



MARATHA VIDYA PRASARAK SAMAJ'S
Karmaveer Adv. Baburao Ganpatrao Thakare
College of Engineering, Nashik



Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622

Department of Civil Engineering
Innovative Teaching Method – Inquiry Based Learning

Name of Faculty – Mr. R. C. Patil
Academic Year– 2022-23

Class – BE
Semester I

Name of Subject: *Transportation Engineering*

Objectives of Methodology:

1. Inquire about the different sign boards in vicinity.
2. Infer the sign boards inquired in vicinity referring IRC-67-2001 (Code of Practice for Road Signs).

Details of Activity/Method:

Activity – Inquire and Infer about the different sign boards in vicinity.

1. Students shall identify different sign boards in the vicinity.
2. Infer the sign boards inquired in vicinity referring IRC-67-2001 (Code of Practice for Road Signs).
3. Prepared report on same.

Assessment Tools & Rubrics:

Roll No.	Students Name			4	4	2	10
01	Ahire	Krutika	Dilip	-	-	-	-
02	Avadhut	Amol	Arun	2	2	2	6
03	Avhad	Madhuri	Bajirao	2	2	2	6
04	Badhan	Rohit	Sanjay	2	2	1	5
05	Barkale	Rohit	Nandu	2	2	0	4
06	Behere	Mayur	Nitin	2	2	2	6
07	Bhadane	Pranjal	Sanjay	3	2	2	7
08	Chavan	Ruchi	Rahul	4	3	2	9
09	Chavan	Dhanashree	Satish	3	4	2	9
10	Dashpute	Hritik	Hemant	2	2	2	6



MARATHA VIDYA PRASARAK SAMAJ'S

Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik



Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622

11	Dhikle	Kaushik	Tukaram	2	2	2	6
12	Dond	Kartik	Sunil	3	2	2	7
13	Gaikwad	Rushikesh	Bapu	2	2	0	4
14	Gavit	Tanmay	Arjun	2	2	2	6
15	Gawali	Tejaswini	Ramesh	3	3	2	8
16	Ingale	Shweta	Vasant	3	3	2	8
17	Jadhav	Kaushal	Bharat	3	3	2	8
18	Jadhav	Prashant	Dinkar	2	1	1	4
19	Javalekar	Dhananjay	Hemant	-	-	-	-
20	Jawale	Saurav	Pramod	2	2	2	6
21	Junagade	Yash	Hemant	-	-	-	-
22	Katkade	Atharva	Padmakar	3	3	2	8
23	Khode	Sai	Chandrakant	3	3	2	8
24	Kochure	Shrikant	Vikas	2	2	1	5
25	Kuwar	Pravin	Ravji	3	3	2	8
26	Lokhande	Yash	Hemant	2	2	2	6
27	Mahewar	Sarvesh	Naresh	3	2	1	6
28	Mali	Rahul	Rambhau	2	2	2	6
29	Mogal	Vedant	Balasaheb	2	2	1	5
30	Nagpure	Kshitij	Nitin	2	1	1	4
31	Patil	Dipak	Suresh	3	3	2	8
32	Patil	Manish	Dinesh	3	3	2	8
33	Randhir	Nishant	Anil	3	4	2	9
34	Rathod	Mansi	Birbal	2	1	1	4
35	Salve	Sakshi	Milind	3	3	2	8
36	Shah	Nikhil	Shirish	2	1	1	4
37	Shermale	Roshan	Kautik	3	3	1	7
38	Sonawane	Sakshi	Vijay	4	3	2	9
39	Sonawane	Yugandhara	Rahul	4	3	2	9



MARATHA VIDYA PRASARAK SAMAJ'S
Karmaveer Adv. Baburao Ganpatrao Thakare
College of Engineering, Nashik



Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622

40	Suryawanshi	Purva	Rajesh	4	4	0	8
41	Wagh	Pranit	Dinesh	3	3	2	8
42	Adroja	Jay	Ashokbhai	3	2	2	7
43	Ahirrao	Pratikshit	Prakash	3	2	2	7
44	Ambekar	Mandar	Pandurang	2	2	2	6
45	Bagade	Sejal	Prashant	3	2	2	7
46	Bhadane	Mayur	Keda	-	-	-	-
47	Bhagwat	Vaishali	Rajendra	3	4	2	9
49	Bhamare	Dhiraj	Bharat	-	-	-	-
49	Bhavsar	Sakshi	Ravindra	3	4	2	9
50	Bodke	Jeevan	Digambar	2	2	2	6
51	Borse	Tanuja	Sunil	3	4	2	9
52	Deore	Sagar	Sunil	-	-	-	-
53	Gahiwad	Dhaval	Deepak	-	-	-	-
54	Gujarathi	Aaditya	Rajendra	3	4	2	9
54	Hiray	Tushar	Anil	3	2	2	7
56	Jadhav	Neha	Anil	3	4	2	9
57	Kapure	Bhavesb	Manoj	3	4	2	9
58	Kudke	Pratik	Santosh	-	-	-	-
59	Malve	Priyanka	Mangesh	3	3	2	8
60	Mohite	Gaurav	Mahendra	2	2	0	4
61	More	Rohini	Vikas	4	3	2	9
62	Nikam	Shubham	Sandip	3	4	2	9
63	Paithankar	Himanshu	Santosh	3	4	2	9
64	Patil	Prithviraj	Rajendra	3	4	2	9
65	Patil	Ritu	Prakash	3	4	2	9
66	Patil	Vishal	Vijay	2	1	1	5
67	Pawar	Shivraj	Harshavardhan	3	2	2	7



MARATHA VIDYA PRASARAK SAMAJ'S

Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik



Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622

68	Pawar	Bhavana	Dilip	3	2	2	7
69	Pitlewar	Parithoshika	Anil	4	4	2	10
70	Salunke	Yogesh	Manoj	3	2	2	7
71	Sanap	Vaibhav	Ramkrushna	3	4	2	9
72	Sanap	Shubham	Ramesh	4	4	0	8
73	Sangale	Vaishnavi	Ramdas	3	3	2	8
74	Savkar	Rakesh	Hiraman	3	3	2	8
75	Shelar	Chetan	Sanjay	2	3	2	7
76	Shelar	Vishal	Sanjay	3	2	2	7
77	Shirsath	Onkar	Ramdas	2	3	2	7
78	Sirame	Ajay	Maroti	-	-	-	-
79	Sonar	Khushali	Kishor	3	3	2	8
80	Sonawane	Shubham	Bhikaji	3	3	0	6
81	Suryawanshi	Kalyani	Vijay	3	3	2	8
82	Thankar	Abhishek	Ganesh	3	3	0	6
83	Ugale	Sanket	Ramkrushna	2	3	2	7
84	Vispute	Tanay	Deepak	3	2	2	7
85	Waklekar	Tejaswini	Sanjay	3	2	2	7
86	Kunal	Baraku	Vani	3	3	2	8
87	Anjali	Yuvraj	Watane	2	2	2	6

Course Outcomes (Related to Methodology)

After the completion of this activity students will be able to:

	Course Outcome	BTL
CO1	Discuss the traffic engineering and control methods.	2

POs (Related to Methodology)



MARATHA VIDYA PRASARAK SAMAJ'S
Karmaveer Adv. Baburao Ganpatrao Thakare
College of Engineering, Nashik

Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622



After the completion of this activity students will be able to:

PO1	Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO8	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PSOs (Related to Methodology)

After the completion of this activity

PSO1	Graduates will apply technical knowledge, engineering skills, and competencies necessary for entering civil engineering career.
PSO2	Graduates will demonstrate knowledge and techniques in engineering fields for effective management and professional development.
PSO3	Graduates will apply technical and professional skills to be nationally competitive for employment/self employment thereby benefit the society.



MARATHA VIDYA PRASARAK SAMAJ'S

Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik



Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622

Evidences:

Sakshi Sonawane
38
NDMVP Samaj's, KBT COE, NASHIK

Assignment No 2

9. Identify the sign boards on the roads into your locality and also with the same get the geotag photograph for the same in addition with specification of dimensions of identified sign boards as per IS standards.

