


National University of Computer and Emerging Sciences, Lahore Campus

	Course Name:	Professional Practices in IT	Course Code:	CS 4001
	Degree Program:	BCS, BSE, BDS	Semester:	Fall 2023
	Exam Duration:	60 Minutes	Total Marks:	38
	Paper Date:	28-09-2023	Weight	15
	Sections:	ALL	No of Page(s):	4
	Exam Type:	Midterm I		

Student : Name: _____ Roll No. _____ Section: _____

Instruction/Notes: Attempt all questions in the space given below. Write to the point. **Question 4 is not for BSE-7B.**

Question1: Which section of BCS (British Computer Society) code of conduct applies for each of the following? Just write the code of conduct label (A, B, C, D). BCS code of conduction sections are; [(1+2)x2]

A: The public interest	B: Duty to relevant authority
C: Duty to profession	D: Professional competence and integrity

Alex is a senior software developer at a reputable software development company, XYZ Software Solutions. Alex's team is currently working on a project for a government agency that involves the development of a critical software system for managing sensitive citizen data. The project is complex, involving a significant amount of data security and privacy considerations. The government agency has entrusted XYZ Software Solutions with this project due to its reputation for delivering high-quality software. Which section of BCS (British Computing Society) CODE OF CONDUCT applies here and why?

BCS Code of Conduct Section: **A/B**

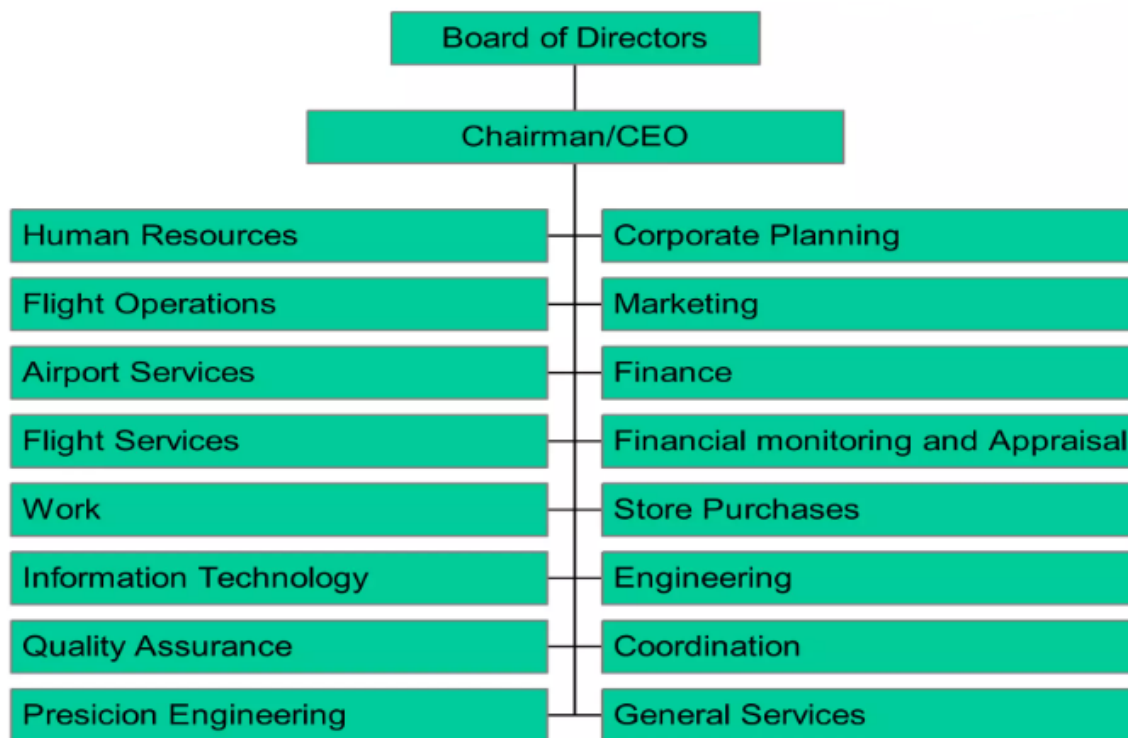
Reason:

Your company is due to deliver a new water processing facility to a national water company. The facility includes real-time monitoring of chemicals and pollutants. This is a major contract for your company, but it is behind schedule and late delivery will result in heavy penalty costs. You have just been told that the company has assigned you to the project to work on the real-time monitoring sub system. Assuming that you are an experienced programmer but have little experience of real-time systems, discuss which section in the BCS Code of Conduct are relevant to this situation and how the Code might affect what you do?

BCS Code of Conduct Section: **A/C**

Reason:

Question2: Following is the high level organizational diagram/chart of PIA (Pakistan International Airlines). Identify the structuring principle(s) present in the following. Make a bullet point for each principle [4]



Answer

Mixture of

1. By Function
2. By Product Line

Question3: Assume that ABC Inc is considering two projects namely Project X and Project Y and wants to calculate the NPV for each project. Both project X and project Y is four-year project and cash flows of both the projects for four years are given below: [10]

Year	Project A Cash Flows	Project B Cash Flows
1.	\$ 5000	\$ 1000
2.	\$ 4000	\$ 3000
3.	\$ 3000	\$ 4000
4.	\$ 1000	\$ 6750

The firm's cost of capital/interest rate is 10% for each project and the initial investment amount is \$ 10,000 for current year. Calculate the NPV of each project and determine in which project the firm should invest.

