



**UNIVERSITY OF COLOMBO, SRI LANKA**

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

**DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY ( EXTERNAL)**

*Academic Year 2012/2013 – 2<sup>nd</sup> Year Examination – Semester 4*

***IT4204 – IT Project Management***  
***Part 1: Multiple Choice Question Paper***

***20<sup>th</sup> 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 **23 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 (*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.**

**Question 1 is based on the following information about a project:**

**Murdhu** is a software company located in Colombo. Piyasena is a software engineer working under Susil, the software manager. Piyumi is a trainee programmer working under Piyasena. Geraldine is the accountant under whom Nimali works as an accounts clerk. Asoka is the managing director of the company.

**Murdhu** has been awarded the contract to develop the stock control system for a small hardware shop in Hambantota. Sarath is its manager. Susil has assigned Piyasena to be the manager of this project.

From the following, which set includes the most suited people who should be in regular contact to ensure the development of a user-friendly quality software package for the hardware shop?

1)

- |                              |                               |
|------------------------------|-------------------------------|
| (a) Asoka, Geraldine, Susil  | (b) Asoka, Piyasena, Susil    |
| (c) Asoka, Geraldine, Sarath | (d) Geraldine, Nimali, Sarath |
| (e) Piyasena, Piyumi, Sarath |                               |

2) A “project”

- |  |
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| (a) has a unique purpose.                        |
| (b) is developed using progressive elaboration.  |
| (c) is temporary.                                |
| (d) requires resources often from various areas. |
| (e) usually involves uncertainty.                |

3) Which of the following issues should be thought of at the beginning of a software development project?

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|--|
| (a) How much will it cost to do this project?                                |
| (b) Is this going to be a stand-alone or a web-based application?            |
| (c) Should this software be developed in-house or be purchased from outside? |
| (d) What approaches are there to do this project?                            |
| (e) Will the users be benefited by this project?                             |

4) Listed below are some functions:

- A. complete a business case
- B. complete project cost estimate
- C. complete project schedule
- D. complete the scope statement
- E. complete the work breakdown structure
- F. monitoring and control
- G. project work execution
- H. select project manager and key team members

The correct order of execution of these functions is:

- |                     |                     |
|---------------------|---------------------|
| (a) A,D,B,C,E,F,G,H | (b) A,H,D,E,C,B,G,F |
| (c) E,B,C,D,A,F,G,H | (d) F,H,A,B,E,C,D,G |
| (e) H,G,F,E,D,C,B,A |                     |

5) Which of the following is/are correct with regard to the *project charter*?

- (a) It identifies the main stakeholders of the project.
- (b) It justifies the project.
- (c) It specifies high-level *cost* goals for the project.
- (d) It specifies high-level *scope* goals for the project.
- (e) It specifies high-level *time* goals for the project.

6) Which of the following combined factors will help to justify to select a **Project A** for implementation when compared with another project, **Project B**?

- (a) **Project A** has a positive NPV of net profit which is smaller than that of **Project B**.
- (b) **Project A** has a shorter payback period than **Project B**.
- (c) **Project A** has lower risks compared to time, cost and scope constraints when compared with **Project B**.
- (d) **Project A** uses comparatively more realistic technology than **Project B**.
- (e) The return on investment of **Project A** is higher than that of **Project B**.

7) *Scope creep*

- (a) can be dangerous as many IT projects have failed due to it and thus the project manager must develop processes for controlling scope changes.
- (b) can be prevented by using a properly written *scope statement* which has been approved by all stakeholders.
- (c) is beneficial to the buyer in a fixed-price contract.
- (d) is the tendency of a project's scope to keep getting bigger.
- (e) is usually expensive.

8) Which of the following is/are (a) component(s) of a typical *project management plan*?

- (a) a description of how the work is organized
- (b) the budget
- (c) the management processes used in the project
- (d) the schedule
- (e) the technical processes used in the project

9) Which of the following is/are true with respect to *critical path analysis*?

- (a) A *backward pass* must be done before a forward pass.
- (b) A *backward pass* through the network determines the earliest start and earliest finish dates of each activity.
- (c) A *forward pass* determines the latest finish and latest start dates of each activity.
- (d) *Earliest start date* of an activity is the earliest possible time an activity can start based on project network logic.
- (e) The *free float* of an activity is the amount of time an activity can be delayed without delaying the earliest start date of any immediately following activities.

