00340

THE OPEN UNIVERSITY OF SRI LANKA
B.SC. (IT) DEGREE PROGRAMME – 2026/2027
FINAL EXAMINATION
ISU4200 – PROFESSIONAL PRACTICES AND ETHICS
DURATION: TWO HOURS ONLY (2 HOURS)

Date: 01.07.2026 **Time: 09.30 am - 11.30 am**

INSTRUCTIONS TO CANDIDATES

Duration of the examination is **two (02)** hours.

This paper contains **seven (07)** questions and **four (04)** pages.

The students should answer **any five (05)** Questions Only.

All the questions carry equal marks.

Write your **index number** clearly on the **cover of the answer book** and on **all extra sheets used.**

Clearly indicate the **question numbers** you are attempting in your answer script.

Begin each answer on a **new page**.

All answers **must be written in English**.

Do not use red pens. Only **blue** or **black** pens are allowed for writing answers.

Tie all additional sheets securely to your main answer script before handing it in.

This is a closed-book examination. No reference materials, textbooks, or electronic devices are allowed.

Candidates are reminded to maintain **academic integrity**. Any form of **cheating or misconduct will result in disciplinary action.**

Answer any Five (05) Questions ONLY.

Question 01

Consider the following scenario:

A software development company is creating a mobile health application that collects sensitive patient data. During testing, it was discovered that the application has security vulnerabilities, but the management decides to release it to meet deadlines.

i. Explain the two (02) ethical issues involved in this situation. [04 marks]

ii. Identify and discuss the responsibilities of the software engineer in this case. [06 marks]

iii. Analyze five (05) potential consequences of releasing the software without fixing identified vulnerabilities. [10 marks]

Question 02

i. Define the term *Professional Ethics*. [04 marks]

ii. Compare and contrast *Code of Ethics* and *Code of Conduct* with three (03) suitable examples. [06 marks]

iii. Explain the importance of maintaining professional integrity in the IT industry. [05 marks]

iv. Describe how conflicts of interest can arise in software development and suggest five (05) ways to manage them. [05 marks]

Question 03

i. List four (04) key ethical principles applicable to IT professionals. [04 marks]

ii. Explain the significance of data privacy and confidentiality in modern systems. [06 marks]

iii. Compare the IEEE Code of Ethics and ACM Code of Ethics, highlighting the key similarities and differences between the two professional ethical frameworks. Discuss how each code guides the conduct of computing and engineering professionals. [10 marks]

Question 04

i. What is *analytical tool*? Briefly explain. [04 marks]

ii. Explain three (03) ways in which analytical tools contribute to effective decision-making in organizations. [06 marks]

iii. Evaluate five (05) factors that influence the successful adoption and integration of analytical tools within organizations. [10 marks]

Question 05

i. Define the concept of *Human-Computer Interaction (HCI)*. [04 marks]

ii. Discuss three (03) ways in which cultural differences influence user interface (UI) design. [06 marks]

iii. Discuss the role of User Centered Design (UCD) in developing effective software systems using five (05) examples. [10 marks]

Question 06

i. Define the term "*Risk*" in software development. [04 marks]

ii. Explain three (03) different types of risks in software development. [06 marks]

iii. Explain the importance of risk assessment in project management and discuss any three (03) strategies used to manage identified risks. [10 marks]

Question 07

i. List the four (04) main categories of Intellectual Property Rights and state the validity period of a Trademark in Sri Lanka. [05 marks]

ii. List the "7 Cs of Communication" that are essential for effective professional interaction.

[07 marks]

iii. Define the formula used to calculate total Risk and name the four (04) "Pillars" of risk evaluation.

[08 marks]

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