**University of Sargodha**

**BS 8th Term Exam 2019   
Subject: Computer Science Paper: Professional Practices (55-4910)**

**Time Allowed: 2:30 Hours Maximum Marks: 80**

**Objective Part Compulsory**

**Ql. Attempt all parts and each require answer 2 — 3 lines**

**(16\*2=32)**

**i. How social contract theory is different from utilitarian theory?**

Social contract theory asserts that individuals give up some of their rights in exchange for protection and security provided by the state, while utilitarian theory holds that the goal of society should be to maximize happiness or utility for the greatest number of people.

**ii. In 2018 Mr. Ali has started business of toys and he is fails in running his business so join Mr. Ahmed and now is a good businessman. Which type of legal business status he had after loss?**

If Mr. Ali has joined Mr. Ahmed to form a partnership after the failure of his toy business, then the legal business status would be a partnership, which is a type of business structure where two or more individuals own and operate the business together.

**iii. What is trademark?**

A trademark is a symbol, word, or phrase that is used to identify and distinguish the goods or services of one seller from those of others.

**iv. What are the types of director?**

The types of directors can include executive directors, non-executive directors, independent directors, and nominee directors, each with different roles, responsibilities, and levels of authority within the company.

**v. Differentiate between computer science and information technology?**

Computer science is the study of computers and computing technologies, while information technology encompasses the use and application of computer systems and software to manage and transmit information.

**vi. What are intellectual property rights?**

Intellectual property rights are legal protections for the creative works of individuals or organizations, including patents, trademarks, copyrights, and trade secrets.

**vii. Between copyrights and patents, which one is more protected?**

Copyrights and patents offer different types of protection for intellectual property, with copyrights covering original works of authorship and patents protecting inventions or discoveries.

**viii. How cyber terrorism is treated?**

Cyber terrorism is treated as a serious offense under the law, with penalties that may include fines, imprisonment, or other sanctions.

**ix. Briefly describe the term “ temporary policy vacuum ”?**

Temporary policy vacuum refers to a situation where there is a gap or lapse in policies or regulations due to changes in government or other factors, which may create uncertainty or risk for individuals or organizations.

**x. How can you briefly describe the term “ uniquely malleable ”?**

Uniquely malleable refers to the property of a computer system that allows it to be programmed or customized to perform a wide range of functions or tasks.

**xi. Why a contract is terminated?**

A contract may be terminated due to various reasons, such as breach of contract, mutual agreement, impossibility of performance, or illegality of the contract.

**xii. Give the name of the ownership theories.**

The ownership theories include the legal theory, the utilitarian theory, the personality theory, and the social welfare theory.

**xiii. You are an employee of the company but performing duties of a director of the company which type of   
 the employee actually you are?**

If an employee is performing the duties of a director, then they may be considered a de facto director, who has the same legal responsibilities and liabilities as a formal director.

**xiv. Differentiate between regulatory and professional bodies?**

Regulatory bodies are government agencies or organizations that oversee and regulate specific industries or activities, while professional bodies are organizations that represent and regulate the professional standards and practices of specific occupations or industries.

**xv. Due to the paradigm shift from computer technology to Information technology what benefits and challenges faced by business world?**

The paradigm shift from computer technology to information technology has brought benefits such as increased efficiency, productivity, and connectivity, but also challenges such as data security, privacy concerns, and the need for constant updating and adaptation.

**xvi. Give the statements of the health and safety at work Act 1974?**

The Health and Safety at Work Act 1974 sets out the duties and responsibilities of employers to ensure the health, safety, and welfare of their employees in the workplace, including providing a safe working environment, training and instruction, and adequate protective equipment and measures.

**Subjective Part (3\*16)**

**Q2 Define regulatory affairs, how you can differentiate it from professional bodies and name few regulatory bodies in Pakistan?**

Regulatory affairs can be defined as a field that deals with the rules, regulations, and laws governing products, processes, and services. It encompasses a wide range of industries such as pharmaceuticals, medical devices, cosmetics, food, and agriculture, among others. The main objective of regulatory affairs is to ensure that the products and services meet the required quality, safety, and efficacy standards set by regulatory bodies.

In contrast to professional bodies, regulatory bodies are governmental agencies responsible for creating and enforcing laws and regulations in specific industries. They are tasked with protecting public health and safety by ensuring that the products and services available to the public meet established quality standards. Professional bodies, on the other hand, are associations of professionals in a particular field that set standards and guidelines for ethical conduct and best practices.

In Pakistan, several regulatory bodies oversee various industries to ensure that they comply with the country's laws and regulations. Some of these regulatory bodies are:

**1. Drug Regulatory Authority of Pakistan (DRAP):** DRAP is the primary regulatory body responsible for ensuring the quality, safety, and efficacy of drugs, vaccines, and other biological products in Pakistan. The authority is responsible for approving and registering drugs and vaccines for human use and ensuring that they meet established quality standards.

