UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (*EXTERNAL*)

Academic Year 2005/2006 – 2ⁿᵈ Year Examination – Semester 4

IT4202 – Software Project Management
Multiple Choice Question Paper

5ᵗʰ August, 2006
(ONE HOUR)

<u>Important Instructions:</u>

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

- The medium of instruction and questions is English.

- The paper has **25** 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 <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 −1 (*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**.

Questions 1 to 2 are based on the following scenario:

Two projects need to be evaluated to select one for implementation. Year-based cash flow forecasts (in Rupees) of the two projects are as follows:

Year	Project 1	Project 2
0	-200,000	-1,000,000
1	50,000	500,000
2	50,000	500,000
3	160,000	600,000

1) Which of the following is/are true?

(a) Net profit of Project 1 is Rs.60,000 while the net profit of Project 2 is Rs.600,000.
(b) Net profit of Project 1 is Rs.160,000 while the net profit of Project 2 is Rs.600,000.
(c) Project 2 has the shorter pay back period.
(d) Return on investment for Projects 1 and 2 are 10% and 20% respectively.
(e) Project 2 must be selected for implementation without any other consideration.

2) Which of the following is/are true?

(a) Internal rate of return (IRR) attempts to provide a profitability measure as a percentage that is directly comparable with the interest rates.
(b) We must consider risk also into account when deciding whether or not to proceed with a proposed project.
(c) Economic assessment of a proposed project involves the identification of all costs and income over the lifetime of the system and checking that total value of benefits exceeds total expenditure.
(d) Technical assessment of a proposed project does not consist of evaluating the required functionality against the hardware and software available.
(e) Money received in the future is worth more than the same amount of money in hand now.

3) A typical project plan does **not** include

(a) details of the past projects.
(b) a description of how the project is organized.
(c) management and technical processes used on the project.
(d) schedule information.
(e) budget information.

4) The scope statement should include

(a) the organization of the project.
(b) the characteristics of the products or services which the project will produce.
(c) the deliverables of the project.
(d) schedule information.
(e) a statement of what constitutes project success.

5) Which of the following is/are true with regard to a work breakdown structure (WBS)?
(a) A WBS can be considered as a foundation document in project management because it provides the basis for planning.
(b) A unit of work can appear at many places in a WBS.
(c) The work content of a WBS item is the sum of the WBS items below it.
(d) When preparing a WBS, consideration may not be given to the final level of detail or depth of the structure.
(e) The project network diagram should be drawn before the WBS is prepared.

6) | Following are some activities involved in planning a project:
   - A. creating the statement of scope
   - B. cost estimation
   - C. cost budgeting
   - D. creating the network diagram
   - E. creating the work breakdown structure
   - F. resource planning

A correct order of the above activity usage is:

(a) A, B, C, D, E, F
(b) D, F, E, C, B, A
(c) C, F, D, A, E, B
(d) F, D, A, C, B, E
(e) A, E, D, F, B, C

7) | Which of the following help/s in meeting project deadlines?

(a) discipline of the Project Manager to control project schedules
(b) good negotiation skills which help to arrive at realistic project schedules in the first place
(c) proper planning and analysis in making the schedule
(d) allowing people who will not be involved in the development work of the project (e.g., marketing department of an organization) to make the schedule
(e) not allowing for contingencies when making the project schedule

8) | Following are some activities involved in network analysis to obtain the critical path:
   - A. List activities, their durations, and precedence requirements
   - B. Get critical path
   - C. Do a backward pass
   - D. Do a forward pass
   - E. Compute floats

The correct order of the above activity usage is:

(a) A,B, C, D, E
(b) E, D, C, B, A
(c) A, C, D, E, B
(d) A, D, C, E, B
(e) B, C, D, A, E

9) | Which of the following is/are true?

(a) Critical path defines the duration of a project.
(b) Any delay on an activity on the critical path will have no effect on the completion schedule of a project.
(c) The float is zero on activities along the critical path.
(d) In planning a project, it is the critical path that we must shorten if we are to reduce the overall duration of the project.
(e) In addition to identifying the critical path, it is also advisable to identify *near critical activities* as they also can turn critical due to various reasons.

10)   Which of the following is/are true?

