	Harcourt Butler Technical University Kanpur			MID SEM 2
Branch	All Branches except Chemical Engineering		Program	B. Tech
Course Name	Air Pollution Monitoring and Control		Semester	VIII
Course Code	OCH 492		Year	2023-24
Time: 1:00 Hr	Answer ALL Questions		Maximum Marks	15
Knowledge Level (KL)	K1: Remembering	K3: Applying	K5: Evaluating	
	K2: Understanding	K4: Analysing	K6: Creating	

Note: *1. Attempt ALL questions.*
2. All questions carry marks, as shown against them.

Q. No	Questions	Marks	COs	KL
1	What are the various meteorological factors responsible for atmospheric condition? How are they useful in describing the atmospheric stability? Discuss it for each and every condition of the atmosphere.	5	CO2	K2
2	How can the pollution level from any industry be reduced at its source itself? Discuss it in detail.	5	CO3	K4
3	Write a note on wet cyclone separators for controlling particulate air pollutants.	5	CO4	K3

Course Outcomes	**CO1**	Demonstrate comprehensive understanding of different types of air pollutants and various standards and acts regarding the air pollutants of global concern.
	CO2	Select proper sampling and analysis method for a specific gaseous or particulate air pollutant. Analyse plume behaviour and come up with a suitable stack design based on meteorological aspects of air pollution.
	CO3	Selection and design aspects of dry collectors for particulate emission control.
	CO4	Selection and design of wet collectors for control of particulate emission at source itself.
	CO5	Design absorption columns for control of gaseous pollutants and three-way catalytic converters for pollution control from automobiles.

	Harcourt Butler Technical University Kanpur				II MID SEM
Branch	FOOD TECHNOLOGY			Program	B.Tech
Course Name	Nutritional aspects of Natural & Processed Foods			Semester	VIII
Course Code	OFT 492			Year	2023-24
Time: 1.00 Hr	Answer All Questions			Maximum Marks	15
Knowledge Level (KL)	K1:Remembering	K3:Applying		K5:Evaluating	
	K2:Understanding	K4:Analysing		K6:Creating	

Note: Attempt all questions. All questions carry marks as shown.

Q. No	Questions	Marks	COs	KL
1	What is Glycolysis? Explain various steps involved in this pathways.	4	3	2
2	Explain clearly the digestion and absorption of fats in human nutrition.	4	3	2
3	Differentiate between fat soluble and water soluble vitamins with suitable example.	4	3	2
4	Explain the following: (i) Therapeutic diet (ii) Nutraceuticals (iii) Functional foods	3	4	2

Course Outcomes	CO1	Understand the basic concepts of food nutrition and RDI	K2
	CO2	Understand the digestion of nutrients in the human body	K2
	CO3	Formulate different diets	K2
	CO4	Calculate calorific value of food	K2
	CO5	Perform sensory analysis of food	K2

Harcourt Butler Technical University, Kanpur

IInd MIDSEM EXAMINATION 2023-24

Machine Learning (ECS-482)

Final (CSE+IT)

Time: 1 Hour **Max. Marks: 15**

Note: Attempt all Questions.

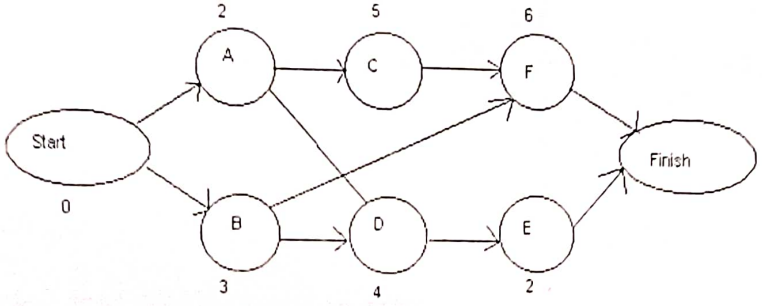
4. What is generalization? What role does it play in the process of Machine Learning? (5)
5. Explain SVM mathematically. (5)
6. Explain the following: (5)

iii) VC Dimensions

iv) Nearest Neighbours Classification

	Harcourt Butler Technical University Kanpur		***II Mid-Sem. Examination***
Branch	**1. Computer Science & Engineering** **2. Information Technology**	Program	**B. Tech.**
Course Name	**Elective-III (Software Project Management)**	Semester	**VIII**
Course Code	**EIT-470**	Year	**2023-24**
Time	**1:00 Hour**	Maximum Marks	**15**
Knowledge Level (KL)	K1: Remembering	K3: Applying	K5: Evaluating
	K2: Understanding	K4: Analyzing	K6: Creating

Note:- Attempt all questions. Marks of every question are given against it.

Q. No.	Questions	Marks	COs	KL
1.	Define the following Earn Value Monitoring (EVM) Metrics (i) Cost Performance Index (CPI) (ii) To Complete Perform Index (TCPI)	4	CO3	K2
2.	Define the following in context to scheduling of a Software Project (i) Slack/Float (ii) Lead/Lag time	4	CO2	K1
3.	Consider the following Network diagram drawn as per Activity on Node (AON) format. Numbers over the nodes represent duration of the corresponding activities. Perform forward and backward pass analysis to find out critical path in the network.  	4	CO2	K3
4.	Discuss Earn Value Analysis and various Earn Value Indicators.	3	CO3	K2

Course Outcomes	**CO1**	Understand various concepts of Software Project Planning and Management.
	CO2	Understand various techniques of Human Resource Organization and Develop schedule of software projects using PERT/CPM.
	CO3	Understand cost benefit analysis, risk management and techniques of monitoring & control of software projects.
	CO4	Use concepts of software quality assurance in the development of software projects.
	CO5	Assess the project to develop the scope of work, provide accurate size, cost, time and effort estimates for software projects.