**2. Pakistan Medical Commission (PMC):** PMC is responsible for regulating medical education, training, and practice in Pakistan. It oversees the accreditation of medical schools, licensing of medical practitioners, and maintaining the standards of medical education and practice in the country.

**3. Pakistan Telecommunication Authority (PTA):** PTA is responsible for regulating the telecommunication sector in Pakistan. It ensures that telecommunication services provided to the public are of high quality, affordable, and accessible to all.

**4. Pakistan Environmental Protection Agency (EPA):** EPA is responsible for ensuring that environmental laws and regulations are enforced in Pakistan. It monitors air, water, and land quality to ensure that they meet established standards, and it regulates industries that have an impact on the environment.

**5. Pakistan Agricultural Research Council (PARC):** PARC is responsible for regulating the agricultural sector in Pakistan. It conducts research to improve crop yields, manages agricultural resources, and ensures that agricultural practices are sustainable and safe for consumers.

In conclusion, regulatory affairs is a vital field that ensures products and services meet quality standards set by regulatory bodies. In Pakistan, several regulatory bodies oversee various industries, such as DRAP, PMC, PTA, EPA, and PARC, to ensure that they comply with the country's laws and regulations. Understanding the roles of these regulatory bodies is crucial for businesses and professionals in different industries.

**Q3 You and a few friends are thinking of going into business together to offer software development and system integration services to small businesses. Explain why it would be wise (or, alternatively, why you think it would not be wise) to form yourselves into a limited company. Also describe the types of a limited company.**

Starting a business with friends is an exciting and potentially lucrative venture, but it requires careful consideration and planning. One of the most important decisions you will have to make is how to structure your business legally. One option is to form a limited company, but is this the right choice for your software development and system integration services venture? In this essay, we will explore the advantages and disadvantages of forming a limited company and the different types of limited companies available.

**Advantages of forming a limited company:**

**1. Limited liability:** One of the main benefits of forming a limited company is that the liability of the shareholders is limited to the amount of their investment. This means that if the company incurs debts or liabilities, the personal assets of the shareholders will not be at risk.

**2. Credibility:** A limited company is a legal entity in its own right, separate from its shareholders. This can give potential clients and partners more confidence in your business and enhance your credibility.

**3. Tax efficiency:** Limited companies are subject to corporation tax rather than income tax, which can be more tax-efficient for the company and its shareholders.

**4. Perpetual succession:** A limited company has a perpetual succession, meaning it can continue to exist even if the shareholders change or pass away.

**5. Easier to raise capital:** It may be easier to raise capital for a limited company through the issuance of shares or by securing loans from banks or other financial institutions.

**Disadvantages of forming a limited company:**

**1. More paperwork:** Forming a limited company requires more paperwork and ongoing administrative duties, including annual filings with Companies House and maintaining accurate financial records.

**2. Higher costs:** Setting up and maintaining a limited company can be more expensive than other business structures, such as sole proprietorships or partnerships.

**3. Less privacy:** Information about the company and its directors is publicly available through Companies House, which may be a concern for those who value privacy.

**Types of limited companies:**

**1. Private limited company (Ltd):** The most common type of limited company, with limited liability for shareholders and a restriction on the transfer of shares.

**2. Public limited company (Plc):** A company that can offer shares to the public and has a minimum share capital requirement of £50,000. It is subject to more stringent regulations and reporting requirements than a private limited company.

**3. Limited liability partnership (LLP):** A hybrid between a limited company and a partnership, with limited liability for members and tax transparency like a partnership.

**4. Community interest company (CIC):** A type of limited company for businesses that have a social or environmental purpose. It is required to reinvest profits back into the community rather than distribute them to shareholders.

In conclusion, forming a limited company can have several advantages, including limited liability, credibility, tax efficiency, perpetual succession, and easier access to capital. However, it also comes with additional paperwork, costs, and less privacy. The decision to form a limited company should be made after careful consideration of the specific needs and goals of the business. There are several types of limited companies available, including private limited companies, public limited companies, limited liability partnerships, and community interest companies, each with its own characteristics and requirements. Before making a decision, it is recommended to seek advice from a legal or financial professional to ensure that you choose the most suitable structure for your business.

**Q4 Explain Dara protection principles.**

Data protection principles refer to the set of guidelines that govern the collection, use, storage, and sharing of personal data by individuals, organizations, and governments. These principles are designed to protect the privacy and security of individuals and ensure that personal data is processed fairly and lawfully. In this essay, we will explore the main data protection principles, including their importance and practical implications.

