



UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)

Academic Year 2010 /2011 – 2nd Year Examination – Semester 4

IT4204: IT Project Management

PART I – Multiple Choice Question Paper

6th August 2011

(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** on **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.**
- Non-programmable calculators may be used.

1) Some factors which help a project succeed are

- | | |
|----------------------------|---------------------------------|
| (a) Top management support | (b) Experienced project manager |
| (c) User involvement | (d) Clear project objectives |
| (e) Firm basic objectives | |

2) The agile project manager:

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| (a) Must discourage all artifacts that do not add direct value to the system. |
| (b) Should encourage communication among participants. |
| (c) Must discourage all activities that do not directly contribute to making a working system. |
| (d) Must discourage the simplest possible solution. |
| (e) Must attempt to make the simplest software that meet stakeholder expectations. |

3) Which of the following is/are true?

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|---|
| (a) Project <i>stakeholders</i> are the people involved in or affected by project activities. |
| (b) Purpose of project management is to meet project requirements and satisfy the stakeholders. |
| (c) It is not beneficial for the project manager to decide on and implement standards for the project such as standard forms or templates for common project documents, etc. |
| (d) A <i>deliverable</i> is a product or service produced or provided as part of a project. |
| (e) A project consists of many phases and a management review should occur after each phase to evaluate progress, potential success and continued compatibility with organizational goals to decide if the project should be continued, redirected or terminated. |

Questions 4 and 5 are based on the following information about a project:

For a particular project, the projected costs and benefits are spread over four years as follows: Estimated *costs* are Rs.50,000 in Year 1 and Rs.25,000 each year in Years 2, 3 and 4. Estimated *benefits* are Rs.0 in Year 1 and Rs.80,000 each year in Years 2, 3 and 4.

Note: The discount rate that has to be used for any computation is 8%.

4) The *Return On Investment (ROI)* of this project is

- | |
|-----------|
| (a) 100%. |
| (b) 60%. |
| (c) 25%. |
| (d) 50%. |
| (e) 80%. |

5) Which of the following is true?

- | |
|---|
| (a) Pay back occurs in Year 1. |
| (b).Pay back occurs in Year 2. |
| (c) Pay back occurs in Year 3. |
| (d) Pay back occurs in Year 4. |
| (e) There is no pay back in this project. |

6) Which of the following is/are correct?

- (a) Key project stakeholders should sign a project charter to acknowledge agreement on the need for and intent of the project.
- (b) Project charter should include among other things, project's title, a summary of the project's budget, a schedule of planned start and finish dates, a brief description of the project's objectives, a summary of the stakeholder needs and expectations, and important assumptions and constraints.
- (c) A project management plan should include among other things, the names of the project manager and key team members, the deliverables of the project, organizational charts, a detailed schedule, and a detailed budget.
- (d) Project monitoring does not involve assessing measurements and analyzing trends to determine what process improvements can be made.
- (e) Administrative project closure procedures should define the approval process of all project deliverables.

7) Which of the following is/are true?

- (a) It is important to do a scope verification at the beginning of the project that involves formal acceptance of the project scope by the stakeholders.
- (b) It is important to prevent scope creep by making sure stakeholders first agree on the work to be performed.
- (c) Scope creep can be increased by the project team members having regular interaction with users.
- (d) Co-locating users with developers is not a recommended strategy to prevent scope creep.
- (e) Early prototyping of the system does not help prevent scope creep.

8) Which of the following is/are correct?

- (a) A *milestone* on a project is a significant event that normally has no duration.
- (b) The *critical path* for a project is the series of activities that determine the earliest time by which a project can be completed.
- (c) *Slack* or *float* is the amount of time by which an activity may be delayed without delaying a succeeding activity or the project finish date.
- (d) A *forward pass* determines the latest start and latest finish dates of each activity.
- (e) A *backward pass* determines the earliest start and earliest finish dates of each activity.

9) Consider the following Work Breakdown Table:

| Task | Duration (days) | Precedent/s |
|------|-----------------|-------------|
| A | 2 | - |
| B | 3 | - |

- (a) The earliest start of activities A and B is day 1.
- (b) The critical path of this project is B-C.
- (c) The critical path of this project is A-B-C.
- (d) The critical path of this project is A-C.
- (e) Activity A has a slack of one day.

10) Which of the following is/are correct?

Project budgeting involves allocating project cost estimate to individual work items.
 The Work Breakdown Structure is not important for cost budgeting.
 The *cost* of a project is the money that has to be paid to acquire goods and services for the project.
 Costs of electricity, paper and telephone used for a project are examples of *direct costs* and the money paid as salaries of people working full-time in the project and the costs of hardware and software purchased specifically for the project are examples of *indirect costs*.
Analogous estimates, also called top-down estimates are created by using the actual costs of a previous similar project as the basis.

11) Which of the following is/are correct?

- (a) Parametric models are most reliable when the historical data that was used to create the model are not accurate.
- (b) When estimating the costs using the bottom-up technique, it is advisable to include a certain percentage of the total cost estimate as reserves to spend for any unexpected risk in the project.
- (c) Parametric modeling uses project characteristics (parameters) in a mathematical model to estimate project costs.
- (d) Bottom-up estimates involves estimating the costs of individual work items or activities and then summing them to get the project total.
- (e) The number of files maintained, the number of inputs and outputs, the number of updates are examples of function points which can be used to estimate the size of a software system to be used in a parametric model.

12) Which of the following is/are true?

