

SUBJECT HIGHWAY AND TRAFFIC
ENGINEERING

ID 7274

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Q1: Keep in view different modes of transportation compare railways with Highways.

Ans:- MODES OF TRANSPORTATION COMPARE WITH RAILWAY & HIGHWAYS:-

There are different modes of transportation. A human being has always remained surrounded by three basic medium known as land, water, air. The modes of transportation are also connected to these three mediums. The land used for the development of road & railway transport while water & air have developed water ways & air ways respectively. Thus there are four different modes of transportation are follow.

- 1) Road ways
- 2) Rail ways
- 3) Water ways
- 4) Air ways

1) The steel rail are laid along the route

2) They are more suitable

1) These are the primary & early modes of communication on the land.

2) They are useful for long

- for long distance journeys.
- 3) They can transport heavy & bulky loads
- 4) They are supposed to be the safe, comfortable & cheapest - mode centers & other ways of transportation.
- as well as short distance they are most suitable for light loads & small values.
- ④ They link up the road communication such as railways, sea way & airway.

Q2. You are you will extract.
Ans:- STEP FOR DESIGN HIGHWAYS:-

① Collect Basic data:-

The basic data that we need topographic map of the area that we build roads.

② IDENTIFICATION location of the road:-
we identify the class of road that we will create from the starting points to end point & road construction plan.

③ Determine road criteria:-

We need to classified our road based on the road function, vehicles plan VCHR & VSR & our design road speed.

④ Determine optimal road alignments:-

We can determine our road alignments base on basic data. Alignments have few types such horizontal & vertical alignments. The main product used in the construction of a highway pavement are aggregates, asphalt concrete & other hydraulic bond material & small element pavers, blocks, slab & bricks.

Traffic volume when the road open.
Traffic volume at the end of the project life.

Q3. What is the importance of vehicle performance in highway design.

Ans:- Vehicle Performance in high way Design:-

In sight into highway design & traffic operation to be able to accommodate a large variety of vehicles the basic to understand vehicle design & their impact on performance of a road vehicles forms the basic for road ways design guide lines such as

- 1) Length of acceleration / deceleration lanes
- 2) maximum grades
- 3) Stopping - sight distance
- 4) passing - sight distance
- 5) setting speed limits
- 6) timing of signalized intersections.

4) Write short note on directional distribution in design of highways.

Ans:- Directional Distribution:-

The directional Distribution is defined as the percentage of heavier volume over the total high way volume.

Accounts for traffic the directional distribution of traffic.

used to convert average daily traffic to directional hour traffic for example consider a rural road with a design volume of 4000 vehicle per hour (vph) for both direction of travel combined if during the design.

hour the directional (distribution is equally split or 200 vph is one direction two lanes each direction ~~many~~ way be adequate if 80 percent of DTV is in one direction would be needed for the 3, 200 vph.

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Q5. Explain broad classification of surface distress modes.

Ans: Classification of surface distress modes:-

There are three classification of surface distress modes are given below:-

- 1) Fracture
- 2) Distortion
- 3) Disintegration

1. FRACTURE:-

The could be in form of cracking in flexible & rigid pavements.

2- Distortions:-

This is the form of deformation (rutting, corrugation & shoving)

3) Disintegration:-

This is in the form of stripping, raveling or spalling.

Q6: Explain Alligator cracking block cracking longitudinal crack & transvers cracking

Ans) ALLIGATOR Cracking:-

Alligator cracking refers a way that the cracks form a pattern that look like reptile scales most notably those an alligator crocodiles back. The pattern usually begins are then connected by transvers cracks.

2) Block Cracking:-

Block cracking is a series of large (typically) are front or more rectangular cracks on an asphalt pavement 1/2 s surface. This type of cracking typically covers large areas & many occur in are where there is no traffic. Block cracking is typically caused by shrinkage of the asphalt pavement due to temperature cycles.

3) LONGITUDINAL CRACKING:-

Longitudinal cracks occur parallel to the centerline of the pavements they are be cause by a poorly constructed joint shrinkage of the asphalt layer. Cracks reflecting up from an underlying layer & longitudinal segregation due to improper pave operation.

4) TRANSVERS CRACKING:-

Transvers cracking is an unconnected crack that runs across

a road pavement perpendicular to the direction of road.