

University of Ruhuna- Faculty of Technology
Bachelor of Information and Communication Technology Honors Degree
Level 2 (Semester I) Examination, June/July 2023
Academic year 2021/2022

Course Unit: ICT2142, Professional Issues in IT (Written)

Duration: 02 hours

This question paper contains *four (04)* pages including this instruction page.

IMPORTANT INSTRUCTIONS:

1. The medium of this examination is *English*.
2. This is a *Closed Book* examination.
3. This Examination consists of *four (04)* questions that are given equal marks.
4. You must *answer all four (04)* questions.
5. You are allowed to use *non-programmable calculators* in this examination.

01)

- a) Write short notes on following terms related to the concepts of Law.
 - (i) Criminal Law
 - (ii) Jurisdiction
 - (iii) Civil Law
- b)
 - i) Briefly describe the concept of '**Code of Conduct**' related to professionals.
 - ii) Write down **two (02)** professional bodies related to professionals in Sri Lanka.
 - iii) Define the term '**Reservation of Function**' and briefly describe the concept by using a suitable example.
- c) "**Substantial education and training are essential in order to practice the Software Engineering Profession.**"
Justify above statement by using **two (02)** examples.
- d) "**Software engineering involves wider responsibilities than simply the application of technical skills.**"
Justify above statement by using your knowledge in the context of **Software Engineering**.

02)

- a) By using an example briefly describe the concept of an **organization**.
- b) Briefly describe the concept of '**Public Organization**' Give **one (01)** example for a **public organization**.
- c) Write down **four (04) Business Structures** which can be seen in Sri Lanka relevant to the commercial organizations.
- d) Write down **three (03)** characteristics of a limited liability company.
- e) Differentiate **executive directors** and **non-executive directors** by using **two (02)** key points.
- f)
 - i) "**It is very difficult to start any commercial venture without having some money in the hand.**"
Are you agreeing with above statement? Justify your answer using **two (02)** key points.
 - ii) Assume that, you are going to start a small coffee shop in your hometown. Write down **two (02)** finance sources that can be used to find capital for starting your business. Briefly describe how you are going to find capital for your business under each listed source.

03)

a)

- i) Write down **three (03)** main *organizational models*. Briefly describe each model.
- ii) *Structure by function is an important structuring principle used in organizational models.*
Briefly describe the concept of *structure by function* by using an example.
- iii) Differentiate *centralized company* and *decentralized company* by using **two (02)** key points.

b)

- i) *“Discrimination can be occurred on various grounds of points.”*
Write down **four (04)** grounds of points where discrimination can be occurred in an organization.
- ii) Briefly describe the concept of *direct discrimination*. Give **one (01)** suitable example for direct discrimination which can be occurred in an organization.
- iii) Describe **two (02)** possible ways how administrative body can avoid discrimination in the workplace.

c)

- i) Briefly describe the concept of a *contract*. Write down **three (03)** essentials in a contract.
- ii) Compare *Bespoke software* vs *Off the shelf software* by using **two (02)** key points.
- iii) Describe the importance of progress meetings for the completion of a *fixed price contract* by using **two (02)** key points.

04)

- a) A company was established in Sri Lanka to assemble laptops. They are going to introduce **three (03)** types of laptops to market named **Inspiron**, **Matebook** and **Vivobook**. The company operates in *weekdays* only. The company has recruited *experienced technicians to assemble laptops*. The total of **270 weekdays** are available for the *year 2023*. Technicians are entitled for **14 days annual leaves** and **07 days sick leaves**. There are **10 public holidays** available for the *year 2023*. The technicians have to work **10 hours per a day**.
 - i) Calculate the Total Revenue earning hours for the year 2023.
 - ii) By referring to the information given below which are related to the salary of a technician, Calculate the cost of the **three (03)** laptop models by using **Fixed Overhead** method.

Annual salary: **Rs.800 000**

EPF, ETF, Medical Insurance and other benefits: **10% of the annual salary.**

Annual overhead cost of the Company: **Rs.2 800 000**

Direct costs and expected sales of different laptop models are shown in below given **Table 1**.

Model	Cost of components (Rs.)	Time spending by a Technician (Hours)	Expected sales
Inspiron	60,000	10	100
Matebook	90,000	20	200
Vivobook	120,000	30	150

Table 1

- b) Assume that you are maintaining a small restaurant in Matara town. In order to maintain cleaning related tasks in the restaurant, you need to have a vacuum cleaner. You have two options (02) to get a vacuum cleaner for your restaurant. That is buying a new vacuum clear or rent out a vacuum cleaner from an external party. Out of the two options you want to get an idea on the most profitable option. One of your friends has suggested to apply Discounted Cash Flow (DCF) Analysis to find out the most profitable option for you.

A **new vacuum cleaner** will cost **Rs.60 000**. There will be **annual costs of Rs.3000** for maintenance. At the end of the **fourth year**, device could be **sold for around Rs.15 000**. The **interest rate** that the company pays on its **borrowings is 5%**. **Renting out cost** of the device **Rs.15 000 per year**. **All the costs are subject to inflation**, which is judged to be around **10% over the period**, but the **resale value of the device is the cash figure expected at the time**.

- i) Perform DCF analysis for the **two (02) options by copying the Table 2** to your answer script.

	Year 0	Year 1	Year 2	Year 3
Buying the Vacuum cleaner				
Purchase	(60000)	-	-	15000
Maintenance	(3000)	.....	.....	.....
Annual Cash Flow	(63000)	.....	.....	.....
Discount Factor	1	0.95	0.91	0.86
NPV of Annual Flow	(63000)	.....	.....	.....
Total NPV	.....		
Renting out the Vacuum cleaner				
Annual Cost	(15000)	.....	.....	.....
Discount Factor	1	0.95	0.91	0.86
NPV of Annual Flow	(15000)	.....	.....	.....
Total NPV	.....		

Table 2

- ii) By giving your reasons identify the most profitable option for you to get the Vacuum Cleaner for your business.

..... **End of the paper**.....