**1. Lawfulness, fairness, and transparency**

This principle requires that personal data is processed in a lawful, fair, and transparent manner. This means that individuals must be informed about how their data will be used and the legal basis for its processing. Personal data must not be used in a way that is incompatible with its original purpose, and individuals must be given the opportunity to object to its processing.

**2. Purpose limitation**

Personal data must be collected and processed for a specific purpose and not used for any other purposes without the individual's consent. This principle aims to prevent data from being used for purposes that are unrelated to the original reason for its collection.

**3. Data minimization**

This principle requires that personal data be limited to what is necessary for the purpose of its processing. This means that only the minimum amount of personal data required to achieve the intended purpose should be collected and processed.

**4. Accuracy**

Personal data must be accurate and kept up to date. This principle aims to ensure that individuals' personal data is not used for decision-making or other purposes based on incorrect or outdated information.

**5. Storage limitation**

Personal data must be stored for no longer than necessary for the purpose of its processing. This principle aims to ensure that personal data is not retained indefinitely and is deleted when it is no longer needed.

**6. Integrity and confidentiality**

Personal data must be processed in a way that ensures its security, confidentiality, and integrity. This means that appropriate measures must be taken to protect personal data against unauthorized access, disclosure, alteration, or destruction.

**7. Accountability**

Individuals and organizations responsible for processing personal data must be accountable for their actions. This principle requires that they demonstrate compliance with data protection regulations and be able to show that they have taken appropriate measures to protect personal data.

**The importance of data protection principles**

The importance of data protection principles cannot be overstated. Personal data is increasingly being collected, processed, and shared in the digital age, and it is essential that individuals have confidence that their data is being handled responsibly and securely. Data protection principles provide a framework for ensuring that personal data is processed lawfully, fairly, and transparently and that individuals' rights to privacy and data protection are respected.

**Practical implications of data protection principles**

Data protection principles have practical implications for individuals, organizations, and governments. For individuals, these principles mean that they have the right to know how their personal data is being used, the right to object to its processing, and the right to have it deleted or corrected if it is inaccurate or outdated.

For organizations, data protection principles mean that they must be transparent about how they collect, process, and share personal data, and must take appropriate measures to protect personal data against unauthorized access, disclosure, or loss. Organizations must also ensure that they have a lawful basis for processing personal data and that they only collect and use the minimum amount necessary for their intended purpose.

For governments, data protection principles mean that they have a duty to protect individuals' right to privacy and data protection, and to ensure that personal data is collected and processed in a fair and lawful manner. Governments must also provide individuals with access to their personal data and ensure that they can exercise their data protection rights.

**Conclusion**

In conclusion, data protection principles are essential for protecting individuals' right to privacy and data protection. These principles provide a framework for ensuring that personal data is processed lawfully, fairly, and transparently, and that appropriate measures are taken.

**Q5 Describe the system of management by objectives and describe some of the strategies used by organizations to improve job satisfaction and employee motivation.**

Management by objectives (MBO) is a management system in which an organization sets specific objectives and goals that are agreed upon by employees and their supervisors. The purpose of MBO is to align the organization's goals with those of its employees, improve performance and productivity, and increase job satisfaction and employee motivation. In this essay, we will explore the system of MBO, its benefits, and some strategies used by organizations to improve job satisfaction and employee motivation.

**The System of Management by Objectives**

The MBO system is designed to ensure that an organization's goals and objectives are clearly communicated to employees, and that they have a clear understanding of what is expected of them. This is achieved through a series of steps, including:

**1. Goal setting:** The first step in the MBO system is to establish specific, measurable, achievable, relevant, and time-bound (SMART) goals that align with the organization's overall objectives.

**2. Planning**: Once the goals have been established, a plan is developed to achieve them. This involves identifying the resources, skills, and capabilities needed to achieve the goals.

**3. Performance measurement:** The progress towards the goals is measured regularly, and feedback is provided to employees to help them improve their performance.

**4. Feedback and evaluation:** The MBO system encourages ongoing feedback and evaluation of performance to ensure that employees are meeting their goals and making progress towards achieving the organization's objectives.

**Benefits of Management by Objectives**

The MBO system has several benefits for organizations, including:

**1. Improved communication:** The MBO system promotes clear communication between employees and their supervisors, which helps to ensure that everyone is working towards the same goals.

**2. Increased motivation:** By involving employees in the goal-setting process, the MBO system helps to increase their motivation and engagement in their work.

**3. Improved performance:** The MBO system encourages employees to set and achieve specific goals, which can lead to improved performance and productivity.

**4. Clear accountability:** The MBO system provides a clear framework for measuring performance and holding employees accountable for their work.

**Strategies for Improving Job Satisfaction and Employee Motivation**

In addition to the MBO system, there are several strategies that organizations can use to improve job satisfaction and employee motivation. These include:

**1. Providing opportunities for growth and development:** Employees are more likely to be motivated and satisfied with their jobs if they feel that they have opportunities to learn new skills and advance their careers.

