

**UCSC****University of Colombo, Sri Lanka***University of Colombo School of Computing***DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY
(EXTERNAL)**Academic Year 2021— 2nd Year Examination — Semester 4**IT4306 — Information Technology Project Management***Part 2 - Structured Question Paper*

(1 Hour)

To be completed by the candidate**Index Number**

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Important Instructions

- This paper has **two (2) parts, Part 1 and Part 2**.
- The duration of this part (Part 2) is **1 Hour**.
- The medium of instructions and questions is English. Students should answer in the medium of English language only.
- This paper has **2 questions on 4 pages**. Answer **both** questions.
- This paper consists of 100 marks and all the questions will carry equal marks.
- **Write your answers on and only on the space provided** on this question paper.
- Do not tear off any part of this answer book. Under no circumstances may this book (or any part of this book), used or unused, be removed from the Examination Hall by a candidate.
- Questions appear on both sides of the paper. If a page is not printed, please inform the supervisor/invigilator immediately.
- Any electronic device capable of storing and retrieving text, including electronic dictionaries and mobile phones, are **not allowed**.
- Non Programmable Calculators are allowed.
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**To be completed
by the examiners**

1	
2	
Total	

1. ABC industries have undertaken a government project to automate the National Identification Issuing process of Sri Lanka. The project is to complete within four (4) years, and the project's initial investment is 200,000 LKR (Two Hundred Thousand Sri Lankan Rupees). For each subsequent year, the company will incur 10%, 7.5%, 5% and 2.5% of the total costs as running costs.

- a) If the discount factor is at 8%, compute the discarded costs.

[12 marks]

	YEAR				
	0	1	2	3	4
Costs	200,000.00	20,000.00	15,000.00	10,000.00	5,000.00
Discount Factor	1	0.93	0.86	0.79	0.73
Discounted Costs	200,000.00	18,600.00	12,900.00	7,900.00	3,650.00

- b) The company receives benefits as a percentage of the initial investment each year. The rates are 50%, 75%, 100% and 120% of the initial investment in that order. If the discount factor is at 8%, compute the discarded benefits.

[08 marks]

	YEAR			
	1	2	3	4
Benefits	100,000.00	150,000.00	200,000.00	240,000.00
Discount Factor	0.93	0.86	0.79	0.73
Discounted Benefits	93,000.00	129,000.00	158,000.00	175,200.00

- c) What is the Net-Present Value of the Project (NPV)?

[03 marks]

NPV	=	Total Discounted Benefits – Total Discounted Costs
	=	555,200 – 43,050
	=	512,150

d) What is the Return on Investment of the project at the end of the fourth year?

[02 marks]

$$\begin{aligned}\text{ROI} &= (512,150 - 43,050) / 43,050 \times 100 \\ &= 1,189.7\%\end{aligned}$$

2.

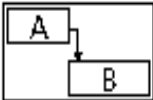
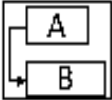
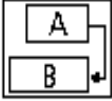
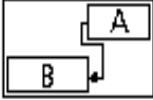
a) List four (4) dependencies found among information technology project activities.

[04 marks]

1. Mandatory dependencies
2. Discretionary dependencies
3. External dependencies
4. Internal dependencies

b) Illustrate graphically using the two tasks, A and B, the four (04) task dependencies that can occur among project tasks.

[05 marks]

Task dependency	Example	Description
Finish-to-start (FS)		Task (B) cannot start until task (A) finishes.
Start-to-start (SS)		Task (B) cannot start until task (A) starts.
Finish-to-finish (FF)		Task (B) cannot finish until task (A) finishes.
Start-to-finish (SF)		Task (B) cannot finish until task (A) starts.

Only the example part of the column is required for the answer.

Task dependencies will be listed in the answer box where the students are required to only draw the graphical illustration.

+1 mark for each correct illustration and +1 for overall correctness of all four illustration.

- c) The descriptions below explain a project management concept. Mention the appropriate project management concept in the space provided. **Please fill in the cell in front of each concept and not the blanks in the description.**

[16 marks]

1	A _____ for a project is the series of activities that determine the earliest time by which the project can be completed	Critical path
2	_____ is the amount of time an activity may be delayed without delaying a succeeding activity or the project finish date.	Slack / Float
3	_____ is the amount of time an activity can be delayed without delaying the early start date of any immediately following activities.	Free Slack/ Free Float
4	A _____ through the network diagram determines the late start and late finish dates for each activity.	Backward pass
5	_____ is a technique for making cost and schedule trade-offs to obtain the greatest amount of schedule compression for the least incremental cost.	Crashing
6	_____ is a process for identifying and modeling business events, who initiated them, and how the system should respond to them.	Use case modelling
7	A _____ is a meeting held at the beginning of a project so that stakeholders can meet each other, review the goals of the project, and discuss future plans.	Kick-off meeting
8	The purpose of _____ is to ensure that the project will satisfy the needs for which it was undertaken.	Project Quality Management