(a) It is important to brainstorm and evaluate alternatives before coming up with the final *resource plan*.
(b) The main output of the *resource planning* process is a list of resource requirements.
(c) *Cost Budgeting* involves developing a cost estimate of the resources needed to complete a project.
(d) *Cost Estimating* involves allocating the overall cost estimate to individual work items.
(e) Project managers must make sure that their projects have accurate time and cost estimates, and have realistic budgets which they were involved in approving.

11)   Which of the following is/are **not** true?

(a) It is generally true that given an easy target, people will work less hard.
(b) Putting more people on a project will reduce the effort that has to go into management, coordination and communication.
(c) Less experienced staff might respond to difficult deadlines by producing sub-standard work.
(d) Unattainable targets and projects which routinely do not meet their published targets will have an effect on staff motivation.
(e) Extensive rework during later phases of a project may have serious consequences for the project completion date.

Questions 12 and 13 deal with earned value analysis (EVA).

12)   Group **A** below contains three values which need to be calculated for each activity or summary activity from a project's work breakdown structure. Group **B** contains some definitions. A matching of the items in group **A** with appropriate ones in group **B** is required.

A   **B**
a1 Planned Value (PV)   b1 percentage of work actually completed multiplied by the planned value
a2 Actual Cost (AC)   b2 Total direct and indirect costs incurred in accomplishing work of an activity during a given time period
a3 Earned Value (EV)   b3 Portion of the approved total cost estimate planned to be spent on an activity during a given period

A correct matching is

(a) a1-b3, a2-b2, a3-b1   (b) a1-b1, a2-b2, a3-b3
(c) a1-b2, a2-b3, a3-b1   (d) a1-b3, a2-b3, a3-b2
(e) a1-b1, a2-b3, a3-b2

13) Let PV, AC and EV denote Planned Value, Actual Cost, and Earned Value respectively.

Group **A** below contains four terms which are used in EVA and group **B** contains some formulae. A matching of the items in group **A** with appropriate ones in group **B** is required.

A	**B**	
a1 Cost Variance	b1	EV/AC
a2 Schedule Variance	b2	EV – AC
a3 Cost Performance Index	b3	EV – PV
a4 Schedule Performance Index	b4	EV/PV

A correct matching is

(a) a1-b3, a2-b4, a3-b1, a4-b2	(b) a1-b4, a2-b1, a3-b2, a4-b3
(c) a1-b2, a2-b3, a3-b1, a4-b4	(d) a1-b1, a2-b2, a3-b3, a4-b4
(e) a1-b1, a2-b4, a3-b2, a4-b3	

14) Which of the following is/are **not** true with regard to quality management in a project?

(a) It is most important that top management be quality minded.
(b) Management need not take responsibility for creating, supporting and promoting quality programs.
(c) Quality should be of concern at all stages of a project.
(d) Functionality, efficiency, reliability, maintainability, portability and usability are six good qualities of a program.
(e) Portability refers to the ability of software to be transferred to a different environment.

Questions 15 and 16 involve filling the blanks in the following paragraph that partially describes the requirements of a Quality Management System (QMS).

The QMS of the BS EN ISO 9001:2000 is built on the following principles. The first is an **...(A)...** by an organization of the needs of their **...(B)...** so that they can meet, or even exceed those requirements. The second is the **...(C)...** to provide unity of purpose and direction needed to achieve **...(D)...** objectives. The third is the involvement of staff at all levels. The fourth is a focus on **...(E)...** carried out which create delivered products and services. The fifth is the continuous **...(F)...** of processes. The sixth is decision-making based on factual **...(G)...** The seventh is building mutually beneficial **...(H)...** with suppliers.

15) The most suitable words for **A,B,C** and **D** respectively are

(a) assurance, suppliers, ability, profit.
(b) undertaking, auditors, desire, leadership.
(c) authorization, competitors, motivation, profit.
(d) understanding, customers, leadership, quality.
(e) understanding, suppliers, ability, supplier.

16) The most suitable words for **E,F,G** and **H** respectively are

(a) processes, improvement, evidence, relationships.
(b) interviews, removal, quality, contracts.
(c) reviews, documentation, replication, deals.
(d) writings, questioning, elimination, documentation.
(e) contracts, approval, needs, profits.

