UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)
Academic Year 2012 /2013 – 2nd Year Examination – Semester 4

IT4304: Rapid Software Development
PART I – Multiple Choice Question Paper
21ˢᵗ July 2013
(ONE HOUR)

Important Instructions :

- The duration of the paper is **1(one) hour**.

- The medium of instruction and questions is English.

- The paper has **30 questions** and **8 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 (*All the incorrect choices are marked & no correct choices are marked*) 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) Which of the following statement(s) is/are true on the meaning of the Rapid Application Development (RAD)?

(a) RAD means developing software iteratively.
(b) RAD means developing software with minimal planning in favor of rapid prototyping.
(c) RAD means software development in a shorter schedule.
(d) RAD means developing critical software
(e) RAD means developing business software

2) Which of the following is/are the key reason(s) for failures in teams?

(a) No cooperation
(b) No documented process
(c) No documented requirements
(d) No trust
(e) Personal Problems

3) The complexity of which of the following item(s) is/are considered in deciding the number of function points in FP analysis?

(a) Per head cost
(b) Calendar months
(c) Internal files
(d) Interface files
(e) Inspection results

4) Which of the following is/are not included in the agile manifesto?

(a) Individuals and interactions over processes and tools
(b) Working software over comprehensive documentation
(c) Contract negotiation over customer collaboration
(d) Responding to change over following a plan
(e) Developer work style over manager schedule

5) What is the 80-20 rule in rapid software development (RSD)?

(a) 80 percent of software are developed using RSD while 20 percent of software do not use RSD.
(b) 80 % software systems do not meet client requirements and only 20 percent do.
(c) In most of the cases, software systems meet only 80 percent of client requirements while remaining 20 % do not satisfied.
(d) 80 percent of the faults during RSD are caused by 20 percent of actions.
(e) In most of the cases, software systems can meet 80 percent of client requirements in 20 percent of the time for the total system.

6) What is meant by the term "Time-box" in Rapid Software Development?

(a) A box in the time line where the box contains the tasks to do
(b) Iteration or a part of an iteration with defined tasks of analysis, design, development and testing with defined start and end times
(c) Iteration in the iterative and incremental software development
(d) Start time and end time of an activity in the iterations
(e) A box in time created by combining the related activities of analysis, design, development and testing

7) Which of the following is a/are considered as issues in traditional software development methodologies?

(a) Cost overrun
(b) Schedule overrun
(c) Employment turnover
(d) No agreement with client
(e) Incorrect progress measurements

8) Which of the following is/are correct characteristic(s) of the prototyping method?

(a) Horizontal prototype is a prototype that models many features with less detail.
(b) Global prototype is a prototype of the entire system.
(c) Vertical prototype is a prototype that models few features with much detail.
(d) Local prototype is a prototype of a single usability-critical system component.
(e) Operational prototype is a prototype used to validate system specifications.

9) Which of the following statement(s) correctly explain the "Silver Bullet Syndrome"?

(a) It is a sickness that affects software team members when working till late hours.
(b) It is relying too much of the advertised benefits of the previously unused tools and technologies.
(c) It is a misunderstanding that one or two highly skilled developers can finish the project successfully if everything goes wrong.
(d) It is thinking that the computer aided tools will do everything in the project.
(e) It is a misunderstanding that adding experienced people to the late projects will make it on schedule again.

10) What is meant by "Risk–driven iterative development"?

(a) Choosing the most risky and difficult elements for the last iteration
(b) Choosing the most risky and difficult elements for the early iterations
(c) Developers are free from the risks in the iterative and incremental development process.
(d) Choosing what clients see as the most important element for the first iteration.
(e) Iterative and incremental development incurs a higher risk.

11) Which of the following strategy (ies) is/are followed when selecting members for a team according to the analysis by Barry Boehm?

(a) Top Talent	(b) Lowest Salary	(c) Team Balance
(d) Job Matching	(e) Relations/Friends Together	

12) Which of the following software development methodology (ies) fall(s) in to the category of "iterative and incremental development"?

(a) EVO (Evolutionary Project Management)
(b) RUP (Rational Unified Process)
(c) MSFP (Microsoft Solutions Framework process)
(d) DSDM (Dynamic Systems Development Method)
(e) XP (Extreme Programming)

13) If the estimated effort is 64 man months to build a project, then, what is the schedule in months and number of team members required respectively?

(a) 16 and 5	(b) 20 and 3	(c) 12 and 5
(d) 64 and 1	(e) No enough data for the calculation	

14) Which of the following approaches can be used to estimate the size of the project in project schedule estimation?

(a) Function point (FP) analysis
(b) Adjusted FP analysis
(c) Test case analysis
(d) Using previous knowledge
(e) Using database table structure

15) Which of the following statement(s) correctly describe(s) "Iterative and Incremental Development"?

