



SLIATE

SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION
(Established in the Ministry of Higher Education, vide In Act No. 29 of 1995)

Higher National Diploma in Information Technology

Second Year, Second Semester Examination – 2022

HNDIT4032: IT Project Management (New)

Instructions for Candidates:

Answer five (05) questions only.

All questions carry equal marks.

No. of questions : 06

No. of pages : 03

Time : Three (03) hours

Question 01. (Total 20 marks)

- i). Define the term of project. (02 marks)
- ii). State three (03) special characteristics of an IT project. (03 marks)
- iii). Why is project management necessary in today's world? (03 marks)
- iv). Who are project stakeholders? State two (02) examples. (04 marks)
- v). State four advantages of project management and explain each advantage. (08 marks)

Question 02. (Total 20 marks)

- i). What is meant by Project Integration Management? (02 marks)
- ii). More appropriate project selection is important task of an organization. State three (03) methods for selecting a project. (03 marks)
- iii). An organisation considers specific strengths and opportunities when selecting a project. Describe two strengths and two opportunities. (04 marks)
- iv). What are the three (03) main objectives of integrated change control? (03 marks)
- v). Project A and Project B are two five-year projects. Initial investment cost of both projects is Rs 50,000. Project A's cash flow of end of year is calculated as Rs.17,000, Rs.25,000, Rs.32,000, Rs.20,000, and Rs.15,000 respectively. Project B's cash flow is forecasted equal amount in each year Rs 20,000.
 - a) Calculate the discounted cash flow to both project and find the NPV (Net Present Value) for the rate of 15%. (06 marks)
 - b) Based on the NPV analysis, which project would you select? Briefly explain the reason. (02 marks)

Question 03. (Total 20 marks)

- i). List two (02) approaches that can be used to develop Work Breakdown Structures. (02 marks)
- ii). Briefly explain four (04) types of task dependencies in MS project by using suitable diagrams. (04 marks)

iii). Describe the following terms briefly.

(04 marks)

- a) Milestone
- b) Gantt Chart

iv). Draw the precedence diagram/ Activity on Node (AON) network diagram for a software company project. In this task, you have prepared an outline of main activities as follows.

Activity	Duration	Predecessor
A	12	-
B	7	A
C	11	A
D	8	A
E	6	A
F	10	B
G	9	C
H	14	D, F
I	13	E, G
J	16	H, I

a) Draw the precedence diagram/ Activity on Node (AON) network diagram.

(06 marks)

Activity Node:

ES	D	EF
Activity Name		
LS	TF	LF

ES - Early Start
EF - Early Finish
D - Duration
LS - Late start
LF - Late Finish
TF - Total Float

b) Find the critical path.

(02 marks)

c) Will it affect to the project duration if the activity 'D' takes 12 days to complete? (01 marks)

d) What is the minimum duration needed to complete the project?

(01 marks)

Question 04. (Total 20 marks)

- i). List three (03) processes in Project Cost Management? (03 marks)
- ii). Briefly explain two (02) basic techniques for cost estimate. (04 marks)
- iii). Explain two (02) types of testing used in IT product development life cycle. (04 marks)
- iv). Describe the following terms, (04 marks)
 - a) Quality Assurance
 - b) Resource Loading

- v). Size of a development project is 30,000 Line of Codes. Find the value for average staff for original model using basic COCOMO model. (05 marks)

[Hint: Effort (E) = $2.4 \times (\text{size})^{1.05}$, TDEV = $2.5 \times (E)^{0.38}$]

Question 05. (Total 20 marks)

- i). What is meant by project communication management? (02 marks)
- ii). What are the benefits of *outsourcing* in procurement management? (04 marks)
- iii). Identify four (04) skills required for a project manager. (04 marks)
- iv). State four (04) risk identification tools and techniques. (04 marks)
- v). After identifying and quantifying risks, you must decide how to respond to the risk. What are the three (03) risk management strategies? Briefly explain. (06 marks)

Question 06. (Total 20 marks)

- i). What is meant by term of agile? (02 marks)
- ii). Specifies any four principles of agile manifesto. (04 marks)
- iii). State four (04) examples for agile software methodologies. (04 marks)
- iv). What are the differences between traditional and agile project management approach? Mention four (04) differences. (04 marks)
- v). *Scrum* is the leading agile development method for completing projects with a complex, innovative scope of work. Explain the scrum framework by using a suitable diagram. (06 marks)