Answer:

Solution:

Following is the calculation of NPV for project X and project Y.

Project X NPV Calculation

Money Invested Now = \$ 2000

So, PV now = - \$ 10,000

$$Year\ 1 : PV = \frac{FV}{(1 + r)^n} = \frac{5000}{(1 + 0.10)^1} = \frac{5000}{1.10^1} = \$4545.45$$

$$Year\ 2 : PV = \frac{FV}{(1 + r)^n} = \frac{4000}{(1 + 0.10)^2} = \frac{4000}{1.10^2} = \$3305.78$$

$$Year\ 3 : PV = \frac{FV}{(1 + r)^n} = \frac{3000}{(1 + 0.10)^3} = \frac{3000}{1.10^3} = \$2253.94$$

$$Year\ 4 : PV = \frac{FV}{(1 + r)^n} = \frac{1000}{(1 + 0.10)^4} = \frac{1000}{1.10^4} = \$683.01$$

Total Cash Inflows = \$4545.45 + \$3305.78 + \$2253.94 + \$683.01 = \$10,788

NPV = \$10,788 - \$10000 = \$788.38

Therefore, NPV of the project X at 10% is \$788.38

Project Y NPV Calculation

Money Invested Now = \$ 10000

So, PV = - \$ 10,000

$$\text{Year 1 : } PV = \frac{FV}{(1+r)^n} = \frac{1000}{(1+0.10)^1} = \frac{1000}{1.10^1} = \$909.09$$

$$\text{Year 2 : } PV = \frac{FV}{(1+r)^n} = \frac{3000}{(1+0.10)^2} = \frac{3000}{1.10^2} = \$2479.33$$

$$\text{Year 3 : } PV = \frac{FV}{(1+r)^n} = \frac{4000}{(1+0.10)^3} = \frac{4000}{1.10^3} = \$3053.43$$

$$\text{Year 4 : } PV = \frac{FV}{(1+r)^n} = \frac{6750}{(1+0.10)^4} = \frac{6750}{1.10^4} = \$4610.34$$

Total Cash Inflows = \$ 909.09 + \$ 2479.33 + \$ 3005.25 + \$ 4610.34 = \$ 11004.01

NPV = \$ 11,004.01- \$ 10000 = \$ 1004.01

Therefore, NPV of the project Y at 10% is \$ 1004.01

We can see, the NPV of project Y is greater than the NPV of project X. Hence, the firm should invest in project Y.

Question4: Imagine you are a financial analyst working for a retail company called ABC Mart. Your task is to examine the following list of assets and categorize them as either fixed assets or current assets based on the company's financial situation as of the end of the fiscal year. Determine whether each asset is a fixed asset or a current asset based on the definitions and criteria commonly used in accounting and finance. List of Assets: **[8]**

Item Number	Asset Type
1. Store Building	Fixed
2. Cash in Hand	Current
3. Inventory of Goods for Sale	Current
4. Delivery Vehicles	Fixed
5. Office Furniture	Fixed
6. Accounts Receivable from Customers	Current
7. Land (held for future expansion)	Fixed
8. Equipment for Store Operations	Fixed

Question5: The people running the company become the owners of the company (management buyouts), do you favor this practice or not? Justify accordingly. [2]

Conflict of Interest. The can run the company poorly to drop the share prices, buy the shares and then put the company back on track (since they were the ones know the problem of company's poor performance) and then sell the shares at higher amount.

Question6: The possible reasons for a takeover are given. Write the label (reason for a takeover) against each takeover example provided. [8]

Reasons for takeover:

- A. Expanding the customer base
- B. Expanding its range of offerings
- C. Acquiring new staff
- D. Vertical integration
- E. Eliminating a competitor

Netflix's shift from licensing shows and movies from major studios to producing its own original content

Answer Label: **D**

Reason: _____

Salesforce is an example of a company that has made acquisitions. Its acquisition of Slack for \$27.7 billion in July 2021 was made after the company realized that the workplace had changed forever as a result of the Covid-19 pandemic.

Answer Label **B**

Reason: _____

The Coca-Cola fridge is instantly recognizable worldwide, but its contents have continued to change over the decades in response to consumer tastes. In 2015, recognizing a global thirst for energy drinks, the Coca-Cola company went looking for a popular energy drink to bolster its portfolio. It acquired a stake in energy drink business Monster - the world's second largest selling energy drink after Red bull - for \$2.15bn, allowing customers to open that fridge and take out a cola, a lemonade, an orange, water, juice or an energy drink, which are all amongst Coca-Cola's product and brand portfolio.

Answer Label: **B**

Reason: _____

Spanish bank Banco Santander has also adopted a roll up strategy of sorts, where the emphasis is on geographic expansion. Banco Santander didn't let Spain's relatively small population of less than 40million people at the time its acquisition spree began, to limit its growth prospects. It looked to the Latin American and later, European markets, where cultural and economic links gave it an advantage. An example of an acquisition (or series of acquisitions) to enter a new geography is well exhibited by Banco Santander's acquisitions in Argentina. To enter the market, it acquired a series of small bank entities, starting in Argentina. In 1963 they bought Banco del Hogar Argentino and in the next four years Banco Mercantil de Rosario y de Santa Fe, and Banco Comercial eIndustrial de Córdoba. In 1996, it acquired Banco Tornquist, cementing itself as the largest private banking entity in Argentina, a market with more banking consumers than Spain, according to Statista.

Answer Label: **A**

Reason: _____

--