



SLIATE

SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION

(Established in the Ministry of Higher Education, vide in Act No. 29 of 1995)

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Higher National Diploma in Information Technology Second Year, First Semester Examination – 2019 HNDIT2302 IT Project Management

Instructions for Candidates:
Answer only **04 Questions**
All questions carry equal marks

No. of questions : 05
No. of pages : 03
Time : Two (02) hours

Q1) [Total 25 Marks]

- Define the term "Project". What are the main attributes of an IT Project? (05 Marks)
- What are the **triple constraints** of a project? (03 Marks)
- A library at ATI is considering the implementation of a computer based system to handle book loans at the library. State four stakeholders in such a project. (04 Marks)
- Briefly describe the important characteristics of IT projects which make this harder to manage compared to other types of projects. (06 Marks)
- What is Project Life cycle and state the phases of project life cycle including one deliverable of each phase? (07 Marks)

Q2) [Total 25 Marks]

- Briefly explain the purpose of project charter for a project and the documents that you are used to prepare the charter document. (04 Marks)
- State three Project Integration Management Processes. (03 Marks)
- Mention three main objectives of Integrated Change Control? (03 Marks)
- A sum of \$400 000 invested today in an IT project may give a series of below cash inflows in future. Should we accept or reject the project? Justify your answer. (10 Marks)

Year	Cash inflow	Discount factor
1	\$20 000	0.926
2	\$100 000	0.857
3	\$100 000	0.794
4	\$200 000	0.735
5	\$150 000	0.681

18 520
85 700
79 400
147 000
102 150
432 770

570 600 3.443

- If estimates for total discounted benefits for a project are \$120,000 and total discounted costs are \$100,000, what is the estimated return on investment (ROI)? (5 Marks)

120 000
100 000
20 000

Q3) [Total 25 Marks]

SLIATE has decided to purchase a new student management system. The main tasks and durations have been identified as follows:

Activity	Duration in Days		
	Optimistic Estimate O	Most Likely Estimate M	Pessimistic Estimate P
A Select Hardware	4	6	8
B System Configuration	2	4	6
C Install Hardware	1	3	5
D Data Migration	1	4	7
E Design Office procedures	2	3	4
F Recruit office staff	6	10	14
G Train users	1	3	5
H Install and test	1	2	3

- i. Draw a work breakdown structure (WBS) diagram for the project, showing all the planned tasks. This WBS should contain at least two levels. (04 Marks)

- ii. Calculate the expected time for each activity (A – H). (04 Marks)

Hint: The time expected is calculated as $TE = (O + 4M + P) / 6$

- iii. The dependencies between the eight activities (A – H) listed above are:

- A, B and F may start immediately
- C depends on A
- D and E, depend on B
- G depends on E and F
- H depends on C and D
- The project will be completed when both activities H and G have been completed.

Earliest Start	Duration	Earliest Finish
Activity Label, Activity Description		
Latest Start	Float	Latest Finish

British standard BS 4335

- iv. Find the critical path and project duration. (05 Marks)

Q4) [Total 25 Marks]

- 2 i. Name three cost estimation tools and techniques. (03 Marks)
- ii. Define the following Basic Principles of Cost Management?
a) Life cycle costing
b) Cash flow analysis (04 Marks)
- 5 iii. Suppose that a software project was estimated to be 600 000 line of codes. Calculate the effort and development time for organic mode using basic COCOMO equation.
Hint: Effort (E) = $a * (\text{size})^b$, Development Time = $c * E^d$; where a, b, c and d equals to 2.4, 1.05, 2.5 and 0.38 respectively. (05 Marks) KLMC
- 6 iv. Explain the difference between quality control and quality assurance. (06 Marks)
- v. Being a project manager you need to spend a significant amount of time in communications. What are the three basic elements of a communications mode?
4 Briefly describe your suggestions to improve project communications. (07 Marks) PIL UF

Q5) [Total 25 Marks]

- 3 i. What is meant by Procurement Management? (03 Marks)
- 12 ii. State the most significant characteristics of effective and ineffective project managers. Give two points per each. (04 Marks)
- 12 iii. What are the causes of project failure that occur later in the project? (04 Marks)
- iv. Define the term "Risk Response Planning" and give four main strategies in risk response planning? (05 Marks)
- v. Suppose you are the project manager of a software project. List three general software project risks and describe the risk reduction techniques that can be applied to them. (09 Marks)