→

- Traffic signs which have backing of law in India, are incorporated in IRC: 67-2001 section 116 of the Indian Motor Vehicles Act, 1988.
- The Motor Vehicles Act, 1988 has covered all the signs warranted by different traffic situations and the designs of signs fully dimensioned.
- The existing road signs (IRC: 67-1977) have been reviewed by the Traffic Engineering Committee of the Indian Road Congress in the light of recommendations made by various international conventions with a view to evolving a uniform and an efficient system of road signs suiting the present as well as future traffic.
- The road sign or traffic sign is the most used and least costly or traffic control devices.

A. Purpose

- i) To achieve orderly movement of traffic.
- ii) To control speed of vehicles.
- iii) To control traffic behaviour such as parking, etc.

"SAVE ENERGY & PROTECT ENVIRONMENT"

iv. To direct traffic on different routes.

v. To guide road users of hazardous conditions ahead.

vi. To intercept heavy traffic in order to allow other vehicles and pedestrians.

vii. To reduce the chances of accidents, etc.

B. Limitations

- i. They are not capable of being read at long distances which can be done with flashing or continuous traffic signal indications.
- ii. They are not capable of providing continuous guidance through complicated areas and around hazardous location which road markings can do under normal conditions.
- iii. They are not capable of providing the positive barriers available by use of kerbs, fencing, raised traffic islands and guard rails.
- iv. They are not capable of spacing vehicle platoons on busy streets so that the same traffic performance is obtained as with traffic signals.

C. Design and location

1. Design - The uniformity of design includes shape, colour, dimensions, legends and illumination. The details of standard signs including letter, style, size and colour are prescribed.



MARATHA VIDYA PRASARAK SAMAJ'S

Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik

Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622



may not be immediately apparent.

To control traffic at important road junctions, or intersections, the automatic traffic signals are installed.



NO ENTRY



GIVE WAY



STOP

MANDATORY SIGNS



CROSS ROAD



NARROW BRIDGE

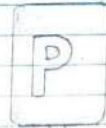


SPEED BREAKER

WARNING SIGNS



PUBLIC
TELEPHONE



PARK THIS SIDE



DIRECTION
SIGN

INFORMATORY SIGNS

2. Location- General rule is to locate signs on the left hand side of road but, under some circumstances such as sharp curves to the left, the signs may be placed on the right hand shoulder or channelizing island.

D. Types of Road / Traffic Signs

As per the provisions of the Indian Motor Vehicles Act 20 IRC code, the road signs can be classified in following three categories:

- i] Guide or Informatory signs
- ii] Regulatory or Mandatory signs.
- iii] Warning or Cautionary signs.

i. Guide or Informatory Signs.

The guide signs show routes, destinations, designations, directions, distances, service points of interest and other geographical or cultural information.

ii. Regulatory or mandatory signs.

The regulatory signs provide notice of statutory traffic laws and regulations which usually are enforceable in absence of such signs.

iii. Warning / Cautionary signs

The warning / cautionary signs are provided to call attention to conditions which are potentially hazardous to traffic operations and which otherwise



MARATHA VIDYA PRASARAK SAMAJ'S

Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik

Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622



Sakshi Sonawane
38

MVP Samaj's, KBT COE, NASHIK

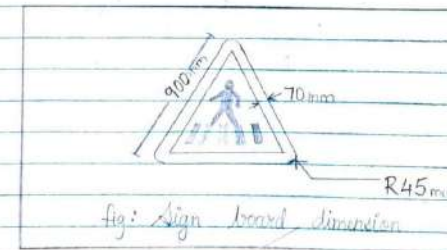
Assignment No 2

- Q. Identify the sign boards on the roads into your locality and also with the same get the geotag photograph for the same in addition with specify the dimensions of identified sign boards as per IS standard.

→ Following are the sign boards identified in my locality.

1. Warning signs / Cautionary signs

- These signs are used to warn the road users of the hazardous conditions either on the road or adjacent to it. The warning signs are in the shape of equilateral triangle with its apex upward.
- These signs are located at sufficient distance in advance of the hazard warned against. These distance are 120, 90, 60 and 40 meters respectively on NH / SH highway, MDR, ODR and VR. on the urban roads this distance is 50m.



