MGM University, Jawaharlal Nehru Engineering College, Chhatrapati Sambhajinagar
CA-1 Examination

Class: SY-B. Tech (All) Sem: IV
Course Code: 20UCC401B Max.Marks:10
Course Name: Engineering Statistics   Date:02.02.2024 Time:10.00 -10.45

Read the instructions carefully.
1. Use of nonprogrammable calculator is allowed.
2. Digits on right hand side indicate the marks.

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

A) A car travels 25 miles at 25 miles per hour (mi/h), 25 miles at 50 mph, and 25 miles at 75 (5M)
mph. Find the arithmetic mean of the three velocities and the harmonic mean of the three
velocities. Which is correct?

B) The points given to the students belonging to two management institutes on the overall (5M)
performance in a year are as follows:

Institute A	60	64	75	82	48	66	81	92	44	80
Institute B	70	65	54	72	80	68	79	77	71	74

The performance of which management institute is more consistent (Use coefficient of
variation)? Which management institute has higher level of performance?

C) The first four moments of a distribution about the value 5 of the variable are 2, 20, 40 (5M)
and 50. Show that the mean is 7. Also find the other moments, $\beta 1$ and $\beta 2$.

SY

MGM University ,Jawaharlal Nehru Engineering College

Civil Engineering Department

CA-I 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: 2ⁿᵈ Feb 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	Explain site selection criteria for Residential building.	CO1	C1	5
Q.2	Define "Building" and state the classification in detail.	CO1	C1	5
Q.3	Explain the benefits of "Green Building".	CO1	C2	5

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

11 MAR 2024/SY/CIVIL CA-I/22

MGMU JNEC, Chh Sambhajinagar, Civil Engineering Department
CA 1 2023-24 Part – 2

Class: SY Civil
Date: 02/02/2024
Duration:- 45 Min

Subject Name: Concrete Tech
Max Marks: 10

Q.	Solve any two questions	Marks	CO	BTL
1)	Calculate the FM for the 1000gr sample of Coarse Agg.	5	CO1	L2
2)	Define Bogues compound along with their properties.	5	CO1	L2
3)	Explain the manufacturing process of cement	5	CO1	L2

For Q1:

Sieve (mm)	80	40	20	10	4.75
Amount Retained on (gr)	70	230	350	250	100

MGMU JNEC, Chh Sambhajinagar, Civil Engineering Department
CA 1 2023-24 Part – 2

Class: SY Civil
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MGMU JNEC, Chh Sambhajinagar, Civil Engineering Department
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11 MAR 2024/SY/civil/CA-I/II/23-24/civil

MGM'S Jawaharlal Nehru Engineering College
Civil Engineering Department
Academic Year 2023-24
Part – II

Course: S.Y(Civil) CA- I
Subject Name: AOS-I Date: 02/02/2024
Duration: -1 Hr. **Max Marks: 10**

Instructions to the Students:
1. Illustrate your answers with neat sketches, diagrams etc. where ever necessary.
2. Attempt any ONE question

		(CO)	(Level)	Marks
Q.1	A three hinged parabolic arch of span 40m and rise of 6m carrys point load of one 40KN and other 65KN at distance of 8m from 25m left support respectively. Determine bending moment , radial shear and normal thrust at section 12m from left support.	CO1	L3	10
Q.2	A three hinged parabolic arch of span 30m and rise of 5m carry a point load of 85KN on left half span. Determine maximum positive and negative bending moment ,	CO1	L3	10

MGMU'S
Jawaharlal Nehru Engineering College
Civil Engineering Department
Academic Year 2023-24 Part – II
CA - I

Course: SY Civil
Date: 03/02/2024
Duration:- 45 Min

Subject Name: Hydraulics II
Max Marks: 10

Instructions to the Students:

1. Illustrate your answers with neat sketches, diagrams etc. where ever necessary.
2. Necessary data is given in the respective questions. If such data is not given, it means that the knowledge of that data is a part of the examination.

Q.		CO	BTL	Marks
	Solve any two questions			
1)	Explain all the geometric elements in an open channel.	CO1	L2	05
2)	A rectangular channel 4.0 m wide carries water at a uniform flow and depth of 2 m. The channel has a bed slope of 1 in 1100. Take Chezy's constant as 50. Find the discharge and check whether flow is critical, sub-critical or super-critical	CO1	L3	05
3)	Derive the conditions for most economical rectangular channel section.	CO1	L3	05

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11 MAR 2024/SY/ciVil/CA-I/II/23-24/ciVil

MGM University
Jawaharlal Nehru Engineering College
Civil Engineering Department
Academic Year 2023-2024
Part – II

Course: SY Civil I

C A-I

Subject Name: SURVEYING-II

Date: 03/02/2024   **Duration:- 45 Min.**   **Max Marks: 100**

		(CO)	Level	Marks
Q. 1	What is the principle of tacheometry.	CO1	C2	5
	OR			
Q. 1	Explain Axis Signal Correction	CO1	C2	5
Q. 2	The following observations were taken using a tacheometer fitted with an anallatic lens. The staff being held vertical. Determine the distances PQ also determine the RL's of P and Q	CO1	C3	5

Inst. Stn	Staff Station	Height of Axis	Vertical Angle	Hair Readings			Remark
P	B.M	1.45	-6⁰12'	0.98	1.54	2.1	R.L. of B.M= 500.00m
P	Q	1.45	7⁰5'	0.83	1.36	1.89	

OR

		(CO)	Level	Marks
Q. 2	Find the vertical height of a electrical column over a hill. The readings are taken from two instrument stations P and R. The horizontal distance between Station P and R is 60m . The horizontal angle RPQ is $60^0 30'$ and the horizontal angle PRQ is $68^0 18'$. The vertical angle from P to Q is $10^0 12'$ and R to Q is $10^0 48'$. Find the reduced level of point Q if the RL of Bench mark is 435.065 m and the staff reading from P and R are 1.965 and 2.055 m respectively	CO1	C3	05