



**UNIVERSITY OF COLOMBO, SRI LANKA**



**UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING**



**DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)**  
**Academic Year 2006/2007 – 2<sup>nd</sup> Year Examination – Semester 4**

***IT4202: Software Project Management***

***PART 2 - Structured Question Paper***

**18<sup>th</sup> August 2007**  
**(TWO HOURS)**

**To be completed by the candidate**

BIT Examination Index No: .....

**Important Instructions:**

- The duration of the paper is **2 (Two) hours**.
- The medium of instruction and questions is English.
- This paper has **3 questions** and **13 pages**.
- **Answer ALL 3 questions**. Question **1** carries **50 marks** and the **other two** questions carry **25 marks each**.
- **Write your answers** in English using the space provided **in this question paper**.
- Do not tear off any part of this answer book.
- Under no circumstances may this book, used or unused, be removed from the Examination Hall by a candidate.
- Note that questions appear on both sides of the paper.  
If a page is not printed, please inform the supervisor immediately.

**Questions Answered**

Indicate by a cross (X), e.g. 

X
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 the question numbers of the questions answered.

<b>To be completed by the candidate by marking a cross (x).</b>	<b>1</b>	<b>2</b>	<b>3</b>	
<b>To be completed by the examiners:</b>				

- 1) **This question is based on the following case study.**

## Case Study

The Ministry of Social Services of the Government has decided to implement a web system called *NeedMatch*. People and institutions which have needs of money, items and services will submit details of their situation and needs to the system. Government officials will then verify these requests and if genuine, will make them accessible on the system for public assistance with urgency ranks for the needs. The donors will then be able to commit money and services for the need requests of their choice. The donors can commit for either total or partial fulfilment of the needs. The commitments would be dynamically updated on the system.

Proposals have been called for by the Ministry for this project. The successful supplier will have to provide the database server hardware and database management system (DBMS) software, the interface software and the business logic software that would link the interface software with the database. The system is **not** required to handle the actual payments at present. The supplier will have to provide user manuals and also training for the staff. The supplier will have to finish the project by 30<sup>th</sup> November 2007.

The software development company that you work for has decided to send a proposal for this project and you have been appointed the manager for that effort. The company has decided to build the interface and the business logic software in-house and to buy from an external supplier the DBMS software.

- (a) List important stakeholders in this project, the criteria which must be met for its success and the deliverables of the project.

**(04 marks)**

**ANSWER IN THIS BOX**

Stakeholders:

Criteria for success:

Deliverables:

- (b) Complete the following table for the project. In the **Activity** column, list the level-1 Work-breakdown-structure activities. In the **Duration** column, list the activity duration in **days**. In the **Precedents** column indicate the other activities which must be performed before the corresponding activity on the row can start. (Assume that the project starts on 3<sup>rd</sup> September 2007. Thus there are **62 working days** till 30<sup>th</sup> November 2007. Note that your answer may or may not use all the rows in the table.)

**(11 marks)**

[illegible]

(c) Draw an activity network diagram for this project.

(10 marks)

**ANSWER IN THIS BOX**

(d) Describe the method to find the critical path of the diagram that you drew for (c) above.

(03 marks)

**ANSWER IN THIS BOX**

(e) Assuming that the development software platform is available at your company, list the **other** resources which will be required for the **interface and business logic software development work of this project** along with the expected level of demand and cost for each resource.

(07 marks)

**ANSWER IN THIS BOX**

- (f) Estimate the total cost for the **interface and business logic software development work** of this project using your answer for (e) above.

**(03 marks)**

**ANSWER IN THIS BOX**


- (g) Describe a way to make a budget for this project.

**(03 marks)**

**ANSWER IN THIS BOX**


(h) List critical risks of this project and their management strategies.

**(09 marks)**

[illegible]

- 2) (a) Explain ways to achieve each of the good qualities, namely, *efficiency*, *maintainability* and *portability* in a software product.

(06 marks)

**ANSWER IN THIS BOX**

Efficiency:

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Maintainability:

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Portability:

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- (b) *Efficiency, maintainability and portability* are three qualities which are desirable in a software product. Discuss **four (04)** other qualities which you consider to be **important** in a software product. **(05 marks)**

**ANSWER IN THIS BOX**

- (c) Software projects generally follow several **sequential** stages such as analysis, design, coding and testing. It is recommended that errors be removed by careful examination of the deliverables at each stage **before** they are passed to the next. Discuss.

**(04 marks)**

**ANSWER IN THIS BOX**

- (d) List typical items which should be brought under configuration control in a project and list duties that a project manager would assign to a *configuration librarian*.

**(10 marks)**

**ANSWER IN THIS BOX**

Typical items which should be brought under configuration control

Duties of a configuration librarian

- 3) (a) *Making everybody a winner* is a good concept to follow in software project management. As a project manager of a software development company, explain how you would make your employer and your team members all win.

(05 marks)

**ANSWER IN THIS BOX**

Employer:

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Team members:

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- (b) Do you recommend staff to regularly work overtime to finish projects? Discuss.

(04 marks)

**ANSWER IN THIS BOX**

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(c) Give the key points in a typical communication management plan.

(09 marks)

**ANSWER IN THIS BOX**

Handwriting practice area with horizontal dashed lines.

- (d) Assume that your firm has decided to get a supplier to provide a piece of application software that you require for your project. Outline the stages which you would follow in the contract placement process from the decision to outsource to the actual selection.

**(07 marks)**

**ANSWER IN THIS BOX**

[illegible]

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