"SAVE ENERGY & PROTECT ENVIRONMENT"



MARATHA VIDYA PRASARAK SAMAJ'S

Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik

Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622



2. Informatory signs / Guiding Signs

These signs are used to guide the road users along routes, inform them of destination, distance and provide with information to make travel easier, safe and pleasant. These signs are grouped under the following sub-heads:

- Direction and place identification sign
- Facility information signs
- Other useful information signs
- Parking signs

These sign boards are fixed at 7 feet measuring vertically from the bottom of the sign to the top of the kerb.



		Marks
R1	Comprehension	01
R2	Accuracy / Appropriateness / Presentation	03
R3	Fluency	02
	Total	06

(Signature)
Date: 21/09/22



MARATHA VIDYA PRASARAK SAMAJ'S

Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik

Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622



Assignment - 2.

Pillewar Parithashika. Anil

BECE - (69)

MVP Samaj's, KBT COE, NASHIK

* **Question** - Identify the sign boards on the roads into your locality & get the Geotag photograph for the same. In addition, specify the dimensions of the identified sign board as per IRC Standards.

→ Road Signs or Traffic Signs -

Road Signs are provided to warn, direct & guide the road users. They are in the form of symbols or inscription. They are mounted on fixed or portable supports & are placed on the sides of roads.

→ Purpose of Road Signs -

1. To regulate the traffic by imparting messages to the driver when to stop, give way or limit their speeds.
2. To give timely warning of hazardous situations when they are not self-evident.
3. To supply information on highway routes, directions & points of interest.

→ According to IRC : 67-1977 Code -

Road Signs



① Regulatory / Mandatory Sign -

These signs are used to inform the road users, certain rules & regulations which has to be noticed for safe & free flow of traffic.

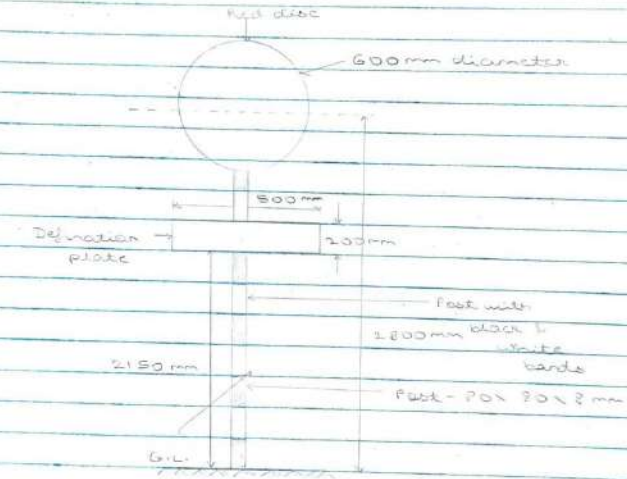


Fig. Vertical Post indicating Regulatory Sign.

Example:

1.1 Operational Control - Speed Limit

1.2 Prohibitory Regulation



MARATHA VIDYA PRASARAK SAMAJ'S

Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik

Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622



NDMVP Samaj's, KBT COE, NASHIK

* Significance of Road Sign.

- ① Speed Limit- Designates the speed, as specified in the sign, of traffic on road.
- ② Horn Prohibited- The sign shall be used on stretches of the road where sounding of horn is not allowed, such as near hospitals & in silence zones.
- ③ School ahead- The sign should be used to notify drivers of vehicles that they should take the precautions required near school.
- ④ Pedestrian Crossing- The sign shall mean that only pedestrians are allowed & the traffic is not allowed on this road / carriageway.
- ⑤ Bump Strip- Sometimes there is a hump on road either intentionally created for slowing the traffic or caused by any other reason. This sign cautions the driver that he / she should reduce the speed to cross the hump comfortably.

