UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)

Academic Year 2008/2009 –2nd Year Examination – Semester 3

IT4203: IT Project Management
Part 1: Multiple Choice Question Paper

15th August, 2009
(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 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 <u>one or more</u> 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) Which of the following statements describe more accurately, valuable skill (s) needed by IT Project Managers more accurately?

> (a) They should have some working knowledge of various IT technologies only.
> (b) They should improve their soft skills and business skills to improve their performance.
> (c) Having positive leadership qualities bring success to projects they handle.
> (d) They should be able to decide which particular skills are more important in different situations.
> (e) Project environment knowledge is not so important for an IT Project Manager.

2) One can view project management as a number of related processes. Identify the correct statement (s) with respect to project management process groups from those listed below.

> (a) A process is a temporary endeavor undertaken to create a unique product, service or result.
> (b) Initiating processes are also required to end a project.
> (c) A project team must develop plans to define the work, to estimate costs, to decide what resources to be acquired etc. during the executing process.
> (d) Any deviation from the original plan, taking corrective action to match progress with the plan are included in the monitoring and controlling process group.
> (e) Preparing the lessons-learned report is an important activity of the planning process group.

3) Identify the correct statement (s) from the list given below.

> (a) Projects operated in isolation will serve the needs of the organization better than those that operate in a broad organizational environment.
> (b) Project mangers must use systems analysis to address needs with a problem-solving approach.
> (c) Systems management can be used to identify key business as well as, technological and organizational issues related to each project.
> (d) Many information technology professionals take into consideration business issues when planning IT projects.
> (e) The three-sphere model for systems management consists of Business, Technology and Planning.

4) Selecting an Information Technology project can be done by a four-stage planning process. The following statements describe some of the results produced during each of these stages. Identify the correct statement/s.

> (a) The information technology strategy to develop the mission and vision of the organization during the project planning stage.
> (b) Document key business processes when could benefit from information technology during project planning stage.
> (c) In the resource allocation stage, select Information Technology projects
> (d) Define project scope, benefits and constraints during resource allocation stage
> (e) Identify key business areas during Information Technology strategy planning stage.

5) Listed in column A are the seven (7) main processes involved in project integration management. Column B contains activities or outputs associated with each one of the seven processes. Match correctly the activities or outputs to the most appropriate process.

	Column A		Column B
I	Develop the project charter	A	Main objectives of this process are to ensure that the requested changes are beneficial to the organization, determine that a change has occurred and manage actual changes as they occur
II	Develop the preliminary project scope statement	B	Work with the stakeholders to create the document that formally authorizes a project
III	Develop the project management plan	C	Outputs of this process include final products, services or results
IV	Direct and manage project execution	D	Describes in detail the work to accomplish on the project and is an important tool to prevent scope creep
V	Monitor and control the project work	E	This is used to guide the work in the project and will include an overview of the project, a description of how the project is organized, the management and technical processes used on the project and sections describing the work to be performed, the schedule and the budget
VI	Perform integrated change control	F	Involves overseeing project work to meet the performance objectives of the project
VII	Close the project	G	Outputs of the process are deliverables, requested changes, work performance information, implemented change requests, corrective actions, preventive actions and defect repair

The correct matching is:

(a) I - E, II - D , III - G , IV - F , V - A, VI - C, VII - B
(b) I - D, II - B , III - G , IV - F , V - A, VI - C, VII - E
(c) I - D, II - E , III - G , IV - F , V - A, VI - C, VII - B
(d) I - B, II - D , III - E , IV - G , V - F, VI - A, VII - C
(e) I - G, II - D , III - E , IV - B , V - F, VI - A, VII - C

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Given below is an example to calculate the Net Present Value (NPV), an analytical method of calculating the expected net monetary gain or loss from a project by discounting all expected future cash inflows and outflows to the present point in time.

Use the example to answer the questions 6 – 8.

Year	0	1	2	3	Total
Costs	140,000	40,000	40,000	40,000	
Discount factor	1.00	0.93	A	0.79	
Discounted costs	140,000	37,200	34,400	31,600	243,200
Benefits	0	200,000	200,000	200,000	
Discounted factor	1.00	0.93	A	0.79	
Discounted benefits	0	186,000	172,000	158,000	516,000
Discounted benefits-costs	(140,000)	148,800	137,600	126,400	272,800
Cumulative benefits-costs	(140,000)	8,800	146,400	272,800	

The formula for the discount factor is $1/(1+ r)^t$ where r is the discount rate, and t is the year.

The formula for NPV is:

$$\textbf{NPV} = \sum_{t=1...n} \textbf{A}/\textbf{(1+ r)}^t$$ where t = the year of the cash flow, the last year of the nth year. A is the amount of cash flow each year, and r is the discount rate.

