



Sri Lanka Institute of Information Technology

B.Sc. Honours Degree in Information Technology

Final Examination  
Year 2, Semester 2 (Mock Paper)

IT2090 – Professional Skills

Duration: 2 Hour

Mock Paper

(2 Questions Only, Regular Paper has 04 Questions)

Instructions to Candidates:

This paper is preceded by 10 minutes reading period. The supervisor will indicate when answering may commence.

This paper has 4 questions.

Answer all questions in the booklet given.

The total marks for the paper is 100.

This paper contains 5 pages, including the cover page.

Electronic devices capable of storing and retrieving text, including calculators and mobile phones are not allowed

## Question 01

[25 Marks]

- I. Majority of the group members in one 2<sup>nd</sup> year project team has been complaining frequently about their team leader, Sanath. The lecturer in charge listen to the students who came to complain and noted down following concerns about Sanath.

Sanath always;

- ✓ - tells the team members how to do their tasks
- provides information on a “need to know” only basis – **not cooperative**
- must attend and control every team meeting, even sub team meetings - **dominant**
- discourages conversations on any variety of issues (problem solving, etc.) and makes decisions himself and tells the team what the decision is (with no explanation as to why) – **not flexible**
- has no tolerance for “small talk” during team meetings - **dominant**
- many of the team no longer want to work with the leader and some are afraid of him. – **intimidating/ has no compassion**

a. Describe 4 issues you can identify in Sanath’s leadership.

- Sanath doesn’t cooperative because he doesn’t provide every information to the team.
- Since he makes decisions only by himself and not allows for “small talk” during the meetings, he is a dominant.
- He intimidates team members, and he has no compassion.
- He is not flexible, and he doesn’t explain the reasons for his decisions to the team members

[4 marks]

b. Suggest 4 actions the lecturer in charge can take to fix the issues the team is having with the team leader?

- The LIC can advise Sanath to be flexible in decision making
- He can explain the team leadership responsibilities such as guide the team, provide the structure etc.
- Suggest a leadership and management training.
- Find a mentor for Sanath, to learn positive leadership role-model.
- Advise him to volunteering in clubs (such as LEO club, IEEE, Rotaract) and get leadership skills.

[6 marks]

- II. You are working in a software development team of NewAsia.com. You want your company to buy a new software that will help your work. Company got two quotations from two software vendors and you have been assigned to decide between two options. The first is more expensive but has better reviews and the second has fewer features but it is within the budget. Describe a decision-making tool you can use to decide the suitable software.

Goal - buy a new software that will help work of company.

Criteria Matrix

Because there are 2 options, and both have different criteria.

[5 marks]

III. Describe three diverse factors that affects team diversity and how they affect to team performance.

Religious Diversity – it will bring lot of benefits by getting many viewpoints in decision making.  
Gender diversity – it will improve organize reputation and staff retention. As well as it enhances team collaboration.

Age diversity – brings different mindsets, increase flexibility of team members, strengthen new ideas and fast execution [6 marks]

IV. Discuss pros and cons of diversity in workplace.

Pros –

- Talents, skills, and experiences.
- It creates innovation.
- Language skills can open doors for a business.
- It grows your talent pool.
- Improves employee performance

Cons –

- Discrimination
- Stereotyping and preconception
- High turnover rate
- Absenteeism
- Conflicts in team members
- Increase tension
- Productivity Decrease

[4 marks]

## Question 02

[25 Marks]

- I. Suranga had an idea about designing a new water purifier for the past few years. This year he was able to implement it and tested for several times. He has done research to figure out defects and found his new creation has only 2% of a failure rate. Now he wants to start a business with this and sell his creation to the open market. One of his friends told him about the concept of Intellectual property.

a) Define the term “Intellectual Property”

Intangible asset with exclusive ownership for a limited period (2 marks)

b) When is the right time for Suranga to consider IP protection?

Now (2 marks)

c) What are the types of IP assets? Briefly explain how they are related to Suranga’s new creation and his new business.

Patent – Suranga must get patent for the water purifier

Trademark – Suranga must use unique brand name and it should

Geographical indications -

Industrial design -

Copyright – he can get copyright IP protection to protect his mechanical process of the product.

Trade secrets - (8 marks)

d) Suranga wants to do a PEST analysis for this business. What is the importance of PEST analysis at the start of a business?

It enables you to spot business or personal opportunities and gives advanced warning of any significant threats.

