



UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)

Academic Year 2024 –3rd Year Examination – Semester 5

IT5206 – Professional Practice
Structured Question Paper

(TWO HOURS)

To be completed by the candidate

BIT Examination Index No:

Important Instructions:

- The duration of the paper is **Two (2) hours**.
- The medium of instruction and questions is English.
- This paper has **4 questions and 12 pages**.
- **Answer all questions.** All questions carry **equal** marks.
- **Write your answers** in English using the space provided **in this question paper**.
- Do not tear off any part of this answer book.
- Under no circumstances may this book, used or unused, be removed from the Examination Hall by a candidate.
- Note that questions appear on both sides of the paper.
If a page is not printed, please inform the supervisor immediately.
- All kinds of electronic devices including calculators are **not** allowed.
- *All Rights Reserved.*

Questions Answered

Indicate by a cross (x), (e.g.

x

) the numbers of the questions answered.

To be completed by the candidate by marking a cross (x).	Question numbers			
	1	2	3	4
To be completed by the examiners:				

Q1)

- a.) Briefly describe three (3) key management issues that are faced by HR Departments in IT organizations.

(06 Marks)

ANSWER IN THIS BOX

Finding and recruiting the right talent
Wellbeing of employees
Promoting inclusion and diversity in the workplace
Regulation & compliance
Skills gap
High Staff Turnover

- b.) Briefly Explain the following different organization structures with examples:

- I. Function based structure.
- II. Geography based structure.
- III. Product based structure.

(09 Marks)

ANSWER IN THIS BOX

Function based structure -A structure based on functions carried out in the organization.
Operations Division
Administration Division
Sales and Marketing
Research and Development

Geography based structure -Grouping activities together on a geographical basis
 Multinational companies that operate in a number of different countries usually have geographical elements in their structure
 Country, Region or Location based units

Product line structure -based around the different types of product that an organization produces
 Organizing themselves into operational divisions according to the products and service they produce
 any example based on different products or solutions

c.) Explain the steps involved in setting up an organization structure.

(10 Marks)

ANSWER IN THIS BOX

Plan the future
 Think about the past
 Build the organizational structure
 Fill in the People
 Balance authority and responsibility
 Fill in employee data and metrics
 Practice robust performance management of employees
 Review your organizational structure annually

a.) Companies have clearly defined Appraisal Schemes, and all the employees are generally going through appraisal processes for their rewards and career progression. Explain the importance of an Appraisal Process for an IT organization using four (4) key advantages.

ANSWER IN THIS BOX

- They measure employee performance against previously agreed goals
- set future objectives
- give staff guidance on their developmental and training needs
- Motivation for performing employees
- Give constructive feedback

- b.) Generally, IT companies have very comprehensive recruitment and selection processes. Most of the companies have built in Psychometric Assessments in their selection process. Explain the different types of Psychometric Assessments that are carried out in the selection process. (06 marks)

ANSWER IN THIS BOX

Ability tests -measure an individual's ability in a general area (ex: verbal or numerical skills)

Aptitude tests -measure a person's potential to learn the skills needed for the job

Personality tests -assess the characteristics of a person that significantly affect how they behave in their relationships with other people

- c.) Work Life Balance is discussed during job interviews and during work involvements. Discuss three (3) important advantages to both employees and the company of having proper Work Life Balance?

(03 Marks)

ANSWER IN THIS BOX

Interface is the intersection of work and personal life many aspects of one's personal life that can intersect with work including family, leisure, and health.

Work-life interface is bidirectional;
 1. work can interfere with private life
 2. private life can interfere with work
 Work-life balance is the equilibrium between personal life and career work

Long term retention
 Employee Satisfaction and Engagement

- d.) Training & Development is a key function that impacts the performance of employees and organizations. IT companies spend a considerable amount of time and budget on Training & Development. Explain four (4) key points explaining the importance of having consistent Training & Development plans for an IT organization in today's context.

(08 Marks)

ANSWER IN THIS BOX

The organization's productivity increases as a result
 employee motivation
 Employees that believe they are expanding their abilities tend to be
 more satisfied in their jobs
 increased staff retention

a.) Describe four (4) different types of Intellectual Property?

