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ID NO = 7823

SECTION = A

PAPER = TRASPORTAN ENGINEFRINH II

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QUESTION NO=01

HIGH WAY	RAIL WAY
1) It is any public or Private Road used to Connect Cities and towns	1) It is Permanet track Composed of line of Paralled Metal Rails.
2) Higher degree of accident occure due to flexible Movent.	2) Less Number of accident occure due to uniform Movement.
3) Journey are More Comfortable.	3) Journey are less comfortable.
4) Highway Provide door to door service.	4) It Serve as a feeder system.
5) It consist of lane and Roads	5) It is Made of Rail track.
6) Highway required less investment for construction.	6) Railway Required greater investment for construction.

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QUESTION NO = 02

OFFICE STUDY OF EXISTING INFORMATION:-

The first phase of any highway location study is the examination of all available data of the area in which the road to be constructed. This phase is usually carried out in the office prior to any field or photogrammetric investigation. All the available data are collected and examined.

The data include these characteristics.

⇒ Engineering (traffic volumes, climatic geology).

⇒ Social and demographic (land use and zoning pattern).

⇒ Economic (unit cost for construction.

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PRILIMINARY LOCATION SURVEY:-

During this phase of the study the position of the feasibl Routes are set as closely as possible;

⇒ Establishing are the control points.

⇒ Determing the priliminary vertical and horizontal alignment.

⇒ priliminary alignment are used for--

⇒ Economic Evaluation, Road user cost, Construction cost and Maintainance cost etc.

⇒ Enviromental Evaluation, Enviromental impact statement.

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QUESTION NO=03

IMPORTANCE OF VEHICLE IN HIGHWAY DESIGN:-

Performance of Road vechile forms the highways.

=) Passing sight distance.
=) Setting speed limit.
=) Maximum grades
=) Turnout bays for buses.
=) Acceleration and deceleration lanes
=) Timing of signalised intersection
=) Highway Alignment.
=) Freeway Ramps
=) Lenght of Acceleration.

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QUESTION NO = 04

DIRECTIONAL DISTRIBUTION:-

It is also known as D-factor is an important traffic Parameter that is frequently used for design and operational Performance operation.

Traditionally the D-factor has been used for traditional operational capacity and LOS.

⇒ Highway must be designed to adequately serve the peak hour traffic volume in the peak direction of flow.

⇒ Total heavily direction in both side used to design two lane Roads

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⇒ In the direction of highway with more than two lane Roads where important intersection are encounter OR where additional lanes are to be provided later. Knowledge of the heavy volume trafffic for each direction of travel is essential. Direction of travel trafffic is used for Multiple Roads and street.

TYPically one directional contribute 55 to 70% in total trafffic. Although occasionaly 80% is observed.

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QUESTION NO = 05

SURFACE DISTRESS:-

Surface distress is any indecation of Poor or unfavourable pavement Performance Surface distress can be broadly classified in the following three groups.

1) FRACTURE:-

This might be within sort of cracking (in flexible and Rigid pavement) or spalling Resulting from such thing as excessive loading, fatigue, thermal changes Moisture "slippage" damage, slippage or contraction.

2) DISTORTION:-

This is often within the sort of deformation e.g: (Rutting, corrugtion and shoving) Which May Result from such things

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Excessive loading, creep densification consolidition, swelling OR Frost Action.

3) DISINTEGRATION:-

This is in the form of stripping. Revelling OR spalling, which MAY Result from such thing as loss of bonding, chemical Reactivity, traffic abrasion, aggregate degradation, poor consolidation / compaction or binder aging.

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Question No = 06

ALLIGATOR CRACKING::

Alligator Cracking, You likely already know what we are pestaining to. This is because you have probably seen it before. This type of pavement fatigue gets its look. It distinctive patteren of cracks resemble the scales on a Reptiles back.

Alligator cracking is one of the most common ways that asphalt pavement deteriorates overtime.

unfortunately it is one the most serious as well. Alligator cracking is more than Just surface level breakage. It is classified as fatigue cracking. The problem beneath the asphalt is more likely the cause. (which is why it's so serious).

Alligator cracking occure when the pavement is carrying load that The supporting structure and base cannot support.

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BLOCK CRACKING:-

Block cracking may be series of inter connecting cracks that form during a roughly Rectangular pattern. It can occure both concrete and versatile Road Pavement.

Block cracking may occure as a result of insufficient slab thickness' loss of sub-base support OR sub-grade Settlement.

In bituminous surface block cracking Could also be caused by Reflection of cracks in an underlying concrete Pavement, ăl* asphalt, shrinkage fatigue cracking in an embritted asphalt wearing coarse.

TRANSVERSE CRACKING:-

cracks perpendicular to the pavements centerline OR laydown direction.

It is usually a type of thermal

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Cracking.

Following are the causes of the transverse cracking.

⇒ The Reflection of the crack OR Joint in an underlying pavement.

A constouction Joint of shrinkage crack (due to coldness of bitumen hardening in an asphalt surface.

LONGTUDNAL CRACKING:-

Cracks parallel to the Pavement centerline OR laydown direction.

It can be a type of fatigue cracking or top-down cracking.

Longitudnal cracks can occure in both asphalt and concret Pavement.

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They indicate the onset of Alligator cracks (in the case of asphalt pavement). and possible crack Reflecting up from an underlying layer.

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