SY

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

Class: SY-B. Tech (All) Sem: IV
Course Code: 20UCC401B Max.Marks:10
Course Name: Engineering Statistics Date:03.04.2024 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

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

Class: SY-B. Tech (All) Sem: IV
Course Code: 20UCC401B Max.Marks:10
Course Name: Engineering Statistics Date:03.04.2024 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.

MGM University ,Jawaharlal Nehru Engineering College

Civil Engineering Department

CA-II Examination

FORM NO.	F/TEAH/06
REV. NO.	00
ISSUE DATE	15-09-2017

Course : B. Tech in CIVIL ENGINEERING **Semester : IV**

Subject Name: Building Planning and Drawing **Subject Code: 20UCI403D**

Max Marks: 10 **Date:3rd April 2024** **Time: 12:45 pm to 1:30 pm** **Duration: 1 Hr**

Instructions to the Students:

1. Each question carries 5 marks.
1. Solve **any two** questions.

	QUESTIONS	CO	BL	Marks
Q.1	What is plumbing service and enlist different types of materials for plumbing work.	CO3	C1	5
Q.2	What is rainwater harvesting? Give its need, scope.	CO3	C1	5
Q.3	Write a short note on wiring installation.	CO3	C2	5

**********Best of Luck**********

MGM University ,Jawaharlal Nehru Engineering College

Civil Engineering Department

CA-II Examination

FORM NO.	F/TEAH/06
REV. NO.	00
ISSUE DATE	15-09-2017

Course : B. Tech in CIVIL ENGINEERING **Semester : IV**

Subject Name: Building Planning and Drawing **Subject Code: 20UCI403D**

Max Marks: 10 **Date:3rd April 2024** **Time: 12:45 pm to 1:30 pm** **Duration: 1 Hr**

Instructions to the Students:

2. Each question carries 5 marks.
2. Solve **any two** questions.

	QUESTIONS	CO	BL	Marks
Q.1	What is plumbing service and enlist different types of materials for plumbing work.	CO3	C1	5
Q.2	What is rainwater harvesting? Give its need, scope.	CO3	C1	5
Q.3	Write a short note on wiring installation.	CO3	C2	5

**********Best of Luck**********

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

MGM University
Jawaharlal Nehru Engineering College, Chh. Sambhajinagar
Civil Engg. Dept.

CA-II 2023-24(PART-II) Surveying-II Dt: 4-4-24 Max Marks: 10

Solve any two:

Q1: Explain with neat sketches signals and towers **(5 Mks)**

Q2: Define: 1. Most Probable Value (MPV) 2. Independent Quantity 3.Dependant Quantity 4. Weigh 5.Residual Error: **(5 Mks)**

Q3: Calculate the Most Probable Value (MPV) of the angle A and B from the following observations:

$\angle A = 50^0 50'50''$ Weight = 2

$\angle B = 60^0 50'50''$ Weight = 3

$\angle A + \angle B = 111^0 41'40''$ Weight = 4

Q.4: In a triangulation survey, the altitude of two proposed stations A and B, 100km apart are respectively 425m and 705 m. The intervening ground situated at C, 60km from A has an elevation of 435m. Ascertain if A and B are intervisible and if necessary find by how much B should be raised so that the line of sight must nowhere be less than 3m above the surface of the ground. Take R= 6400 km and m= 0.07 **(5 Mks)**

MGM University
Jawaharlal Nehru Engineering College, Chh. Sambhajinagar
Civil Engg. Dept.

CA-II 2023-24(PART-II) Surveying-II Dt: 4-4-24 Max Marks: 10

Solve any two:

Q1: Explain with neat sketches signals and towers **(5 Mks)**

Q2: Define: 1. Most Probable Value (MPV) 2. Independent Quantity 3.Dependant Quantity 4. Weight 5.Residual Error: **(5 Mks)**

Q3: Calculate the Most Probable Value (MPV) of the angle A and B from the following observations:

$\angle A = 50^0 50'50''$ Weight = 2

$\angle B = 60^0 50'50''$ Weight = 3

$\angle A + \angle B = 111^0 41'40''$ Weight = 4 **(5 Mks)**

Q.4: In a triangulation survey, the altitude of two proposed stations A and B, 100km apart are respectively 425m and 705 m. The intervening ground situated at C, 60km from A has an elevation of 435m. Ascertain if A and B are intervisible and if necessary find by how much B should be raised so that the line of sight must nowhere be less than 3m above the surface of the ground. Take R= 6400 km and m= 0.07 **(5 Mks)**

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