

MGM University
Jawaharlal Nehru Engineering College

EXAM: CA-2 (2023-24) Part-II

Class: SY (ECE)

Subject: Electrical machine (EM)

Max Marks: 10

Duration: 30 Minutes

N.B.:- Solve any Two Questions.

Q.No.	Question	Marks	CO	BL
1	Compare squirrel cage rotor type with phase wound rotor type of Three phase Induction motor	05	1	1
2	Derive an equation of starting torque of 3 Phase Induction motor also derive condition for maximum torque.	05	2	1
3	Discuss Speed control methods of 3 Phase Induction Motor	05	1	2
4	What is necessity of starter for 3 Phase Induction Motor? Explain Rotor rheostat starter?	05	1	1

***** END *****

15 MAY 2024/SY/EE/2023-24/P2/CA-2

MGM University, Jawaharlal Nehru Engineering College, Chhatrapati Sambhajnagar
CA-2 Examination

Class: SY-B. Tech (All)

Course Code: 20UCC401B

Course Name: Engineering Statistics

Date: 03.04.2024

Sem: IV

Max. Marks: 10

Time: 10.00 - 11.00

Q.1 Solve any **Two** questions.

A) The ranks of the same 15 students in two subjects A and B are given below; the two numbers within the brackets denoting the rank of same student A and B respectively. (5M)

(1, 10), (2, 7), (3, 2), (4, 6), (5, 4), (6, 8), (7, 3), (8, 1), (9, 11), (10, 15), (11, 9), (12, 5), (13, 14), (14, 12), (15, 13). Use Spearman's formula to find the rank correlation coefficient.

B) Fit a straight line of the form $y = mx + c$ to the given data, by using method of least squares. (5M)

x	0	1	2	3	4	5	6	7
y	-5	-3	-1	1	3	5	7	9

C) A departmental store gives in-service training to its salesman which is followed by a test. It is considering whether it should terminate the service of any salesman who does not do well in the test. The following data gives the best scores and sales made by nine salesmen during a certain period: (5M)

Test scores	14	19	24	21	26	22	15	20	19
Sales ('000 Rs.)	31	36	48	37	50	45	33	41	39

Calculate the coefficient of correlation between test scores and the sales. Does it indicate that the termination of services of low test scores is justified? If the firm wants a minimum sales volume of Rs. 30000, what is the minimum test score that will ensure continuation of service? Also estimate the most probable sales volume of a salesman making a score of 28.

END

**Mahatma Gandhi Mission's
Jawaharlal Nehru Engineering College, Aurangabad.
CA-II (2023-24) Part-II**

Class: SY (ECE)

Subject: Data structure Code Course: (21UEE404D)

N.B.:- Solve any two questions.

**Max Marks:10
Duration: 30 Minutes**

Sr.No.	Question	Marks	CO	BL
1	What is a Stack and Queue? Explain with examples.	05	1	1
2	Convert following infix to Prefix and Postfix 1. $(A+B)*(C+D)$ 2. $A\$B*C-D+E/F/(G+H)$	05	1	2
3	Write a function in C to perform the push operation on an array based Stack?	05	1	2
4	Write a C program to implement a Circular Queue using Array	05	1	3

-----Best Luck-----

15 MAY 2024 /SY/EE/2023-24/P2/CA-2

Mahatma Gandhi Mission University
Jawaharlal Nehru Engineering College, Aurangabad.

Class: SY (Electrical & Comp.) CA-II (2023-24) Part-II 4.04.2024

Subject: Object Oriented Programming with JAVA - 21UEE405D

Max Marks: 10

Duration: 30 Min.

N.B.:- Solve any two questions.

Sr. No.	Question	Marks	CO
1	What is string manipulation explain following command with its syntax and example. indexOf(str) b. length() c.toLowerCase() d.toUpperCase()	05	CO4
2	Write a program in JAVA using below commands toLowerCase() , toUpperCase() , length() , trim() , isEmpty()	05	CO4
3	Explain Steps for creating package in detail.	05	CO4
4	Explain keywords of Exception handling in detail	05	CO4

15 MAY 2024/SY/EE/2023-24/P2/CA-2

MGM University, Chh.Sambhajinagar

CA-2 Examination – April 2024

Course: B. Tech in Electrical and computer Engineering

Sem: IV

Subject Name: EPS-I

Subject Code: 21UEE402D

Max Marks: 10

Date:- 03/04/2024

Duration: - 30 Minutes.

Instructions to the Students:

1. All Questions are compulsory
2. Illustrate your answer with neat sketches, Diagram etc., wherever necessary
3. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.

Q.1	Solve Any Two of the following	CO	BL	Marks
				2X 5=10
	1. Derive an expression for the inductance per phase for a 3-phase overhead transmission line when conductors are symmetrically placed	CO3	1	5
	2. A single phase transmission line has two parallel conductors 3 m apart. the radius of each conductor being 1 cm. Calculate the loop inductance per km length of the line if the material of the conductor is (i) copper (ii) steel with relative permeability of 100.	CO4	2	5
	3. Derive an expression for the capacitance of a single phase overhead transmission line.	CO4	1	5