



**UNIVERSITY OF COLOMBO, SRI LANKA**

**UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING**

**DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY ( EXTERNAL)**

Academic Year 2022 – 3<sup>rd</sup> 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.
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**Questions Answered**

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

1)

- (a) Briefly describe the term '
- organization**
- '. List
- TWO*
- (2) example organizations.

(05 Marks)

**ANSWER IN THIS BOX**

An organization is a group of people working together in a formal way

ex: Schools and Colleges, Hospitals, Banks

- (b) Identify and write down the correct type of
- commercial organizations**
- based on the given definitions. (04 Marks)

Definition	Type of Commercial Organization
i. An individual who runs their own business	<u>A sole trader</u>
ii. A group of people carrying on a business with a view of making profits (and if the business is not a limited company)	<u>Partnership</u>
iii. User-owned and user-controlled businesses formed to benefit a group of members	<u>Cooperatives</u>
iv. An organization limited by shares or by guarantee	<u>limited company</u>

- (c) What is the difference between a **centralized company** and a **decentralized company**?

(04 Marks)

**ANSWER IN THIS BOX**

In a centralized company,  
as much power as possible is kept at the top of the company, with  
delegation only when essential

In a decentralized company,  
as much power and control as possible is delegated to the lowest  
level

- (d) **Structure by Market Sector** is a structuring principle used in the software industry. Discuss advantages and disadvantages of **Structure by Market Sector** principle.

(06 Marks)

**ANSWER IN THIS BOX**

Advantage - both sales and technical staff, are likely to be  
familiar with customers' problems and each division can  
identify its potential customers

Disadvantages - one division may be unaware of technological  
expertise that exists in another division and it will lead to  
inefficient use of resources through unnecessarily hiring  
additional specialists

By continuing to concentrate on its traditional areas, company  
will miss new opportunities and will stagnate

- (e) State *THREE (3)* differences between **Recruitment** and **Selection**.

(06 Marks)

**ANSWER IN THIS BOX****Recruitment****Selection**

Practice of actively seeking out and selecting candidates for a position.

Method used to pick qualified candidates from the shortlisted

It serves to expand the pool of potential candidates.

The goal is to narrow the pool of candidates until we find the best match.

Enables applicants to submit applications for open positions.

Through this process, the HR can go forward with qualified candidates while rejecting the others.

(25 Marks)

- 2) List *Four (04)* main duties of a **Human Resources Department**.

(a)

(04 Marks)

**ANSWER IN THIS BOX**

- Talent management
- Compensation and employee benefits
- Training and development
- Compliance
- Workplace safety

- (b) Identify the correct assessment type or selection method of the given definitions and write the answers on the 'Type of Assessment / Selection' column.

(05 Marks)

Definition	Type of Assessment / Selection
i. Measure a person's potential to learn the skills needed for the job	<u>Aptitude test</u>
ii. Shortlisted applicants are brought together and put into a variety of situations and observing them	<u>Situational Assessment</u>
iii. Candidates are asked to carry out some of the tasks that they will be required to do in the job	<u>Task Assessment</u>
iv. Choosing cousins, children or other family members	<u>Nepotism</u>
v. Choosing friends or former colleagues	<u>Cronyism</u>

- (c) Briefly describe the term 'whistleblowing'.

(05 Marks)

**ANSWER IN THIS BOX**

A person, often an employee, who reveals information about activity within a private or public organization that is deemed illegal, immoral, illicit, unsafe or fraudulent

Whistleblowers can use a variety of internal or external channels to communicate information or allegations

(d) State *FIVE* (5) of the **Ten Commandments of Computer Ethics**.

(05 Marks)

**ANSWER IN THIS BOX**

- i. You shall not use a computer to harm other people.
- ii. You shall not interfere with other people's computer work.
- iii. You shall not snoop around in other people's computer files.
- iv. You shall not use a computer to steal.
- v. You shall not use a computer to bear false witness.
- vi. You shall not copy or use proprietary software for which you have not paid (without permission).
- vii. You shall not use other people's computer resources without authorization or proper compensation.
- viii. You shall not appropriate other people's intellectual output.
- ix. You shall think about the social consequences of the program you are writing or the system you are designing.
- x. You shall always use a computer in ways that ensure consideration and respect for other humans

(e) Briefly describe the term '**conflict of interest**' using suitable examples.

(06 Marks)

**ANSWER IN THIS BOX**

A conflict of interest occurs when an entity or individual becomes unreliable because of a clash between personal (or self-serving) interests and professional duties or responsibilities. Such a conflict occurs when a company or person has a vested interest—such as money, status, knowledge, relationships, or reputation—which puts into question whether their actions, judgment, or decision-making can be unbiased.

Some examples of a conflict of interest could be:

Representing a family member in court  
 Starting a business that competes with your full-time employer  
 Advising a client to invest in a company owned by your spouse  
 Hiring an unqualified relative or friend

(25 marks)

3)  
(a)

What are the *THREE* (3) roles that an ISP may play.