(5 marks)

- II. Subhashini is a small-scale entrepreneur, manufacturing chocolates under the name “Yummy Chocos”. She had started this venture in the year 2012. She attended various start-up meetings where several Angel Investors and Venture Capitalists shared their success stories and mentored the new budding entrepreneurs. In one of these sessions, she heard a mentor say that every entrepreneur should constantly and consistently aim to improve the products and services already existing in the market.

Taking this cue, she decided to introduce wafers, lollipops, and hard candy under the same brand name.

Explain the benefits of Subhashini’s decision.

Subhashini got more opportunities by getting this decision. Because of that, she could improve her business and gain the income. (8 marks)

### Question 03

[25 Marks]

- I. Assume you are working in a company as a software engineer. Your team lead informed your team that next project that comes after three months will use Ruby on rails. Ruby on rails is a web-application framework that includes everything needed to create database-backend web applications according to the Model- View- Controller (MVC) architecture, Front end development using this framework is like HTML.
- a. Assuming you will continue your employment with this this company, do a SWOT analysis to identify actions you can take to prepare yourself for this assignment  
S – I have experience in MVC architecture and HTML  
W – I have no experience in Ruby on rails framework  
O - Ruby on rails framework includes everything needed to create database-backend / I get a chance to learn Ruby on rails framework  
T - next project that comes after three months will use Ruby on rails and I don't have enough time to study [8 marks]
- b. Derive four actions you can take according to the above analysis.  
Learn Ruby on rails fundamentals and do tutorials within 1<sup>st</sup> month.  
After studying Ruby, implement a simple project including CRUD.  
[4 marks]
- II. Dr Meredith Belbin studied teamwork for many years, and he famously observed that people in teams tend to assume different "team roles. ' He defined a team role as "a tendency to behave, contribute and interrelate with others in a particular way" and named nine such team roles that underlie team success.
- a. What are the three groups according to Dr. Belbin that above roles can be categorized?  
Thought focused roles  
People focused roles  
Action focused roles [3 marks]
- b. Select one such group and describe three team role comes under that group.  
Thought focused roles  
- Plant – very creative people  
- Monitor evaluator – thinkers, but not people friendly  
- Specialist – Master in a particular domain  
People focused roles  
- Coordinators – very good as team leaders or project managers because they have good understand on team members and their skills and he assign work to them according to their skills  
- Resource investigators – this people have lot of connections  
- Team workers -  
Action focused roles  
- Implementers – these people implement the idea which thought focused role given  
- Shapers – focus on the quality of the output, like QA  
- Completer - finishers - good at final touch up  
[6 marks]
- III. Describe the importance of "Reflective Practice" to a successful professional career.  
Considering the past failures, we avoid future failures and do our tasks efficiently by reflective practice. [4 marks]

#### Question 04

[25 Marks]

- I. Describe 4 different advancements related to information Technology that impacted modern society.
- Connectivity and digital world
- Online learning
  - Social network
  - Mobile phones
- Video sharing – share our talents and have entertainment
- E-commerce – sell our items through the internet
- Free information - [4 marks]
- II. Describe why ethics are important to a professional.
- Helps people to make moral decisions
- Describes how people do act and how people should act [3 marks]
- III. Code of Ethics is an important attribute in any profession. All professional bodies have 'stipulated "Code of Ethics" for their members.
- a. Explain the purpose of "Code of Ethics"
- To motivate members of an association to behave in certain ways. [3marks]
- b. Describe three focus areas of "Code of Ethics" of any computing professional body that is familiar to you.
- CSSL
- Professionalism – respect all the members in the society while protecting the safety, welfare, and health
  - Professional Development – work in professional interests to develop career as well as help the colleagues to develop their profession
  - Added value to Sri Lanka – work diligent to strive to enhance the value of Sri Lanka, protect the public from misinformation and misinterpretation.
  - Honesty – maintain honesty in all dealing
  - Competence – accept the responsibilities which cover your areas of competence. [9 marks]
- IV. Nimal is a member of Computer Society of Sri Lanka, the professional body of computing professionals. Nimal's web design company got a project from a pharmaceutical company which needed a website to sell few banned drugs. At the time of requirement gathering, Nimal came to know about these drugs by chance. What are the actions that Nimal can take as a professional? Explain your arguments.
- Nimal can refuse the project since by this project, the society get misinformation and misinterpretation about the company. [6 marks]

**End of Paper**