"SAVE ENERGY & PROTECT ENVIRONMENT"

MVP Samaj's, KBT COE, NASHIK

Dimensions according to IRC-67-2001 Code

1.1 Operational Control Sign-

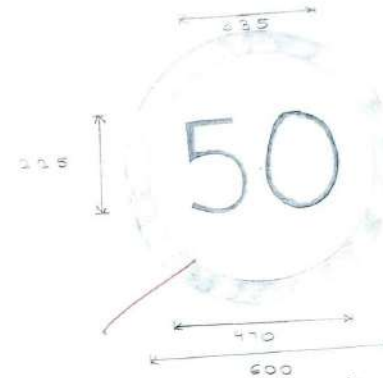


Fig 1.1 Speed Limit

1.2 Prohibitory Sign-

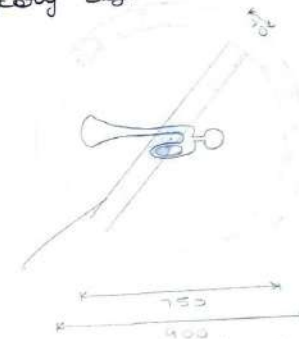


Fig 1.2 Horn Prohibited

"SAVE ENERGY & PROTECT ENVIRONMENT"



MARATHA VIDYA PRASARAK SAMAJ'S

Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik

Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622



1. REGULATORY/MANDATORY SIGNS

1.1 Operational Control Sign-



Fig 1.1 Speed Limit

1.2 Prohibitory Sign-



Fig 1.2 Horn Prohibited

MVP Samaj's, KBT COE, NASHIK

② Warning / Cautionary Sign-

1. They are triangular in shape with red border & black symbol in white background used to caution & alert the road users to potential danger or existence of certain hazardous conditions either on or adjacent to the roadway so that they take the desired action.
2. These signs indicate a need for special caution by road users & may require a reduction in speed or some other manoeuvre.
3. These signs are located at sufficient distance in advance of the hazard warned against.
4. These signs are 120, 90, 60 & 40 m respectively on National Highway / State Highway / Major District Roads / other District Roads & Village Roads. On the Urban Roads, this distance is 50 m.
5. Commonly used warning Signs:-
 - Right Hand Curve
 - Left Hand Curve
 - Steep Ascent / Descent
 - T- Intersection
 - Unguarded Railway Crossing
 - School
 - Cattle
 - Falling Rocks
 - Cycle Crossing & many more.

"SAVE ENERGY & PROTECT ENVIRONMENT"



MARATHA VIDYA PRASARAK SAMAJ'S

Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik

Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622

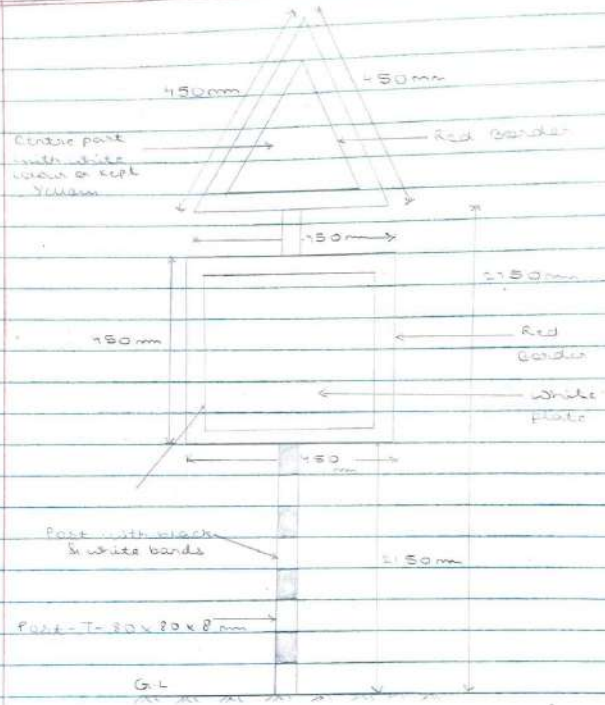


Fig vertical Post indicating Cautionary Sign

Example:

2.1 School ahead

2.2 Pedestrian Crossing

2.3 Uneven Roads

2. WARNING /CAUTIONARY SIGNS

2.1 School Ahead-



Fig 2.1 School



MARATHA VIDYA PRASARAK SAMAJ'S

Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik

Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622



2.2 Pedestrian Crossing-



Fig 2.2 Pedestrian Crossing

2.3 Uneven Road-



Fig 2.3 Uneven Road

Parmanika
21/1/22
Sign of Student
with Date

		Marks
R ₁	Comprehension	04
R ₂	Accuracy / Appropriateness / Presentation	04
R ₃	Punctuation	02
Total		10/10

