UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY
(EXTERNAL)
Academic Year 2014/2015 – 2nd Year Examination – Semester 4

IT4305: Rapid Software Development
Multiple Choice Question Paper

02nd August, 2015
(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 **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 −1 (*All the incorrect choices are marked & no correct choices 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. How is Agile Planning different from the Traditional Approach to Planning?

> (a) Agile Planning is iterative.
> (b) Traditional Approach to planning is iterative.
> (c) Agile teams make and adjust plans frequently.
> (d) Planning is done only once in an Agile project.
> (e) Agile Planning places emphasis more on the project plan compared with Traditional Approach.

2. The Agile Manifesto has 4 statements of values. Match the agile value on the left (P-S) with (i-iv) on the right hand side.

P) Customer collaboration over	i) Processes and tools
Q) Responding to change over	ii) Following a plan
R) Individuals and interactions over	iii) Contract negotiation
S) Working software over	iv) Comprehensive documentation

> (a) P – iii, Q – iv, R – ii, S – i   (b) P – iii, Q – ii, R – i, S – iv
> (c) P – iv, Q – ii, R – i, S – iii   (d) P – ii, Q – iii, R – iv, S – i
> (e) P – i, Q – iv, R- iii, S - ii

3. Which activity/ies below represent/s responsibilities that are consistent with agile development's Whole Team approach?

> (a) Testers are responsible for developing unit tests which they pass on to the developers for testing.
> (b) Business representatives are expected to select the tools the team will use during the project.
> (c) Testers are expected to work with customer representatives to create acceptance tests.
> (d) The whole team, not just testers, has responsibility for the quality of the product.
> (e) Developers are expected to test non-functional requirements (performance, usability, security, etc...

4. Which of the following is best at showing the team's progress against estimates?

> (a) Automation Logs   (b) Big Visible Charts
> (c) Burndown Charts   (d) Defect Tracking Tools
> (e) The agile task board showing user story and task progress

5. Which of the following is true about determining the length of a sprint?

> (a) Sprint should always last at least 20 days.
> (b) The Scrum master determines the Sprint length.
> (c) The team determines Sprint length by dividing the total number of user stories by the average velocity of the team.
> (d) The team determines Sprint length by multiplying the total number of user stories by the average velocity of the team.
> (e) The Scrum team determines the length of the sprint, taking the size and complexity of the project into consideration.

6. Who is responsible for ensuring that good economic decisions are continuously being made at the release, sprint and product backlog levels of the product development?

(a) Business Analyst
(b) Lead Developer
(c) Product Owner
(d) Project Manager
(e) Scrum master

7. Time-boxing is a significant principle of Scrum. Which of the following is true about a meeting having a time-box?

(a) The meeting must end by a given time.
(b) The meeting must start by a given time.
(c) The meeting must be conducted at the same time every day.
(d) The meeting must be conducted at the same time every week.
(e) The meeting can take no more than a specified maximum amount of time.

8. Which of the following best describes the attribute(s) of a Scrum Development Team?

(a) Members of Development Teams are exchanged frequently with other projects to promote cross-functionality.
(b) The development team has defined job roles according to specialties of each member.
(c) The Development Team provides input for the Sprint Planning Meeting with respect to the projected capacity during the upcoming Sprint.
(d) The Development Team grooms (fine tunes) the Product Backlog.
(e) The Development Team inspects and adapts the Product and Process.

9. One significant feature of a scrum development team is that it is cross functional. What are the properties of a cross-functional Development Team?

(a) The team is competent enough to complete development of the project and is able to complete the project according to the planning.
(b) The team consists of people with several skills, needed to take collective ownership for the development of the product.
(c) All team members will work on a specific task of the sprint backlog to deliver the correct product increment.
(d) The team comprises of members dedicated to specialized areas such as automation testing or business analysis, to deliver the product within the timeframe.
(e) The development team can bring in members from other teams when needed.

10. Which of the following are the main roles defined in Scrum?
   i.   The Scrum testing team
   ii.   The Scrum owner
   iii. The Scrum manager
   iv.   The Scrum master
   v.   The product owner

(a) i, iv, and v
(b) ii , iv and v
(c) i, ii, iv, and v
(d) ii, iii, iv, and v
(e) All of the above

11. Which of the following meetings are defined in Scrum?

    i.   Sprint Planning Meeting
    ii.   Sprint Retrospective Meeting
    iii.   Sprint Review Meeting
    iv.   Mid-Sprint Status Review Meeting
    v.   Daily Scrum meeting

        (a) i, iii, v
        (b) i, ii, iii, and iv
        (c) i, ii, iii , and v
        (d) i, iii, iv, and v
        (e) All of the above

12. Which of the following are responsibilities of a product owner, in sprint Planning?

    (a) Observe the planning activity
    (b) Share the initial sprint goal
    (c) Present the prioritized product backlog
    (d) Answer questions
    (e) Determine what can be delivered after the sprint

13. What does the Development Team do during the first Sprint?

    (a) Finalize the requirements of the project
    (b) Develop a plan for the rest of the project
    (c) Finalize the complete architecture and infrastructure
    (d) Develop and deliver at least one piece of functionality
    (e) Deliver an increment of potentially deliverable functionality

14. Which of the following is/are true about the activities done during the Sprint review?

    (a) The Product Owner evaluates the deliverable software made by the team.
    (b) The Team Members must do a presentation to the Product Owner explaining what they have built.
    (c) The Product Owner must do a presentation to the Scrum Master explaining what the team has built.
    (d) The most important activity in this meeting is to make sure that the team is on track and will get the product completed before the release date.
    (e) The Scrum Team demonstrates the product increment to other stakeholders, for the purpose of getting feedback to improve the product.