- (a) Pareto analysis does not involve identifying the vital few contributors that account for most quality problems in a system.
- (b) Statistical sampling involves choosing a part of a population of interest for inspection and a good equation to compute the sample size is

$$\text{sample size} = 0.25 \times (\text{certainty factor/acceptable error})^2$$
 where the *certainty factor* is obtained from a statistics book based on the desired certainty percentage and acceptable error is (1-desired certainty percentage).
- (c) The degree to which a system performs its intended function is called *functionality* and is a good quality characteristic.
- (d) Quality planning identifies which quality standards are relevant for the project and how to satisfy them.
- (e) For an IT project some example quality requirements include allowing for system growth, planning for a reasonable system response time or ensuring that the system works reliably.

13) Deming's points for quality management includes

- (a) working with a single supplier to minimize cost.
- (b) breaking down barriers between staff.
- (c) eliminating slogans and targets for the workforce.
- (d) implementing numerical quotas for the workforce and numerical goals for management.
- (e) making sure quality is inbuilt in every process.

- 14) Consider three tasks, their durations, dependences, slack times and their resource requirements for workers given in the following table:

| Tasks | Durations (days) | Precedents | Slack (days) | No.of Required Workers |
|-------|------------------|------------|--------------|------------------------|
| A | 2 | - | 3 | 2 |
| B | 5 | - | 0 | 4 |
| C | 3 | - | 2 | 2 |

- (a) **Without** resource leveling, the maximum worker requirement at any given time is eight (8) workers.
- (b) A resource leveled allocation of tasks are:
day 1: tasks A,B
day 2: tasks A,B
day 3: tasks B,C
day 4: tasks B,C
day 5: tasks B,C
- (c) A resource leveled allocation of tasks is:
day 1: tasks B,C
day 2: tasks B,C
day 3: tasks B,C
day 4: tasks A,B
day 5: tasks A,B
- (d) **With** resource leveling, the maximum worker requirement at any given time is 8 workers.
- (e) **With** resource leveling, the maximum worker requirement at any given time is 6 workers.

- 15) A project manager can increase staff motivation by

- (a) setting specific responsibilities for each staff member.
(b) by talking kindly to them.
(c) by being good and correct.
(d) by being responsible towards society and environment.
(e) by treating everyone fairly

- 16) A company is trying to decide whether to bid for a certain IT contract or not. They estimate that merely preparing the bid will cost Rs.10,000. If their company bids then they estimate that there is a 50% chance that their bid will be put on the "short-list", otherwise their bid will be rejected. Once "short-listed" the company will have to supply further detailed information (that involves costs estimated at Rs 5,000). After this stage their bid will either be accepted or rejected.

The company estimates that the labour and material costs associated with the contract are Rs.127,000. They are considering two possible bid prices, namely Rs. 155,000 and Rs.170,000. They estimate that the probabilities of these bids being accepted (once they have been short-listed) are 0.90 and 0.75 respectively.

Which of the following is/are true?

- (a) The Expected Monetary Value (EMV) of bidding for Rs.155,000 is Rs.10,200.

- (b) The EMV of bidding for Rs.170,000 is Rs.17,250.
- (c) The company should not bid.
- (d) The company should prepare the bid and if it is short-listed then it should bid Rs.170,000.
- (e) The company should prepare the bid and if it is short-listed then it should bid Rs.155,000.

17) Consider the following communication needs:

- (i) building consensus
- (ii) resolving a misunderstanding
- (iii) asking an informational question
- (iv) giving complex instructions

In respective order, good media type choices for the above communication needs are

- (a) i-meeting, ii-phone call, iii-email, iv-meeting
- (b) i-email, ii-hard-copy, iii-web-site, iv-phone call
- (c) i-phone call, ii-web-site, iii-hard-copy, iv-email
- (d) i-phone call, ii-meeting, iii-phone call, iv-web-site
- (e) i-meeting, ii-meeting, iii-email, iv-email

18) Which of the following is/are true?

- (a) A Meeting should **not** have an agenda.
- (b) *Status reports* address where the project stands in terms of meeting scope, time and cost goals.
- (c) *Progress reports* describe what the project team has accomplished during a certain period.
- (d) *Forecasts* predict future project status and progress based on past information and trends.
- (e) *Status reports* describe where the project stands at a specific point in time.

19) Following are risks which can affect a project:

- (i) unrealistic time and cost estimates
- (ii) developing wrong software interface
- (iii) late changes to requirements
- (iv) development technically too difficult

In respective order, good resolution strategies for the above risks are:

- (a) I-Use of COCOMO, ii-Using Java, iii-Version control, iv-research
- (b) i-prototyping, ii-Use of COCOMO, iii-Version Control, iv-research
- (c) i-analysis of past projects, ii-prototyping, iii-incremental development, iv-staff training
- (d) i-Use of COCOMO, ii-Using Visual Basic, iii-research, iv-research
- (e) i-multiple estimation techniques, ii-user involvement, iii-incremental development, iv-staff training

20) Which of the following is/are correct?

- (a) If a computer that has a purchase price of Rs.50,000 is needed for a programming project and a similar computer could be leased for Rs.1000 per day, then if the estimated time for programming is less than 50 days, then it is economical to lease the computer without buying it.
- (b) A fixed price contract has the least amount of risk for the buyer.
- (c) A cost reimbursable contract has the least amount of risk for the buyer.
- (d) Cost reimbursable contracts are often used for projects which include providing goods and services that involve new technologies.
- (e) A contract Statement of Work (SOW) should be clear, concise and as complete as possible.