17) Which of the following is/are **not** true?

(a) It is important to select the best people for jobs and then instruct them in the best methods.
(b) It would be good if the employees consider work as natural as rest or play and they like it.
(c) The team leader need not assess the training needs of his team members.
(d) It is good to improve productivity by encouraging reuse of existing software components.
(e) Being flexible and keeping the common goals of the team in mind all the time, will help a person to become a good team member.

18) Which of the following is/are **not** likely to improve staff motivation?

(a) good work environment
(b) manager not having specific goals
(c) feedback to staff on the work that they do
(d) job enlargement
(e) job enrichment

19) Which of the following is/are **not** true?

(a) Project management is a process of constant communication and negotiation.
(b) Getting project information to the right people at the right time and in a useful format is important.
(c) Senior management need not set high expectations and lead by example with regard to quality presentations and reports.
(d) *Status reports* address where the project stands in terms of meeting scope, time, and cost goals.
(e) *Progress reports* describe what the project team has accomplished during a certain period of time.

20) Which of the following will **not** help to run effective meetings?

(a) defining the purpose and intended outcome to the meeting when planning it
(b) determining who should attend the meeting when planning it
(c) at the beginning of the meeting, restating the purpose of the meeting and stating any ground rules which should be followed
(d) designating someone to take minutes, keeping the minutes short and focussing on the crucial decisions and action items from the meeting in the minutes
(e) not distributing an agenda before the meeting

21) Which of the following is/are **not** true with regard to risk management in a project?

(a) Identifying and discussing risk as early as possible in a project's life is not important.
(b) *Risk identification* consists of listing all of the risks which can adversely affect the successful execution of the project.
(c) *Risk estimation* consists of assessing the likelihood and impact of each risk.
(d) *Risk planning* consists of drawing up contingency plans and, where appropriate, adding these to the project's work-breakdown-structure.
(e) *Risk monitoring* need not be an ongoing activity as the importance and likelihood of particular risks will never change as the project proceeds.

22) The following two groups **A** and **B** are connected to risk management in that **A** contains risks and **B** some management strategies. A matching of the items in group **A** with appropriate ones in group **B** is required.

A	**B**
a1 personnel shortfalls	b1 user involvement
a2 developing the wrong user interface	b2 incremental prototyping
a3 unrealistic time and cost estimates	b3 multiple estimation techniques
a4 late changes to requirements	b4 staffing with top talent
a5 shortfalls in externally supplied components	b5 staff training
a6 development technically too difficult	b6 quality assurance procedures

A correct matching is

> (a) a1-b1, a2-b2, a3-b3, a4-b4, a5-b5, a6-b6   (b) a1-b4, a2-b1, a3-b3, a4-b2, a5-b6, a6-b5
> (c) a1-b3, a2-b4, a3-b5, a4-b6, a5-b2, a6-b1   (d) a1-b6, a2-b4, a3-b3, a4-b2, a5-b1, a6-b5
> (e) a1-b5, a2-b3, a3-b1, a4-b6, a5-b4, a6-b2

23) Which of the following is/are true with regard to *fixed price contracts* when compared with *time and materials* contracts?

> (a) Customer is aware of the price of the system.
> (b) Supplier is likely to have the motivation to manage the delivery of the system in a cost-effective manner.
> (c) It is not difficult to change the requirements.
> (d) The quality of the software can suffer.
> (e) The supplier will have to absorb the risk for any errors in the original estimate.

24) Which of the following is/are true with regard to *time and materials contracts* when compared with *fixed price contracts*?

> (a) Customer is charged at a fixed rate per unit of effort.
> (b) Changing requirements is difficult.
> (c) Supplier absorbs all risks associated with poorly defined or changing requirements.
> (d) Supplier may have the incentive to work in a cost-effective manner.
> (e) Better quality software can be produced.

25) Which of the following is/are **not** true?

> (a) An effective project manager must lead by example.
> (b) It is not advantageous for a project manger to be technically competent.
> (c) Management, leadership, communication and political skills are desirable to become a successful project manager.
> (d) Successful project scheduling is not a simple sequence.
> (e) A key factor in project success is having clear objectives.

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