6) The discounted value for the 2nd of the project indicated in positions A of the example is:

(a) 0.75	(b) 0.86	(c) 0.50
(d) 1.21	(e) 0.65	

7) Net Present Value (NPV) is:

(a) 8,800	(b) 243,200	(c) 516,000
(d) 272,800	(e) 140,000	

8) Payback period is the amount of time it will take to recoup, in the form net cash inflows, the total amount invested in a project. In the above example the payback period is:

(a) 3 years	(b) 2 years	(c) 1 year
(d) 0 year	(e) 4 years	

9) Identify the correct statement/s associated with project communication management.

(a) The best mode for handling conflicts is the withdrawal mode.
(b) Some of the main causes of conflict in projects are schedules, priorities, cost and personalities.
(c) Conflict among team members of a project can avoid the development of groupthink.
(d) When sending emails, it is a good habit to include many subjects in a single mail to save time.
(e) Providing an agenda to participants before a meeting gives potential attendees a chance to decide whether they really need to attend the meeting.

10) Column B contains the phases of a work breakdown structure for the development of a promotional DVD. Column A gives the different tasks to be performed during those phases. Match correctly the tasks to the most appropriate phase. One phase could have more than one task.

	Column A		Column B
I	Define selection criteria	A	Concept phase
II	Shoot sections	B	Design phase
III	Write narrative text	C	Prototype and test phase
IV	Define requirements	D	Select vendor phase
V	Edit video sections	E	Produce and send phase
VI	Sign contract	F	Post implementation phase
VII	Supply/approve mail-to lists		
VIII	Produce lessons-learnt report		

The correct matching is:

(a) I - C,   II - D,   III - C ,   IV - A ,   V - C,   VI - D,   VII – E,   VIII - B
(b) I - D,   II - B,   III - C ,   IV - A ,   V - C,   VI - D,   VII – E,   VIII - F
(c) I - A,   II - E,   III - C ,   IV - A ,   V - C,   VI - D,   VII – E,   VIII - B
(d) I - D,   II - C,   III - C ,   IV - A ,   V - C,   VI - D,   VII – E,   VIII - F
(e) I - D,   II - C,   III - C ,   IV - A ,   V - C,   VI - D,   VII – B,   VIII - E

11) The statements given below are associated with project scope management. Identify the correct statements.

(a) Stakeholders should be discouraged from suggesting changes to a project irrespective of whether they are beneficial to the project or unnecessary.
(b) Lack of user input leads to problems with managing scope creep and controlling change.
(c) Having a sponsor from the IT department of the user organization in the project will improve user input.
(d) Employing techniques such as prototyping use case modeling and joint application design will help in understanding user requirements thoroughly.
(e) Scope verification is the controlling of changes in the project scope.

12) The statements given below are associated with project time management. Identify the correct statement/s.

(a) The main outputs of an activity definition process are to project a schedule network diagram, request changes and update to the activity list and attributes.
(b) The goal of the activity definition process is to ensure that the project team has complete understanding of all the work they must do as part of the project scope so that they can start scheduling the work.
(c) The critical path method predicts total project duration.
(d) Crashing is a technique used to shorten the project schedule by doing activities in parallel that you would normally do in sequence.
(e) Several leadership skills which help project managers control schedule changes include empowerment, discipline, using incentives and negotiation.

13) Given below is an Activity-on-Arrow (AOA) Network diagram for a project. Use the diagram and the words/phrases labeled I - VII to fill the blanks labeled P – U in the given paragraph.
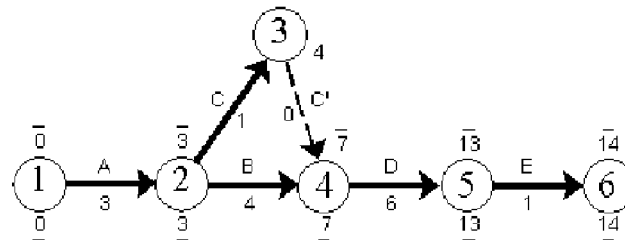
I   Dummy arrow   V   Zero
II Event   VI   ABDE
III ACDE   VII   Activity
IV Activities

The node labeled five (5) represents a/an ……[P]…….. The arrow

connecting the nodes three (3) and four (4) is a/an ……[Q]…… An event

occurs when all the …[R]………… entering the node are completed.

A dummy arrow has ……[S]… duration and does not represent an

.[T].…. The critical path in this network is …[U]…..

