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NED UNIVERSITY OF ENGINEERING & TECHNOLOGY

FINAL YEAR / 4TH YEAR –FALL SEMESTER – 2023

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TCHNOLOGY

MID TERM EXAMINATION – ORGANIZATIONAL BEHAVIOR MG-482

Time: 1 Hour and 30 Minutes PAPER-A Date: 29- NOV-2023
Max Marks: 20

Instructions:

- Attempt all questions.
- Your answers must be relevant, focused and logically presented as per the needs of the question.

Q – 1 (CLO-1)

Read the case study given below and answer the questions that follow.

In early 2007, after 30 years as a computer company, Apple Computers, Inc. became Apple, Inc., dropping "Computer" from the company name. Apple would still make computers, but with the introduction of the iPhone, Apple became more than just a computer company. The iPhone, which further developed the iPod by merging it with a cell phone, was about to disrupt the entire personal computing industry. The introduction of the iPhone clearly threatened the smartphones on the market at the time; however, the iPhone's impact ultimately was broader than anyone could have predicted. Essentially, the iPhone was a game changer, creating a new mobile computing market.

The iPhone initially competed with smartphones such as the BlackBerry and it was immediately successful because it was a better product. However, the iPhone moved on to create competition in the laptop computer market due to a key feature, a new way to access the Internet. Far easier and more convenient than the laptop, the iPhone connected users to the Internet on the go with easy, touchscreen technology. Ultimately the iPhone was the catalyst for a new mobile computing market as the product merged cellphone and Internet services into a single device.

Within a year of the launch of the iPhone, there were 5.4 million users, and developers created more than 17,000 "web applications" now known as "apps." This new app market changed the way we look at software. Instead of software created by a small number of large software development companies, the evolution of the app created a new mini-economy of software developers. This new market led to a new group of entrepreneurs creating businesses around mobile applications. Before the iPhone, companies such as Twitter and Snapchat could not have existed.

The introduction of apps allowed consumers to create a customized product with their iPhone as users could download apps based on their own needs and preferences. The demand for customization and easy access led technology companies to respond, essentially shifting the direction of the personal computing industry. The iPhone led to the development of the iPad and the entire tablet market. The laptop market also responded by integrating the features that consumers prefer, including the ability to install apps and touchscreen access.

The iPhone created a disruption in the technology world through its innovative business model that created a new market for access to the Internet. App developers and phone users were connected and the impact shifted not only the cellphone industry, but also challenged the laptop market. Apple isn't finished yet. With the company's innovations, the mobile computing market continues to evolve, most recently with the introduction of the Apple Watch. What's next?

QUESTIONS:

(a) How would you differentiate between innovation and disruptive innovation? You may compare Nokia/ blackberry Vs i phone for further elaboration. [2.5]

(b) Why is the iPhone considered a disruptive innovation? **Explain** the significance of disruptive innovation. **Apply** the concept of innovation to creativity and Design Thinking? [2.5]

(c) Discuss Steve Jobs Leadership in this case [2.5]

(d) Why do people in organizations resist change? What measures an organization can take in order to reduce resistance to change [2.5]

Q – 2 (CLO-2)

Read the case study given below and answer the questions that follow.

Pat Riverer is vice president of manufacturing and operations of a medium-size pharmaceutical firm in the Midwest. Pat has a Ph.D. in chemistry but has not been directly involved in research and new-product development for 20 years. From the "school of hard knocks" when it comes to managing operations, Pat runs a "tight ship." The company does not have a turnover problem, but it is obvious to Pat and other key management personnel that the hourly people are putting in only their eight hours a day.

They are not working anywhere near their full potential. Pat is very upset with the situation because, with rising costs, the only way that the company can continue to prosper is to increase the productivity of its hourly people.