Parmanika



MARATHA VIDYA PRASARAK SAMAJ'S

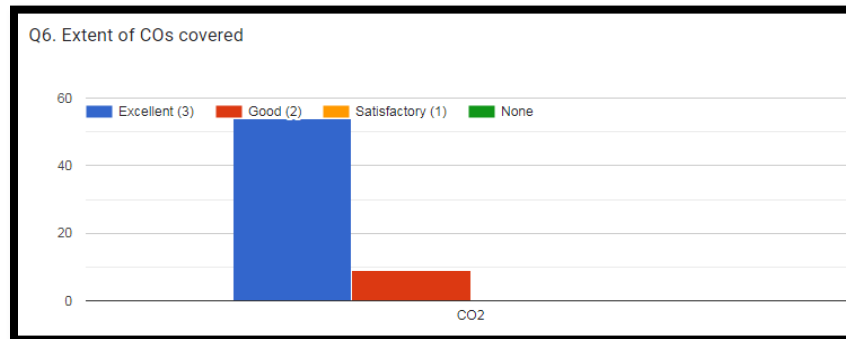
Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik

Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622



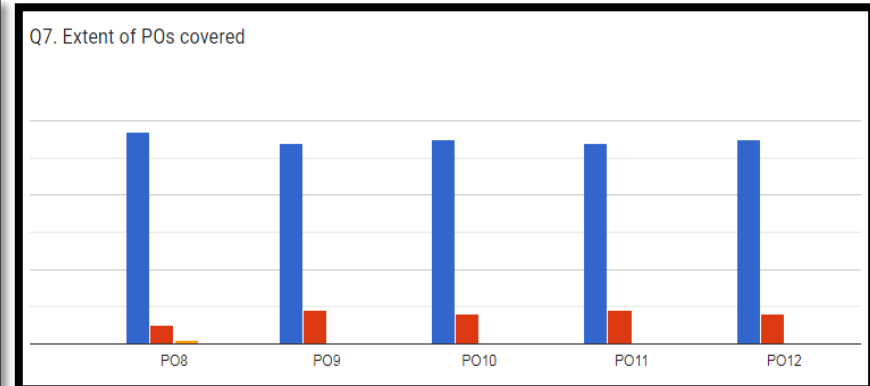
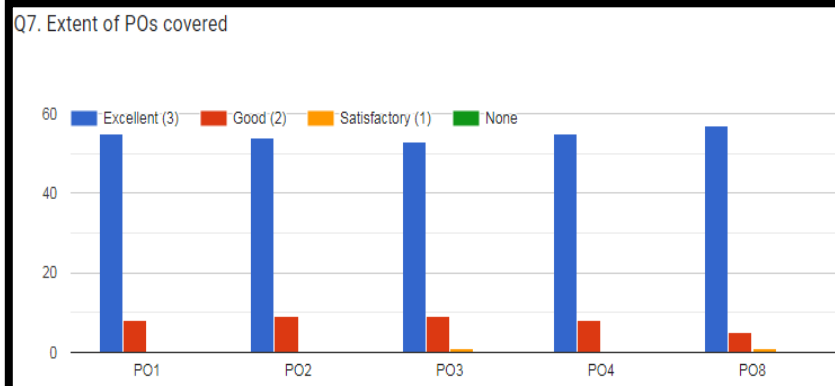
Course Outcome

	Course Outcome	CO1
A	No. of Groups/Students Achieving CO	63
B	Total Rating	
C	Average Rating (B/A)	



Program Outcome

	Program Outcome	PO1	PO2	PO3	PO4	PO8	PO9	PO10	PO11	PO12
A	No. of Groups/Students Achieving PO	63	63	63	63	63	63	63	63	63
B	Total Rating	181	180	178	181	182	180	181	180	181
C	Average Rating (B/A)	2.87	2.86	2.83	2.87	2.89	2.86	2.87	2.86	2.87