ANSWER IN THIS BOX

Describe following with good level of details - what they mean / examples

- Copyright,
- Patents
- Confidential information
- Trade marks

b.) Write down four (4) exclusive rights owned by a Software Copyright Owner?

(04 Marks)

ANSWER IN THIS BOX

The right to make copies of the work:

The right to adapt the work

The right to issue copies of the work to the public:

The right to rent or lend the work to the public

The right to perform, play or show the work in public

The right to broadcast the work

c.)

- I. What is defined as Confidential Information?
- II. How can a Non-Disclosure Agreement safeguard confidential information of an organization?

(07 Marks)

ANSWER IN THIS BOX

Information cannot be 'stolen' or shared without permission.

It is possible to take action in a civil court to prevent someone from using or revealing information that they have received in confidence.

The critical point is that the information must have been given to that person in circumstances that give rise to what is known as an obligation of confidence.

NDA is a legal binding between two parties and when you sign a NDA you are bound to keep any confidential information to yourself and they cannot be disclosed or share with any other party with approval.

A non-disclosure agreement (NDA) is an agreement that is specifically intended to set up an obligation of confidence.

For example, when two companies are discussing possible collaboration, each side will sign such a non-disclosure agreement to protect the information that they exchange.

Q4).

- a.) You are given a set of scenarios and a list of terms related to each scenario. These scenarios and terms are related to computer security and computer crime.

The list of terms: Spam, Phishing, Denial of Service (DoS) attack, Defamation, Ransomware, Child Phonography, BYOD, Vulnerability, Advanced Persistent Treat (APT).

Write the most suitable term from the above list against its respective description on the table given below. (18 Marks)

Description	Term
Nimal, who is a farmer in Mandalama, posted a false and misleading information about the Irrigation Engineer of the area on Facebook. As a result of this misleading post, the service of the Irrigation Engineer was suspended for two weeks.	Defamation
A Magistrate issued an order to the Telecommunication Regulatory Authority (TRC) to take steps to takedown a website since it contains some materials that are universally considered harmful.	Child Phonography
A female worker of a company makes a complaint since she was getting the same email messages over and over. As a result, she does not have space in her mailbox.	Spam
A company takes a policy decision to allow its employees to use their own devices during working hours. However, these devices should be used for any official work.	BYOD
It was revealed that a hacker gained access to Saman's computer by correctly guessing Saman's password. The password was Saman's date of birth.	Vulnerability
A hacker demands some money in crypto currency to provide the key to decrypt the data of five hacked computers.	Ransomware
No one can visit the website of an organization to place an order since there are very large number of malicious requests are being received by the servers.	Denial of Service (DoS) attack
A government has sponsored a group of hackers to hack into the critical infrastructure of a rival country. The hackers apply a combination of stealth, advanced hacking techniques, and continuous, long-term surveillance. Furthermore, these hackers use various tactics to evade detection and maintain unauthorized access over an extended period of time.	Advanced Persistent Treat (APT)
Suranga, an attacker, sends legitimate-looking emails urging the Nilani to login into her bank account to obtain a gift sent by her friend in the United Kingdom.	Phishing

b.) Discuss the difference between anonymous and pseudonymous postings.

(03 Marks)

ANSWER IN THIS BOX

Anonymous Postings: When you post something anonymously, nobody knows who you are. It's like having a secret identity, but it can sometimes make people say things without taking responsibility. People do this on certain websites and social media where they don't have to share their real names.

Pseudonymous Postings: With pseudonymous postings, you use a made-up name, not your real one. It's like having a nickname. The identity could be revealed by linking the two.

c.) Discuss two (2) responsibilities of the Internet Service Providers (ISP)s in allowing anonymous and pseudonymous postings.

(04 Marks)

ANSWER IN THIS BOX

1. Adhering to local laws
2. Protect the identity of the users, privacy of users
3. Protect the freedom of expression and safety of the publisher
4. Protect the security of the data