**2. Offering flexible working arrangements:** Flexibility in work hours, remote work options, and other flexible working arrangements can help to improve job satisfaction by giving employees more control over their work-life balance.

**3. Encouraging collaboration and teamwork:** Encouraging collaboration and teamwork can help to foster a sense of community and shared purpose among employees, which can lead to increased motivation and job satisfaction.

**4. Recognizing and rewarding employee achievements:** Recognizing and rewarding employees for their achievements can help to increase motivation and job satisfaction by acknowledging their hard work and contributions to the organization.

**5. Providing a positive work environment:** A positive work environment that is safe, comfortable, and enjoyable can help to improve job satisfaction by creating a pleasant and welcoming workplace.

**Conclusion**

In conclusion, the MBO system is a management system that is designed to align an organization's goals with those of its employees, improve performance and productivity, and increase job satisfaction and employee motivation. The system involves setting specific, measurable goals, planning to achieve them, measuring progress, providing feedback and evaluation, and holding employees accountable for their work. In addition to the MBO system, organizations can use several strategies to improve job satisfaction and employee motivation, including providing opportunities for growth and development, offering flexible working arrangements, encouraging collaboration and teamwork, recognizing and rewarding employee achievements, and providing a positive work environment.

**Q6 Explain in detail Direct and indirect discrimination?**

Discrimination is the unfair treatment of an individual or a group based on their personal characteristics, such as race, gender, age, religion, or sexual orientation. Discrimination can take many forms, including direct and indirect discrimination. In this essay, we will explain in detail direct and indirect discrimination, including their definitions, examples, and impacts.

**Direct Discrimination**

Direct discrimination occurs when an individual or a group is treated less favorably than others because of a personal characteristic that is protected by law. For example, a company may refuse to hire someone because of their race, gender, or religion. Direct discrimination is usually intentional and can be easy to identify.

Direct discrimination can take many forms, including:

**1. Denial of opportunities:** An individual may be denied opportunities such as a job, education, or housing because of their personal characteristics.

**2. Unequal pay:** An individual may be paid less than others in a similar position because of their personal characteristics.

**3. Harassment:** An individual may be subjected to harassment because of their personal characteristics, such as racial slurs or sexual comments.

**4. Denial of services:** An individual may be denied services such as healthcare or education because of their personal characteristics.

The impact of direct discrimination can be significant and can lead to feelings of frustration, anger, and isolation. Direct discrimination can also have long-term effects on an individual's opportunities and well-being.

**Indirect Discrimination**

Indirect discrimination occurs when an organization's policies or practices have a disproportionate impact on individuals or groups based on their personal characteristics, even though the policies or practices appear to be neutral. For example, a company may require employees to work on Saturdays, which could disproportionately affect individuals who observe the Sabbath on that day.

Indirect discrimination can take many forms, including:

**1. Indirect exclusion:** An individual or a group may be excluded from an opportunity because of a policy or practice that has a disproportionate impact on them.

**2. Unintentional bias:** An individual or a group may be treated unfairly because of unconscious or unintentional bias.

**3. Inflexibility:** An organization may have policies or practices that are inflexible and do not take into account individual differences.

The impact of indirect discrimination can be significant and can lead to feelings of frustration, isolation, and exclusion. Indirect discrimination can also have long-term effects on an individual's opportunities and well-being.

Examples of Direct and Indirect Discrimination

Here are some examples of direct and indirect discrimination:

**1. Direct discrimination:** A company refuses to hire a person because of their religion.

**2. Indirect discrimination:** A company requires all employees to work on Saturdays, which disproportionately affects employees who observe the Sabbath on that day.

**3. Direct discrimination:** A school refuses to enroll a student because of their disability.

**4. Indirect discrimination:** A company requires all employees to have a certain level of education, which disproportionately affects individuals from certain socio-economic backgrounds.

**5. Direct discrimination:** An employer pays a woman less than a man for doing the same job.

**6. Indirect discrimination:** An employer requires all employees to be a certain height, which disproportionately affects women and certain ethnic groups.

Strategies for Preventing Direct and Indirect Discrimination

There are several strategies that organizations can use to prevent direct and indirect discrimination, including:

**1. Education and awareness:** Educating employees about discrimination and its effects can help to increase awareness and prevent discriminatory behavior.

**2. Diverse recruitment:** Diverse recruitment practices can help to ensure that a range of individuals are considered for job opportunities.

**3. Flexible policies:** Flexible policies can help to accommodate individuals with different needs and prevent indirect discrimination.

**4. Clear policies and procedures:** Clear policies and procedures can help to ensure that discrimination is not tolerated and provide a clear framework for addressing discrimination if it does occur.