Pat called the human resources manager, Carmen Lopez, and laid it on the line: "What is it with our people, anyway? Your wage surveys show that we pay near the top in this region, our conditions are tremendous, and our fringes choke a horse. Yet these people still are not motivated. What in the world do they want?" Carmen replied: "I have told you and the president time after time that money, conditions, and benefits are not enough. Employees also need other things to motivate them. Also, I have been conducting some random confidential interviews with some of our hourly people, and they tell me that they are very discouraged because, no matter how hard they work, they get the same pay and opportunities for advancement as their coworkers who are just scraping by." Pat then replied: "Okay, you are the motivation expert; what do we do about it? We *have* to increase their performance."

QUESTIONS:

a) Analyze the problem areas in this organization. **[2.5]**

b) Specifically highlight the content models and the process models of motivation pertaining to this case. **[2.5]** M-T Herberg

c) How would you respond to Pat's last question and statement if you were the human resources manager in this company? (Your suggestions as HR manager). After a comprehensive analysis of job design can you advise something ? **[2.5]** Stephen Covey

d) What are the "other things" that the human resources manager is referring to in speaking of things besides money, conditions, and fringe benefits that are needed to motivate employees? **[2.5]** ~~Herzberg~~ H.R Theory

Paper-B Natural Language Processing (CT-485) Midterm Date: 28-11-2023

Instructions: **Duration: 90 minutes**

Attempt all questions.

Make necessary assumptions if required.

Q.1 EXPLAIN step by step process flow of named entity recognition system for the given dataset with diagram. Also, DISCUSS the possibility of ambiguity in the given dataset. **(CLO-2, 12 marks)**

A recent study published in the Journal of Medicine suggests that aspirin can reduce the risk of heart attacks.
Dr. Emily Johnson, a leading oncologist, recommends regular screenings for breast cancer.
The patient was prescribed 20mg of Lipitor to manage cholesterol levels in pt.
The CDC advises getting vaccinated against influenza every flu season.
In a groundbreaking discovery, researchers identified a new gene linked to Alzheimer's disease.
The surgery, performed by Dr. Michael Rodriguez, was a success.
The FDA approved a new drug for the treatment of diabetes.
Patients (pt) with hypertension should monitor their blood pressure regularly.
The World Health Organization (WHO) recommends a balanced diet for overall well-being.
A recent case study highlighted the effectiveness of immunotherapy in cancer treatment.

Q.2 IMPLEMENT Naïve Bayes algorithm on the given dataset for text classification task. **(CLO-3, 8 marks)**

	Doc #	Words	Class
Training	1	Story was disappointing and depressing	Negative
	2	Hero played bad	Negative
	3	Waste of time	Negative
	4	Liked acting	Positive
	5	Loved this story superb characters	Positive
Test	6	Liked story and characters	?
	7	Complete time waste	?

NED UNIVERSITY OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY
BS CS, Midterm Examinations Fall 2023

Time: 90 minutes **Network & Information Security (CT-486) - A** **Max Marks: 20**
Date: 27-11-2023

Note: Attempt all questions.

Q-1) ***Modify*** the Playfair encryption scheme by including the numbers (0 to 9) and a special character hyphen (-) in its encryption matrix. ***Compute*** the ciphertext of last four characters of your Roll No. in the format (e.g. **CT-001**) as the plaintext. Use the first six non-repeating letters of your name as the secret keyword. [CLO 6] [4]

Q-2) Consider an encryption key of *Hill Cipher* consisting of the four numbers from your cyphertext of above Q1 and calculate the inverse key matrix. Modify the key if the inverse key is not possible. ***Validate*** the keys by encrypting and decrypting the last four letters of your name. [CLO 6] [4]

Q-3) ***Design*** an attack model to ***explain*** that it is not safe to use the same key repeatedly in a One Time Pad scheme. [CLO 2] [4]

Q-4) ***Describe*** the Meet-in-the-Middle attack model to demonstrate the weakness of 2DES encryption scheme. [CLO 2] [4]

Q-5) In a specific application of secret live data streaming (byte stream) you are required to use 3DES for sending encrypted data. Because of the sensitivity of data, it is required to propagate even a small minor modification or change in data during transmission. ***Design*** an appropriate mode of operation for this scenario. [CLO 6] [4]