> (a) The system grows incrementally with new features, iteration by iteration.
> (b) It is building software in which the overall lifecycle is composed of several iterations in series.
> (c) It is a traditional software development methodology.
> (d) Only the first iteration contains activities such as requirement analysis and design.
> (e) Iterations are started and ended based on the work completed by the developers.

16) How is the 'influence multiplier' in function point (FP) analysis computed?

> (a) Adj. FP Total = FP Total * Influence Multiplier
> (b) Adj. FP Total = FP Total / Influence Multiplier
> (c) A random value between 0 and FP Total
> (d) Based on the influence by all factors have on the project
> (e) An even value between 0 and FP Total selected randomly

17) What does the term "premature convergence" mean in the context of software development?

> (a) Software behaves as matured although they are just deployed on client site
> (b) Creating a shippable version of a software product before the product is stable
> (c) Software developed by engineers with ages below 20
> (d) Delivering software product before the deadline to the client
> (e) Connecting untested software modules together and doing overall testing

18) Which of the following is a/are cause(s) for 'risks associated with technology'?

> (a) Technology is correctly used but it has failed to accomplish the requirements
> (b) Usage of poorly documented API, Programming Language or IDE
> (c) The first time of using a new technology in test system
> (d) Project managers having no experience in new technology
> (e) Dissatisfied developers

19) Which of the following causes create a vicious cycle in software project scheduling?

(a) Analysis -> Design -> Development -> Testing -> Bugs Reported -> Analysis
(b) Incorrect schedule -> Incorrect Implementation -> More Bugs -> More Schedule Slips -> Incorrect Schedule
(c) More Pressure -> More Stress -> More Mistakes -> More Schedule Slips -> More Pressure
(d) More Pressure -> More Scheduled Work -> More Bugs -> More Bug Fixing Time -> No Time For Scheduled Work -> More Pressure
(e) More Pressure -> More Scheduled Work -> More Productivity -> More Projects To Do -> More Pressure

20) Which of the following team type(s) is/are focused on solving a specific problem and more focused on problem resolution with creativity and tactical execution?

(a) Business Team   (b) Skunk works Team   (c) Feature Team
(d) Search and Rescue Team   (e) Theater Team

21) Which of the following statement(s) is/are considered as (a) root cause(s) for overly optimistic schedules?

(a) Managers believe that developers will work harder for ambitious schedule.
(b) Developers are having no sense of the dead lines of the project.
(c) New features are added to the project, but no change in the schedule.
(d) Project managers do not consider the quality of the project.
(e) Clients are willing to accept even a buggy solution if delivered fast.

22) Which of the following is a/are good condition(s) to use iterative and incremental development?

(a) Requirements are expected to evolve overtime.
(b) Basic functionality is needed to the market early.
(c) Small projects with little time span
(d) Projects that require excessive client testing
(e) Projects where requirements are unknown

23) Which of the following statement(s) is/are true about customer involvement in the project?

(a) User involvement is the number one reason for project success.
(b) Easy to access end users is not a critical factor in RAD.
(c) Good reaction with the customers improves the development speed.
(d) Good reaction with the customers slows down the development speed.
(e) Customer is only involved in analysis and testing phases.

24) Which of the following feature(s) is/are typically provided by a content management system (CMS)?

(a) Bug tracing   (b) Content creation   (c) Managing access rights
(d) Search engine optimization (e) Content archival

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

(a) No risk of failure
(b) Easy to prototype
(c) Accelerated development
(d) Increased tool support
(e) Reduced process risk

26) Which of the following is/are the most essential component(s) available in an Integrated Development Environment (IDE) for software design and development using Rapid Application Development (RAD) methodology?

(a) An interface generator
(b) A database programming language
(c) A report generator
(d) An application memory profiler
(e) An automated comment generator

27) Which of the following is/are considered as the 4-dimensions of software project development according to Barry Boehm?

(a) Developers – Development Methodology – Deliverables – Testing
(b) People – Process – Product – Technology
(c) Managers – Project Schedule – Deliverables – Customers
(d) Analysis – Design – Development – Testing
(e) Specification – Class Diagrams – Object Diagrams – Package Diagrams

28) Which of the following is a/are constraint(s) of Rapid Application Development?

(a) Clients should accept informal deliverables
(b) Meeting notes are available rather than formal requirement specifications
(c) No design documents
(d) Clients do not accept releases without documentation
(e) Lesser planning involved in the project

29) One cause for overly optimistic schedule is 'under-estimating the project'. Why do team members under-estimate the project?

(a) Sales representatives want to submit a winning bid
(b) Developers want to have quick funding for the project
(c) Developers do not mind the quality of their work
(d) Managers do not mind the quality of development
(e) Developers like to work under pressure

30) Which of the following is/are not considered as people related mistakes/issues in rapid software development?

(a) Lazy Management
(b) Developer productivity
(c) Lack of Computer Aided Software Engineering (CASE) tools
(d) Group dynamics
(e) Team Work

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