

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]

i. Define the term "Project". What are the main attributes of an IT Project? (05 Marks)

ii. What are the triple constraints of a project?

(03 Marks)

iii. 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)

iv. Briefly describe the important characteristics of IT projects which make this harder to manage compared to other types of projects. (06 Marks)

v. 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]

i. Briefly explain the purpose of project charter for a project and the documents that you are used to prepare the charter document. (04 Marks)

ii. State three Project Integration Management Processes. (03

(03 Marks)

iii. Mention three main objectives of Integrated Change Control?

(03 Marks)

iv. 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
		2.663

197000

432,770

18520 85700 79400

v. 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

Q3) [Total 25 Marks]

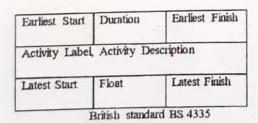
SLIATE has decided to purchase a new student management system. The main tasks and durations have been identified as follows:

	Duration in Days		
Activity	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. (12 Marks)



iv. Find the critical path and project duration.

(05 Marks)

or V

Q4) [Total 25 Marks]

- 1. 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)

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) = $a * (size)^b$, 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)

b iv. Explain the difference between quality control and quality assurance.

(06 Marks)

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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? Briefly describe your suggestions to improve project communications.

PIL (1F. (07 Marks)

Q5) [Total 25 Marks]

3 i. What is meant by Procurement Management? (03 Marks)

ii. State the most significant characteristics of effective and ineffective project managers. Give two points per each. (04 Marks)

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?

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)