The correct matching is:

(a) P - III,   Q - I,   R – II,   S – V,   T – VII,   U – VI
(b) P - IV,   Q - I,   R – II,   S - V ,   T – VII,   U – III
(c) P - III,   Q - I,   R – II,   S - II ,   T – V,   U – VI
(d) P - VII,   Q - I,   R – II,   S - V ,   T – III,   U – VI
(e) P - II,   Q - I,   R – IV, S - V ,   T – VII,   U – VI

14) Consider the following statements with respect to Project cost management. Which of these statements is/are **false**?

(a) Taking sunk cost into consideration to select a particular project would be a correct decision.
(b) Learning curve theory states that when many items are produced repetitively, the unit cost of those items normally increases in a regular pattern as more units are produced.
(c) Management reserves allow for future situations when are predictable.
(d) Tangible costs or benefits are those costs or benefits which an organization can measure in terms of money.
(e) The cost of electricity, water and cleaning services in a large building housing many employees working on many projects would be considered as direct costs.

15) Given below in Column A are some cost estimation techniques and tools or definitions used in project cost management. Match correctly those of A with a description from column B

	Column A		Column B
I	Top-down estimates	A	A technique based on estimating individual work items and summing them up to get a project total
II	Bottoms-up estimates	B	Number of inputs and outputs, the number of files maintained are some examples of these
III	The acronym KSLOC	C	Not the best technique to be used when a project involves a new programming language or new type of hardware or network
IV	Function points	D	Thousands of source lines of code which are human written and not blanks or comments
V	Resource cost rates	E	A technique which uses estimating the quantity of material, number of hours or people and multiplying that quantity by the cost rate per unit

(a) I - A, II - D , III - B, IV - E, V - C
(b) I - E, II - B , III - D, IV - C, V - A
(c) I - C, II - E , III - B, IV - D, V - A
(d) I - C, II - A , III - D, IV - B, V – E
(e) I - A, II - D , III - B, IV - C, V - E

16) The following statements are related to tools & techniques used for quality control in project quality management. Which of these statements is/are true?

(a) A simple formula for determining sample size in statistical sampling is:
Sample size = 0.25 (certainty factor/acceptable error).
(b) A Pareto diagram is an effective tool for analyzing user complaints and help project managers to identify and prioritize problem areas in a project.
(c) Post implementation phase cannot be considered as a testing phase in the system development life cycle.
(d) Establishing test standards, defining test criteria etc. should be only after software development.
(e) The three main categories of outputs for quality control are Acceptance decisions, rework and process adjustments.
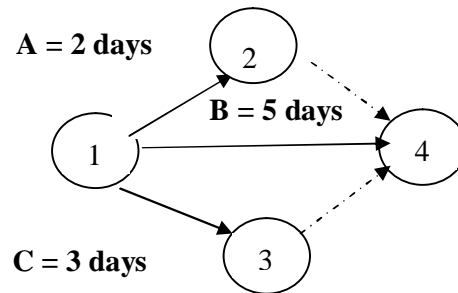
17) Consider following statements with respect to the cost of quality in IT project cost management.
(i) Prevention cost is the cost of conformance plus the cost of non conformance.
(ii) Internal failure cost is a cost incurred to correct an identified defect before the customer receives the product.
(iii) Top management is primarily responsible for the high cost of non conformance in IT projects.
Which of the above statements is/true?

(a)   (i) only
(b)   (ii) only
(c)   (iii) only
(d)   (i) & (ii) only
(e)   (ii) & (iii) only

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Given below is a project network diagram. Use resource leveling to determine the correct answers for questions 18 & 19.
Assumptions to be made are Activity A has 2 workers, B has 4 workers and C has 2 workers.

18) The slack of activity A is

(a) 0	(b) 1	(c) 5
(d) 3	(e) 2	

19) If resources are leveled how many workers would be needed to complete the project?

(a) 8	(b) 6	(c) 4
(d) 2	(e) 3	

20) Match the contents of Column A with the most appropriate from Column B.

	Column A		Column B
I.	Time and materials contract	A	Document prepared by a seller when there are different approaches for meeting buyer needs
II.	Firm-fixed price contract	B	Used for services which are needed when the work cannot be clearly specified and total costs cannot be estimated
III.	Request for Quote (RFQ)	C	Document used to solicit prices from prospective sellers
IV.	Request for Proposal (RFP)	D	Has the lowest risk for the buyer
V.	CPCC contract	E	Has the lowest risk for the supplier

Correct matching is:

(a) I - C,   II - D,   III - B,   IV - A,   V – E
(b) I - E,   II - D,   III - A,   IV - C,   V – B
(c) I - B,   II - D,   III - C,   IV - A,   V – E
(d) I - D,   II - C , III - A,   IV - E,   V – B
(e) I - C,   II - A , III - E,   IV - B,   V – D

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