Program Specific Outcome



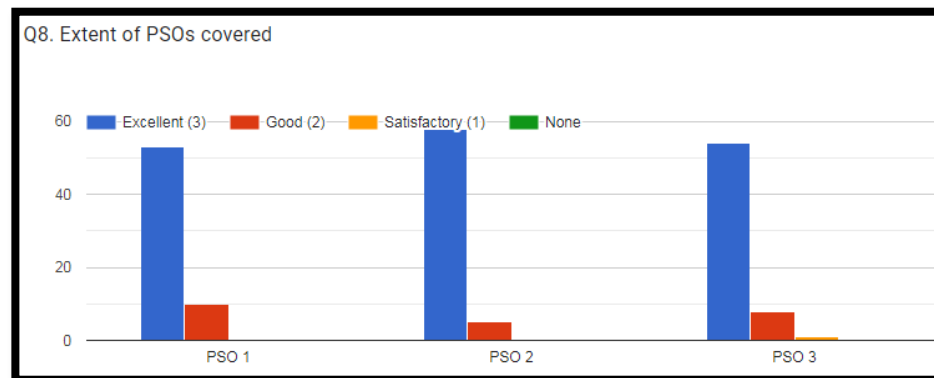
MARATHA VIDYA PRASARAK SAMAJ'S

Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik

Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622



	Program Specific Outcome	PSO1	PSO2	PSO3
A	No. of Groups/Students Achieving PSO	63	63	63
B	Total Rating	179	184	179
C	Average Rating (B/A)	2.84	2.92	2.84



Impact Analysis for Methodology (Based on Students Feedback):

	Rating	Q1. Did you find the methodology helpful?	Q2. Is the content relevant?	Q3. Concept of the methodology.
A	No. of Students	63	63	63
B	Total Rating	186	184	184
C	Average Rating (B/A)	2.95	2.92	2.92



MARATHA VIDYA PRASARAK SAMAJ'S

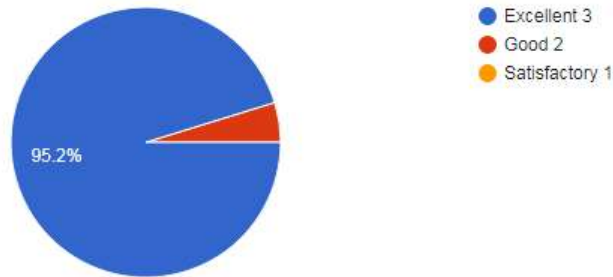
Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik

Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622



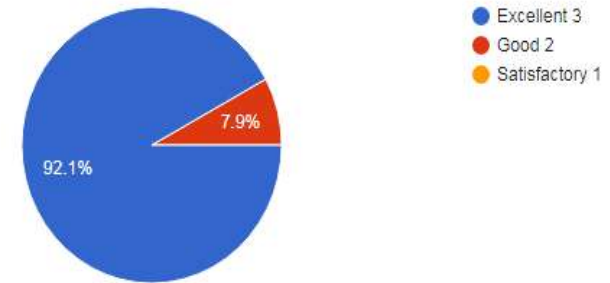
Q3. Did you find the methodology helpful?

63 responses



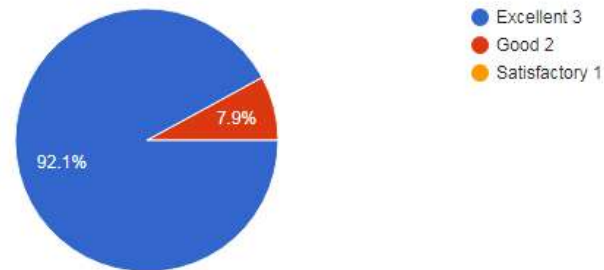
Q4. Is the content relevant?

63 responses



Q5. Concept of the methodology.

63 responses



Link for Review and Critics:

https://docs.google.com/forms/d/1TYzUSGTrWOnGCWZvsQ9A3gUB0qxle4apnFwA8_BZ9d8/edit

Email: patil.rohan@kbtcoe.org

Mr. R.C. Patil
Course In-charge

Dr. P.D. Nemade
HOD Civil Engg.



MARATHA VIDYA PRASARAK SAMAJ'S

Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering, Nashik



Permanently Affiliated to Savitribai Phule Pune University Vide Letter No. : CA/1542 & Approved by AICTE New Delhi - Vide Letter No. : 740-89-32 (E) ET/98 AISHE Code - C-41622