(03 Marks)

The Caching role  
The hosting role  
The mere conduit role

(b) What is the term '**defamation**' refers to in information communication?

(05 Marks)

**ANSWER IN THIS BOX**

Defamation is the act of communicating to a third-party false statements about a person, place or thing that results in damage to its reputation.

- (c) The given below are a **list of Perpetrators** of Computer Crime and Damage.

*Black hat hacker, White hat hacker, Cracker, Industrial spy, Cybercriminal, Hacktivist, Cyberterrorist, Malicious insider*

Write the most suitable name of the perpetrators of computer crime against its respective description on the table given below.

(10 Marks)

<b>ANSWER IN THIS BOX</b>		
<b>Description</b>	<b>Creative Commons License Options</b>	
1. Someone who has been hired by an organization to test the security of its information systems.	White hat hacker	
2. An employee who attempts to gain financially and/or disrupt a company's information systems.	Malicious insider	
3. A person who captures trade secrets and attempts to gain an unfair competitive advantage.	Industrial spy	
4. A person who attempts to destroy the infrastructure components of corporations, utilities, and emergency response units.	Cyberterrorist	
5. Who hacks computers or websites in an attempt to promote a political ideology.	Hacktivist	

- (d) Explain the difference between **Cyberespionage** and **Cyberterrorism** by providing an example for each scenario

(07 Marks)

<b>ANSWER IN THIS BOX</b>
<p>Cyberespionage involves the deployment of malware that secretly steals data in the computer systems of organizations, such as government agencies, military contractors, political organizations, and manufacturing firms.</p> <p>The U.S. experts claim cyberespionage has helped China to accelerate the research and development process and cut years off the time for that country to acquire new technology in a variety of industries.</p> <p>Cyberterrorism is the intimidation of government or civilian population by using information technology to disable critical national infrastructure</p> <p>In late 2015, cyberterrorists attacked the two electric utility companies in western Ukraine, causing a three-hour power outage affecting some 80,000 customers.</p>



**(25 marks)**

**4)**

(a) Differentiate **Retail Software Agreements** and **Corporate Software Agreements** by highlighting at least *THREE* (3) different aspects

(09 Marks)

**ANSWER IN THIS BOX**

Retail Software aimed at a mass market and selling for a one-off fee of a few tens or hundreds of pounds per copy. Corporate is aimed at large organizations

Retail The license is usually granted in perpetuity.  
Corporate usually involves a a substantial up-front license fee with a maintenance

Retail license excludes any provision for the user to receive updates, corrections, or assistance, with the possible exception of a help line.

Corporate provide assistance with initial installation and configuration, ongoing upgrades (including those required to comply with legislative changes), and a helpful and quick help line in return for these significant fees.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

- (b) Explain the difference between **primary infringement** and **secondary infringement** of copyrights (4 marks)

**ANSWER IN THIS BOX**

Primary Infringement - takes place whenever any of the exclusive rights of the copyright owner is breached.

Secondary Infringement - occurs when primary infringement occurs in a business or commercial context.

- (c) Creative Commons licenses give everyone from individual creators to large institutions a standardized way to grant the public permission to use their creative work under copyright law.

Given below are *SIX (6)* main Creative Commons license options.

CC-BY, CC-BY-SA, CC-BY-ND, CC-BY-NC, CC-BY-NC-SA, CC-BY-NC-ND

Write the name of the correct Creative Commons License Option against its respective description on the table given below.

(08 Marks)

Description	Creative Commons License Options	
This license allows reusers to distribute, remix, adapt, and build upon the material in any medium or format, so long as attribution is given to the creator. The license allows for commercial use.	CC-BY-SA	
Allows others to copy and redistribute the material in any medium or format and remix, transform and build upon the material for any purpose, even commercially.	CC-BY	
This license allows reusers to distribute, remix, adapt, and build upon the material in any medium or format for noncommercial purposes only, and only so long as attribution is given to the creator.	CC-BY-NC	
This license allows reusers to distribute, remix, adapt, and build upon the material in any medium or format for noncommercial purposes only, and only so long as attribution is given to the creator. If you remix, adapt, or build upon the material, you must license the modified material under identical terms.	CC-BY-NC-SA	

(d)

In software and the information systems industry Intellectual property rights should be looked on as a package, since different rights may be used to protect different aspects of a piece of software.

Write down the name of the correct intellectual property right against the descriptions given bellow.

(4 marks)

**ANSWER IN THIS BOX**

Description	Intellectual property right
Concerned with the authority to duplicate something such as a computer program	Copyright
Provides a monopoly to inventors on their own inventions for a certain period.	Patent
Describes the information that a person receives in circumstances that make it clear they must not pass it on.	CI
Used to identify the product of a particular supplier.	Trademark

(25 marks)

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