15. Which of the following are responsibilities of a Scrum master?

    (a) Be a facilitator
    (b) Prioritize the requirement
    (c) Remove obstacles faced by the team
    (d) Coach the team on SCRUM principles
    (e) Assist the team in achieving the iteration goals

16. Why does scrum planning favour smaller, more frequent releases?

    (a) Provide faster feedback
    (b) Takes a lot of time to develop
    (c) Reduce Return On Investment
    (d) Improves Return On Investment
    (e) Reduce Return On Investment

17. Outflow strategies help organizations decide when to pull a product out of the portfolio backlog. Which if the following is an/are outflow strategy(y)(ies) in portfolio planning?

    (a) Apply the Economic Filter
    (b) Establish a Work In Progress limit
    (c) Focus on idle work instead of idle workers
    (d) Plan for Smaller, More Frequent Releases
    (e) Balance the Arrival Rate with the Departure Rate

18. Flow management is a major task carried out in sprint execution. Which of the following are decisions taken at the sprint execution under flow management?

    (a) Who does the work?
    (b) Which work is to start?
    (c) Who is going to start?
    (d) How to organize task work?
    (e) What work needs to be done?

19. Which of the following is not an input to product planning?

    (a) Product roadmap
    (b) Initial sprint goal
    (c) The product vision
    (d) Sprint retrospective
    (e) High-level product backlog

20. How do you calculate the cost for a fixed date release?

    (a) Multiply the number of sprints in the release by the cost per sprint.
    (b) Multiply both the high and low number of sprints by the cost per sprint.
    (c) Divide the total duration by the number of team members.
    (d) Divide the total duration by the number of sprints.
    (e) Multiply the number of sprints in the release by the number of team members.

21. What is the normal duration of a daily scrum meeting?

    (a) 10 minutes
    (b) 15 minutes
    (c) 20 minutes
    (d) 30 minutes
    (e) 5 minutes

22. Which of the following is an/ are output(s) of the sprint review?

    (a) Review plan
    (b) Sprint backlog
    (c) Sprint retrospective
    (d) An updated release plan
    (e) Groomed (fine-tuned) product backlog

23. What does it mean by a "Seven day sprint plan"?

    (a) It represents the capacity of the team.
    (b) The team has seven days to dedicate for sprint planning.
    (c) The team has seven days to dedicate for sprint execution.
    (d) The team has less than seven days to dedicate for sprint planning.
    (e) The team has less than seven days to dedicate for sprint execution.

24. Select the correct order of following activities of the scrum lifecycle?
    i. Daily Scrum
    ii. Sprint review
    iii. Sprint planning
    iv. Sprint execution
    v. Sprint retrospective

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

25. Which four main activities are found in the Extreme Programming (XP)?

    (a) Planning, Design, Coding, Testing
    (b) Analysis, Design, Coding, Testing
    (c) Analysis, Planning, Coding, Testing
    (d) Planning, Analysis, Design, Coding
    (e) Planning, Analysis, Coding, Testing

26. Which of the following is/are true about "Stand-up Meetings" in Extreme Programming?

    (a) Everyone stands up in a circle to avoid long discussions.
    (b) Developers report what was accomplished yesterday, what will be attempted today and what caused delays.
    (c) There will be a discussion at the end of the meeting to find the solutions to the problems which arose the previous day.
    (d) Communication among the entire team is the purpose of a stand-up meeting.
    (e) Only the developers who encountered problems in the previous day will be talking in the meeting.

27. What is the most appropriate explanation of a 'user story'?

    (a) An artifact that the tester must review and sign off before testing can begin. Each story needs to represent a complete feature.
    (b) An artifact used to detail only the functional requirements of the system. A Story describes the implementation details of the feature.
    (c) An artifact documented by business representatives to help developers and testers understand the system requirements.
    (d) A story is a placeholder for a detailed discussion about requirements.
    (e) An artifact written collaboratively by developers, testers and business representatives to capture requirements.

28. Which of the following help(s) to build a good Extreme Programming iteration plan?

    (a) Writing stories on index cards
    (b) Breaking down the stories into tasks
    (c) Including the implementation details with the stories
    (d) Adding the stories to the plan if there is not enough to do
    (e) Removal of the stories from the plan if there is too much to do

29. Match the following agile software development approaches on the top with their corresponding descriptions on the bottom.
   P. Extreme Programming
   Q. Scrum
   R. Kanban
      i. Embraces 5 values to guide development: Communication, Simplicity, Feedback, Courage, and Respect
      ii. Divides the project into short iterations called sprints.
      iii. Optimizes the 'flow' of work in a value-added chain.

   (a) P - i, Q- iii, R- ii
   (b) P – i, Q – ii, R – iii
   (c) P – ii, Q – i, R – iii
   (d) P – iii, Q – ii, R – i
   (e) P – iii, Q – i, R - ii

30. Identify who the responsible persons for each task are respectively by taking into account the following tasks
      i. Writes User Stories
      ii. Estimates stories, defines Engineering Tasks from stories
      iii. Implements and runs Functional Tests
      iv. Sends doubtful signals, makes sure the project continues to Stay Extreme

   (a) Programmers, Domain Experts, Testers, Coach
   (b) Programmers, Project Manager, Testers, Coach
   (c) Customers, Domain Experts, Programmers, Project Manager
   (d) Customers, Programmers, Testers, Coaches
   (e) Programmers, Domain Experts, Coaches, Customers

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