- 10) Lack of user input especially at the design stage of a software development project usually leads to problems. Which of the following is/are (a) good technique(s) to improve user input?

- (a) co-locating users with the developers
- (b) having regular meetings with users with defined agendas
- (c) making users sign off on key deliverables presented at meetings with them
- (d) not having users on the project team so that the software can be developed without interruption
- (e) showing prototypes of the system to users to get their approval

- 11) Which of the following is/are true with regard to dependencies?

- (a) User training on a new system has a *finish-to-start dependency* on the installation of system.
- (b) Quality control has a *finish-to-finish* dependency on production.
- (c) Testing code has a *mandatory* dependence on writing code.
- (d) Detailed design of a new information system has a *discretionary dependence* on the users signing off on all of the analysis work.
- (e) Installation of an operating system has an *external dependency* on the delivery of new hardware from an external supplier.

- 12) A particular task is given an *optimistic estimate* of 2 weeks, a *most likely time estimate* of 4 weeks and a *pessimistic time estimate* of 12 weeks. The *Program Evaluation and Review Technique (PERT)* weighted average time estimate for this task is

- |              |               |              |
|--------------|---------------|--------------|
| (a) 2 weeks. | (b) 4 weeks.  | (c) 5 weeks. |
| (d) 6 weeks. | (e) 12 weeks. |              |

- 13) Consider the following table:

Column A: Terms	Column B: Descriptions
A1: Cost budgeting	B1: Allocating the overall cost estimate to individual work items to establish a baseline for measuring performance
A2: Cost control	B2: Developing an approximation of the costs of the resources needed to complete a project
A3: Cost estimating	B3: Managing the changes to the project budget

A correct matching between columns A and B is

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|--------------------------|--------------------------|--------------------------|
| (a) A1-B1, A2-B2, A3-B3. | (b) A1-B1, A2-B3, A3-B2. | (c) A1-B2, A2-B1, A3-B3. |
| (d) A1-B2, A2-B3, A3-B1. | (e) A1-B3, A2-B2, A3-B1. |                          |

- 14) In a project, the correct execution order of the three activities *cost budgeting*, *cost control* and *cost estimating* is

- (a) cost budgeting, cost control and cost estimating.
- (b) cost budgeting, cost estimating, and cost control.
- (c) cost control, cost estimating, and cost budgeting.
- (d) cost estimating, cost budgeting, and cost control.
- (e) cost estimating, cost control and cost budgeting.

- 15) The typical costs of correcting software defects vary depending on the life cycle stage in which the defect is identified. The defect detection life cycle stage order that will usually result in increasing correction cost is

- (a) acceptance testing, requirement analysis, system implementation, coding/unit testing, system testing.
- (b) coding/unit testing, requirement analysis, acceptance testing, system implementation, system testing.
- (c) requirement analysis, coding/unit testing, system testing, acceptance testing, system implementation.
- (d) system implementation, coding/unit testing, requirement analysis, system testing, acceptance testing.
- (e) system testing, acceptance testing, requirement analysis, coding/unit testing, system implementation.

- 16) Consider the following table:

Column A	Column B
A1: Tangible costs	B1: Costs of electricity, paper towels and water are examples for this type
A2: Intangible costs	B2: Costs that an organization can easily measure in Rupees (or any other currency).
A3: Direct costs	B3: Costs that are difficult to measure in monetary terms.
A4: Indirect costs	B4: Is the money that has been spent in the past.
A5: Sunk costs	B5: Salaries of people working full time on a project are examples for costs of this type.

A correct matching between columns A and B is

- (a) A1-B1, A2-B2, A3-B3, A4-B4, A5-B5.
- (b) A1-B2, A2-B3, A3-B5, A4-B1, A5-B4.
- (c) A1-B3, A2-B5, A3-B4, A4-B2, A5-B1.
- (d) A1-B4, A2-B1, A3-B2, A4-B5, A5-B3.
- (e) A1-B5, A2-B3, A3-B1, A4-B2, A5-B4.

17) Which of the following is/are correct with respect to *cost estimation*?

