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Paper : → Highway & Traffic Engineering

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Exam : → Mid-Term (Spring - 2020)

Q NO : → (01)

Keep in View different modes of transportation
Compare railway with highways ?

Answer

Modes of transportation Compare with Railway
and highways.

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

P.T.O

- (1) ⇒ Roadways
- (2) ⇒ Railways
- (3) ⇒ Water Ways
- (4) ⇒ Airways

- (1) ⇒ The Steel Rail are laid along the route.
- (2) ⇒ They are more ^{Suitable} ~~Suitable~~ for long distance journeys
- (3) ⇒ They can transport heavy and bulky loads
- (4) ⇒ They are supposed to be the safe comfortable and cheapest way of transportation

- (1) ⇒ These are the primary and early mode of communication on the land.
- (2) ⇒ They are useful for long as well as short distance.
- (3) ⇒ They are most suitable for light loads and small values.
- (4) ⇒ They link up the trade centers and other communication such as railways, sea way and airways



Q NO: 7 (02)

You are a transportation engineer. You have been tasked to conduct office study as a ~~pre~~ preliminary step for design of new highway. What reference material you will study and what data you will extract?

Answer

Step for Design Highways: →
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(1) → Collect Basic Data: →

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

(2) → Identification Location Of The Roads: →

We identify the class of road that we will create from the starting points to end point of road construction plan.

(3) → Determine Road Criteria: →

We need to classified our road based on the function Vehicles plan VCHR and VJR and our design speed.

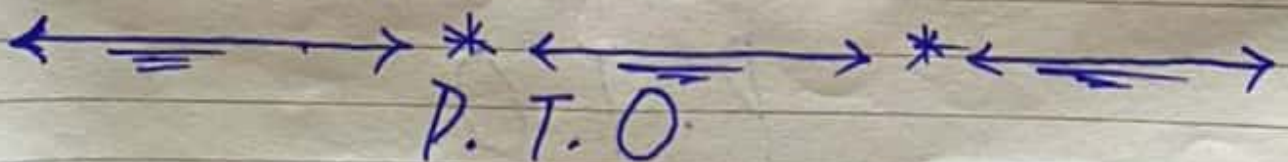
(4) → Determine Optimal Road Alignments: →

We can determine over road alignments base on basic data alignments have few types such as horizontal and vertical alignments.

The main product used in the construction of a highway pavement are aggregates asphalt concrete and other hydraulic bond materials and small element pavers blocks, Slab and bricks.

Traffic Volume Cohent. the Road Opaw

Traffic Volume at the end of the project life.



Q NO: → (03)

What is importance of Vehicle performance in highway design?

Answer

Vehicle Performance In Highway Design : →

In Sight into highway design and traffic operation. To be able to accommodate a large variety of Vehicles. The basic to understanding Vehicle designs and their impact on performance of 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 Signalized Intersections.



Q NO: → (04)

Write Short note on Directional distribution in design of highway?

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Answer

Directional Distribution :->

The directional distribution is defined as the percentage of heavier volume over the total highway volume.

Accounts for the directional distribution of traffic.

Used to convert average daily traffic to directional peak 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 2000 vph in one direction, two lanes in each direction may be adequate. If 80 percent of DHV is in one direction, at least three lanes in each direction would be needed for the 3,200 vph.



Q NO: → (05)

Explain broad Classification of Surface distress modes ?

Answer

Classification of Surface distress modes :->

There are three Classification of Surface distress modes are:

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- (1) → Fracture.
- (2) → Distortion
- (3) → Disintegration

(1) → Fracture: → The could be in form of Cracking.
(In flexible and rigid pavements).

(2) → Distortion: → This is in the form of deformations.
(Rutting, ~~Other~~ Corrugation and Shoving).

(3) → Disintegration: → This is in the form of
Stripping, Raveling or Spalling.



Q NO: → (06)

Explain Alligator Cracking, Block Cracking,
Longitudinal Cracking and transverse
Cracking?

Answer

(1) → Alligator Cracking: → Alligator Cracking refers to a surface damaged in such a way that the cracks form a pattern that look like reptiles scales most notably those on an alligator crocodile's back. The pattern

P.T.O

usually begins with longitudinal cracks, which are then connected by transverse cracks.

(2) ⇒ Block Cracking ⇒

Block Cracking is a series of large (typically one foot or more) rectangular cracks on an asphalt pavement's surface. This type of cracking typically covers large area and may occur in areas 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 can be caused by a poorly constructed joint shrinkage of the asphalt layer cracks reflecting from an underlying layer and longitudinal segregation due to improper paver operation.

(4) ⇒ Transverse Cracking ⇒

Transverse cracking is an unconnected crack that runs across a road pavement, perpendicular to the direction of road.

