Enrol. No. / ID | | | | | | | | | | | | |

KADI SARVA VISHWAVIDYALAYA
LDRP INSTITUTE OF TECHNOLOGY & RESEARCH, GANDHINAGAR

B.E. MID SEMESTER EXAMINATION JUNE-2022

Date : 03/06/2022
Subject Name & Code: ELEMENTS OF CIVIL ENGINEERING (CC109-N) **Semester : II[nd]**
Time : 12:00pm to 1:30pm **Max. Marks : 30**

Instructions:
1) All questions are **compulsory**
2) Figures to the **right** indicate full marks.
3) Use of scientific calculator is permitted
4) Indicate **clearly**, the options you attempt along with its respective question number.
5) Use the last page of main supplementary for **rough work**
6) Assume necessary data if required

Q.1	(A)	Describe division of surveying in detail.	[5]
	(B)	Listout various branches of civil engineering. Discuss any three.	[5]
Q.2	(A)	Listout various instruments used for chain survey. Discuss any two.	[5]
	(B)	Differentiate between prismatic compass and surveyor's compass.	[5]

OR

Q.2	(A)	Give difference between 1. Plan and Map 2. W.C.B and Q.B.	[5]
	(B)	The length of a chain line when measured with a 30 m chain was found to be 5879 meters. But when a 20 m chain which was 0.45 meter too short was used for the purpose, the line was found to be 5900 meter long .Find the error in 30 m chain?	[5]

OR

Q.3	(A)	Differentiate between load bearing and framed structure.	[5]
	(B)	List out various materials used for building construction. Discuss any one material with its requirements.	[5]

OR

Q.3	(A)	Discuss various types of surface and sub-surface water sources.	[5]
	(B)	write a short note on requirements of industrial building	[5]

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KADI SARVA VISHWAVIDYALAYA
LDRP-ITR

MID-SEMESTER EXAMINATION (BE SEM-1,2) MAY- 2023

Date : 19/05/23 , FRIDAY	**Branch : Civil Engg**
Subject Name & Code: ELEMENTS OF CIVIL ENGINEERING CC109-N	**Semester : 1 , 2**
Time : 01:30 PM to 03:00 PM	**Max. Marks : 30**

Instructions:
1) All questions are **compulsory**.
2) Figures to the **right** indicate full marks.
3) Use of scientific calculator is permitted.
4) Indicate **clearly**, the options you attempt along with its respective question number.
5) Use the last page of main supplementary for **rough work**.

Marks

Q.1 (A) Discuss the scope of civil engineering. [5]
(B) Enlist principles of planning. Explain in details any two. [5]

Q.2 (A) Write difference between geodetic survey and plane survey. [5]
(B) Find the interior angles for a close traverse having following data. [5]

LINE	FB
AB	32°
BC	116°
CD	227°
DA	308°

OR

(A) List out instruments used for chaining. Explain any one in detail with figure. [5]
(B) A line was measured with a steel tape which was exactly 30m long at 18 °C and found to be 452.343m. The temperature during measurement was 32°C.Find the true length of line. Take coefficient of thermal expansion per °c= 0.0000117. [5]

Q.3 (A) What is brick? Write properties of first class brick. [5]
(B) What are the basic requirements of residential building? [5]

OR

Q.3 (A) Differentiate between load bearing and framed structure. [5]
(B) Differentiate between prismatic compass and surveyor's compass. [5]

KADI SARVA VISHWAVIDYALAYA

BE SEMESTER: 2ND EXAMINATION (JULY/2022)

SUBJECT NAME: ELEMENTS OF CIVIL ENGINEERING (CC 109-N)

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DATE: 15/07/2022 **TIME: 10:30 a.m. to 01:30 p.m.** **TOTAL MARKS:70**

INSTRUCTIONS:

1. Answer each section in separate answer book
2. Use of scientific calculator is permitted.
3. All questions are compulsory.
4. Indicate clearly the options you attempted along with its respective question number.
5. Use the last page of main supplementary for rough work.

SECTION: I

Q:1 (A) Explain in brief any five branches of civil engineering. 05

(B) Explain the fundamental principles of surveying with neat sketch. 05

(C) Differentiate between prismatic compass and surveyor's compass. 05

OR

(C) Convert the following bearings. If the bearing is given in WCB convert it into quadrantal bearing and if it is given in quadrantal bearing, convert it into WCB. 05

1) 320°
2) 190 °
3) S 30° 30' E
4) N 50°15' W
5) 145°

Q:2 (A) The following bearings in the table were observed in running a closed traverse ABCD. Calculate the interior angles of the traverse and apply necessary checks. 05

Line	Fore bearing	Back bearing
AB	N 45°30' E	S 45°30'W
BC	S 60°00' E	N 60°00'W
CD	S 10°30' W	N 10°30' E
DA	N 75°45'W	S 75°45' E

(B) Define levelling. Write uses of levelling. 05

OR

Q:2 (A) The distance between two points on the ground was measured with 30m chain and found to be 1500m. The same distance was measured with 20m chain and found to be 1450m. If the 30m chain was 5 cm too short, what was the error in the 20m chain? 05

(B) What is Ranging? Discuss with sketch Reciprocal/Indirect ranging. 05

Q:3 (A) Define following: 05
1) Station 2) Back sight 3) Fore sight 4) Intermediate sight 5) Change point

(B) List out the instruments used for laying perpendicular offset. Discuss any one in detail.

