b) success depends on being able to meet tight schedules by limiting the product's scope.
- (c) every project can complete within the timebox time frame.
- (d) one can be sure that end-users and management have agreed to a core feature.
- (e) one can cut features to make the timebox deadline.

11) Which of the following statements is/are **true** in relation to FOSS Integrated Development Environments (IDE) s?

- (a) They are freely available.
- (b) All FOSS IDEs are free for commercial use.
- (c) All FOSS IDEs are free for non commercial use only.
- (d) Participation in FOSS IDEs project is open to anyone.
- (e) Source code is available to anyone to reuse without any license.

12) Select the **incorrect** statement/s about IDEs.

- (a) JCreator is a FOSS Java IDE.
- (b) Eclipse is freely available to download.
- (c) NetBeans is the one and only Java IDE that is freely available.
- (d) NetBeans can be used as IDE for languages other than Java.
- (e) IntelliJIDEA cannot used freely for commercial development.

13) **Complete** NetBeans installation supports

- (a) JUnit.
- (b) J2EE.
- (c) XML.
- (d) UML.
- (e) PHP.

14) All Integrated Development Environments do **not** facilitate

- (a) group chat.
- (b) version control.
- (c) refactoring.
- (d) UI design.
- (e) run time analysis.

15) Which of the following statements is/are **true** in relation to break points in debugging?

- (a) A breakpoint is a flag in the source code that tells the debugger to stop execution of the program.
- (b) In variable breakpoint, one can stop execution of the program whenever a variable in a specific class is accessed.
- (c) When a program stops on a breakpoint, one can perform actions like examining the value of variables and single-stepping through the program.
- (d) In method breakpoint program, execution stops every time a class is executed.
- (e) Line breakpoints cannot be set in NetBeans.

16) When a programmer cleans and builds the main project using **ant**,

- (a) all class files will erase and restore at destination folder.
- (b) all source files will erase and restore to source folder.
- (c) all source files will copy to destination folder.
- (d) all source files and class files will erase and restore at destination folders.
- (e) destination folder will execute without restoring.

17) Refactoring **allows** programmer to

- (a) Merge.
- (b) Rename.
- (c) Rebuild.
- (d) Introduce Variable.
- (e) Move.

18) Which of the following GUI components is/are **used** in building the following form in NetBeans?



- (a) JSplitPane
- (b) JScrollBar
- (c) JLabel
- (d) JRadioButton
- (e) JLabel

19) Ant build tool allows a programmer to ..... without doing it manually.

- (a) rebuild
- (b) rename
- (c) refactor
- (d) test
- (e) deploy

20) Which of the following statements is/are **false** in relation to the RAD project using JUnit?

- (a) Writing more tests will make project more productive and not less productive.
- (b) Should be done as soon as possible at the code unit level.
- (c) JUnit makes unit testing complex.
- (d) JUnit is designed for automated unit testing.
- (e) JUnit is mostly used by developers and not for QA engineers.

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