



Civil Engineering

Vision: “To impart quality technical education beneficial to industry and the society in the field of Civil Engineering.”

- **Mission:** • To arrange academic and technical expertise.
 - To improve the practical knowledge of the student as per current scenario of industry.
 - To make the students socially and ethically responsible.

Assignment No :- 01

Date :-

Topic Name :- Overview of Highway Engineering (C302.1)

1. State any four modes of transportation
2. Classify the roads according to Nagpur Road Development plan.
3. Define alignment and state the requirement of an ideal road alignment.
4. State characteristics of Road Transport.
5. State the contents of drawings required for road project.
6. Write the classification of roads according to third road development plan

Date of Submission :-

Assign By :- Mr.Dattatray Bangar.



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Assignment No :- 02

Date :

Topic Name :- Geometric Design Of Highway Engineering (C302.2)

1. Define gradient and state any four types of gradient.
 2. Define i) Stopping sight distance ii) Overtaking Sight Distance
 3. Draw a neat sketch of std. C/s of National Highway in embankment.
 4. Define Kerb and Right of way.
 5. Define Camber and super-Elevation.
 6. Define Design Speed. Give four factors affecting Design Speed.
 7. Define gradient. Explain types of gradient
 8. Define: i) Road carriageway ii) Road Shoulder
 9. State the necessity of providing extra widening on horizontal curves.
 10. Calculate the length of stopping sight distance for two way traffic in a single lane road having descending gradient of 2%. The design speed is 70 kmph. Assume reaction time of driver as 2.5 seconds and coefficient of friction as 0.6
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Assignment No :- 03

Date :

Topic Name :- Construction of road pavements (C302.3)

1. State merits and demerits of WBM road.
 2. Write the procedure of construction of cement concrete pavement showing its components.
 3. Draw C/S of typical flexible pavement & label its components
 4. State the requirement of good quality material which plays the major role in highway construction.
 5. Write the procedure of construction of WBM road with neat sketch showing various components
 6. State and explain functions of Pavement Components.
 7. Explain the construction procedure of Bituminous Road.
 8. Explain Softening Point Test on Bitumen with neat sketch.
 9. State different types of Tar used in construction of Road with its suitability.
 10. State the methods of construction of Cement Concrete Road.
 11. Explain the procedure for determining softening point of bitumen.
 12. Explain the procedure for flakiness and elongation test on aggregate.
 13. Discuss the merits and demerits of bitumen road.
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Assignment No :- 04

Date :

Topic Name :- Traffic Engineering(C302.4)

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1. Define traffic volume , Traffic Capacity and traffic density
 2. Draw road sign for, i) Load limit ii) Keep Left iii) Right hand curve iv) Hospital v)left turn prohibited vi) No parking vii) Speed Limit viii) Width limit ix) Narrow bridge ix) Compulsory ahead or right turn
 3. Explain the Divisional Island with neat sketch
 4. Define PCU and list four factors affecting passenger car unit.
 5. Explain the Rotary Island and Channelising Island with neat sketch
 6. State the objects of traffic volume study.
 7. List causes of Accident and Draw the Collision Diagram for, i) Head on collision ii) Rear end collision iii) Side Sweep and

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Assignment No :- 05

Date :-

Topic Name :- Hill Roads.

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1. State causes of landslides
 2. State the difference between alignment of hill roads and alignment of plain roads
 3. State preventive measures of landslides in hilly roads
 4. State the necessity of providing catch water drain in Hill Roads
 5. Explain the types of hill road curve with neat sketch.
 6. Draw a neat sketch of hill road showing its components.

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Assignment No :- 06

Date :-

Topic Name :- Drainage, Maintenance and Road Repair.

1. Draw labeled sketches of side drains along hill roads.
2. Prepare a chart showing schedule of maintenance operation from October to March for bituminous road.
3. Justify the remedial measures for the following defects in earthen road: i) Formation of dust during dry weather. ii) Growth of vegetation inside drains and their silting up
4. State the functions of surface drainage and sub-surface drainage.
5. Draw a neat sketch (Plan & Section) of Longitudinal drain and Cross drain.
6. State the necessity of Good drainage
7. State the classification of highway maintenance.

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