- (a) *Bottom-up estimates* use the actual cost of a previous, similar project as the basis for estimating the cost of the current project.
- (b) *Top-down estimates* could be improved by obtaining expert assistance.
- (c) *Top-down estimates* involve estimating individual work items and summing them to get a project total.
- (d) *Parametric modelling* uses project characteristics (parameters) in a mathematical model to estimate project costs.
- (e) The number of function points and the expected number of source lines of code are sometimes used in *parametric models*.

18) Which of the following is/are true?

- (a) Functionality, reliability, usability, efficiency, maintainability, portability are some good software quality characteristics.
- (b) Projects involve the stages *initiation, planning, execution, quality management* and *termination* done in that **strictly sequential** order.
- (c) Quality can be defined as the totality of characteristics of an entity that bear on its ability to satisfy stated or implied needs.
- (d) Quality can be defined based on the conformance to requirements and fitness to use.
- (e) The purpose of project quality management is to ensure that the project will satisfy the needs for which it was undertaken.

19) Following are risks which can affect a project

- A. cost overrun
- B. developing wrong software functions
- C. late changes to requirements
- D. technical difficulties in system development

Good prevention/resolution strategies for the above risks are

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|--|---------------------|----------------------------|
| (a) A-analysis of past projects,<br>D-staff training             | B-prototyping,      | C-incremental development, |
| (b) A-prototyping,<br>D-research                                 | B-use of COCOMO,    | C-version Control,         |
| (c) A-use of COCOMO,<br>D-research                               | B-using Java,       | C-version control,         |
| (d) A-use of multiple estimation techniques,<br>D-staff training | B-prototyping,      | C-user involvement,        |
| (e) A-use of multiple estimation techniques,<br>D-staff training | B-user involvement, | C-incremental development, |

20) A project has a budget of Rs. 200,000. The project work plan represents 50% of work completion by now. However, the work completed to date represents 25% of the entire project. The BCWS (Planned Value) and the BCWP (Earned Value) for the project at present are, respectively

- |                                 |                                 |                                |
|---------------------------------|---------------------------------|--------------------------------|
| (a) Rs. 50,000 and Rs. 50,000   | (b) Rs. 50,000 and Rs. 100,000  | (c) Rs. 100,000 and Rs. 50,000 |
| (d) Rs. 100,000 and Rs. 100,000 | (e) Rs. 200,000 and Rs. 100,000 |                                |

21) Which of the following **does not** belong to Deming's list of 14 points for management?

- (a) end dependence on inspection to achieve quality
- (b) end practice of awarding business based on price tag alone
- (c) enforce targets for workforce
- (d) improve every process constantly and forever
- (e) institute a program of education and self-improvement for everyone

22) Assume that you are the Project Manager of a small software development company. You have been asked to manage a project that involves two sub-systems. Some information about this project is given in the table below:

Task	Duration (days)	Precedents	No.of workers needed
A. Design of sub-system 1	3	-	1
B. Code/test of sub-system 1	6	A	1
C. Design of sub-system 2	5	-	1
D. Code/test of sub-system 2	3	C	1
E. Merge sub-systems	3	B,D	2

There are two BIT graduates, Shankar and Fareena working under you. They are equally skilled and can do any of the above tasks. However, Shankar is more experienced.

Which of the following is a good staff assignment?

- (a) A-Fareena, B-Fareena, C-Shankar, D-Shankar, E-Shankar and Fareena
- (b) A-Fareena, B-Shankar, C-Fareena, D-Shankar, E-Shankar and Fareena
- (c) A-Fareena, B-Shankar, C-Shankar, D-Fareena, E-Shankar and Fareena
- (d) A-Shankar, B-Fareena, C-Fareena, D-Shankar, E-Shankar and Fareena
- (e) A-Shankar, B-Shankar, C-Fareena, D-Fareena, E-Shankar and Fareena

23) A scanner needed for an IT project costs Rs.16,000. Once bought it has a daily operational cost of Rs.200. If the same scanner could be hired for Rs. 1,000 per day including the operational costs, what is the maximum number of days of work beyond which it will be more profitable to buy the scanner?

- |        |        |        |
|--------|--------|--------|
| (a) 16 | (b) 18 | (c) 20 |
| (d) 22 | (e) 24 |        |

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