OR

Q:3 (A) The following consecutive readings were taken with a level and a 4m staff at a common interval of 30m; The first reading was taken at B.M. having R.L. = 100m. The instrument was shifted after the fourth and nineth readings. Rule out a page of a level book, enter the readings given and also calculate the reduced levels of the points by the height of instrument method. Also apply arithmetic checks. Consecutive readings are: 2.650, 1.745, 0.625, 0.260, 2.525, 2.160, 1.235, 0.870, 1.365, 0.625, 1.790 and 2.535. 05

(B) What are contours? Discuss characteristics of contours with suitable sketches. 05

SECTION: II

Q:4 (A) Briefly explain classification of building based upon occupancy. 05

(B) Write advantages and disadvantages of water transportation. 05

(C) Explain the term cement. Enlist types of cement and explain any three. 05

OR

(C) Discuss water requirement for different uses. 05

Q:5 (A) What is concrete? Write advantages and disadvantages of concrete. 05

(B) Write a short note on global positioning system. (GPS) 05

OR

Q:5 (A) Differentiate between load bearing and framed structure. 05

(B) Enlist different elementary principles of building planning? Explain any three. 05

Q:6 (A) What is the role of transportation in national development? Explain in brief. 05

(B) Write requirements of good brick and uses of bricks. 05

OR

Q:6 (A) Discuss various types of surface and sub-surface water resources. 05

(B) What are the requirements and properties of a good timber? 05

END OF QUESTION PAPER

KADI SARVA VISHWAVIDYALAYA

B.E. SEMESTER-II (NEW: CBCS COURSE) EXAMINATION JUNE-2023

Subject Code : CC-109N **Subject Name: Elements of Civil Engineering**

Date : 28/06/23 **TIME: 10:00am To 1:00pm** **Total marks: 70**

Instruction:

1. Answer each section in separate Answer Sheet.
2. Use of scientific calculator is permitted.
3. All questions are compulsory.
4. Indicate clearly the options you attempted along with its respective question number
5. Use the last page of supplementary for rough work.

SECTION - I

Q-1 [A] Explain in brief different branches of civil engineering [5]

[B] Differentiate Between: 1) Plane surveying and Geodetic Surveying [5]

[C] What is brick? Write properties of brick. What are the uses of bricks? [5]

OR

[C] What are the elementary principles of building planning? Describe any two. [5]

Q-2 [A] What are the various instruments used in chaining. Describe briefly. [5]

[B] The length of a chain line when measured with a 20 m chain was found to be 1432 meters. But when a 30 m chain which was 0.65m meter too short was used for the purpose, the line was found to be 1445 meter long .Find the error in 20 m chain? [5]

OR

Q-2 [A] Differentiate between prismatic compass and surveyor's compass. [5]

[B] Find the interior angles for a close traverse having following data. [5]

LINE	FB
AB	N 45°30'E
BC	S 60°00'E
CD	S 10°30'w
DA	N 75°45'w

Q-3 [A] Explain with sketch temporary adjustment of a dumpy level [5]

[B] What are contours? Discuss characteristics of contours with suitable sketches. [5]

OR

Q-3 [A] Write short note on Global Positioning System. [5]

[B] Discuss water requirement for different uses. [5]

SECTION - II

Q-4 [A] What is the role of transportation in national development? Classify the different ways of transportation and state their importance.

[B] Write a note on role of civil engineer.

[C] Define Surveying and levelling. What are objects and applications of surveying?

OR

[C] What is concrete? Write also advantages and disadvantages of concrete. [5]

Q-5 [A] The following consecutive readings were taken with dumpy level. 1.885, 1.450, 1.765, 2.670, 2.880, 2.010, 2.310, 2.620, 2.980, 3.215. The level was shifted after fourth, sixth, and ninth reading. The RL of the first point was 50.500. Rule out a page of a book and record all readings. Use collimation method and apply the usual checks. Indicate the highest and lowest points. [5]

[B] Differentiate between load bearing and framed structure. [5]

OR

Q-5 [A] A 10 km long road is indicated in a map by a length of 10 cm straight line. Calculate the scale and R.F. of a map. [5]

[B] What is Ranging? Discuss with sketch reciprocal/ indirect ranging. [5]

Q-6 [A] What is rain water harvesting? Write its benefits. [5]

[B] Explain the Application of Remote sensing. [5]

OR

Q-6 [A] Differentiate between: WCB & QB, Cumulative error & Compensating error. [5]

[B] What are building bye-laws? Why are they required? [5]

END