

31042 - Transportation Engineering

UNIT 1

PART - A (2 MARK)

1. Name the various modes of transportation?
2. What is the importance of road?
3. Explain about Nagpur plan and write the classifications of road as per Nagpur plan?
4. Define NH?
5. What is Ribbon development?
6. Write the advantages and requirements of road?
7. Name the classification of urban road?
8. Write the use of District road?
9. Name the various types of pavement?
10. Define road camber and list the types of camber?
11. What is sight distance and mention its types?
12. Define road gradient?
13. What are express way?
14. What is Atterberg's limit, plastic limit and liquid limit?

PART - B (3 MARK)

1. State the position of ancient roads before BC?
2. Write note on development of road in Mughal period?
3. Explain about Ribbon development?
4. How roads are important in India?
5. Explain IRC?
6. What are the objectives of highway planning?
7. Write about flexible pavement?
8. State the reasons for providing camber?
9. Name the types of camber and gradient with sketches?
10. Name the various types of traffic survey?

PART - C (10 MARK)

1. Discuss about the various modes of transportation?
2. Explain about Nagpur plan and its recommendations.
3. Compare flexible and rigid pavement?
4. State the types of sight distance generally provided with reasons?
5. Explain about various causes of road accidents?
6. Enumerate the preventive measures to accident?
7. Explain about standard compaction test?
8. What factors considered in selection of trees?

31042 - Transportation Engineering

UNIT 2

PART - A (2 MARKS)

1. What is meant by alignment of highway?
2. Name the stages of engineering surveys in highway alignment?
3. Define reconnaissance survey of highway alignment?
4. What are the excavating road machineries?
5. List the compaction equipments?
6. What is the use of bulldozer and grader?
7. What is low cost and earth road?
8. Define bituminous road?
9. What is meant by patch repair?
10. What is hair pin bend?
11. What is the purpose of retaining wall?

PART - B (3 MARKS)

1. What are the various factors which control the highway alignment?
2. Write about tractor and grader?
3. What are the advantages and disadvantages of WBM road?
4. What are the various techniques in soil stabilization?
5. What are various types of bituminous road?
6. Write about Alternate bay method and Continuous bay method?
7. Draw a sketch of hill road fully in embankment?
8. Draw a sketch of hill road partly in embankment and partly in cutting?

PART - C (10 MARK)

1. Explain about the stages of engineering surveys.
2. Explain about preliminary survey and map preparation.
3. Explain the various excavating equipments and compacting equipments used in highway project?
4. Explain briefly about the construction of WBM road?
5. Write the methods of soil stabilization and explain briefly.
6. Explain about maintenance of earth road and gravel road?
7. Explain about the construction of surface dressing?
8. State the advantage and disadvantage of CC roads?
9. Explain about the formation of a hill road with sketches.

31042 - Transportation Engineering

UNIT 3

PART - A (2 MARKS)

1. What is the basis of classification of Indian railway?
2. Name the various rail gauges with their gauge length?
3. What is loading gauge?
4. Name the types of rail sections?
5. State the purpose of welding of rails?
6. Name the materials used for sleepers?
7. What is ballast?
8. What is spike?
9. What are bearing plates?
10. Define plate laying?
11. How rolling stock is maintained?
12. State the methods of maintenance of bridge?

PART - B (3 MARKS)

1. Define gauge of railway track?
2. What is the function of loading gauge?
3. What are the functions of rail?
4. What are the functions of sleepers?
5. Draw a neat sketch of fish plates?
6. What are blocks?
7. State the necessity of maintenance of track?
8. What is meant by rolling stock?

PART - C (10 MARKS)

1. State the requirements of an ideal rail?
2. What are the types of rail section? Explain briefly.
3. Explain about creep of rail, its causes, prevention and effects.
4. Explain the requirements of sleepers?
5. Explain the functions of ballast?
6. Explain about PQRS method of relaying?
7. What is plate laying? Explain various methods.
8. Briefly explain about the maintenance of bridges.

31042 - Transportation Engineering

UNIT 4

PART - A (2 MARKS)

1. What is station and list the types of station?
2. Define yard?
3. What is the purpose of locomotive yards?
4. What is turn table?
5. What is the purpose of buffer stops?
6. Define throw of switch?
7. What is turnout?
8. List the types of switches?
9. List the types of crossings?
10. Define signaling?
11. List the types of signals?
12. Define interlocking?

PART - B (3 MARKS)

1. What is yard and name the various types of yard?
2. Explain about engine shed?
3. Write about weight bridges?
4. What is the purpose of points and crossings?
5. Draw a neat sketch of crossings?
6. What is meant by shunting signal?
7. State the principles of interlocking?
8. State the advantages of underground railway?

PART - C (10 MARKS)

1. State the purpose of railway station?
2. What are the types of way side station? Explain with neat sketches.
3. Differentiate triangles and turntables with neat sketch?
4. Draw a neat sketch of left hand and right hand turnout and name the various parts?
5. State the various types of crossing? Explain briefly.
6. State the objects of signaling?
7. State the various system of control of movement of trains?
8. Explain the methods of interlocking with neat sketches.

31042 - Transportation Engineering

UNIT 5

PART - A (2 MARKS)

1. Define bridge?
2. What are abutments?
3. What is meant by afflux?
4. What is economic span?
5. What are the functions of foundations of bridge?
6. What is coffer dam?
7. Define culvert and list the types of culvert?
8. What is pier?
9. Define wing walls? Name the types of wing walls?
10. Define bearing and list the types of bearing?

PART - B (3 MARKS)

1. Draw the cross section of bridge and mention its parts?
2. What is single wall coffer dam?
3. What is box culvert and draw a sketch?
4. What are causeways? Where are they constructed?
5. How abutments for girder bridges are constructed?
6. Explain about cantilever bridge?
7. What are the purpose of bearing and list the types of bearing?

PART - C (10 MARKS)

1. Explain (i) Afflux (ii) Economic span (iii) Water way.
2. When would you prefer caisson foundation in bridge construction?
3. State the various types of culvert? Explain briefly.
4. State the various types of cause ways? Explain briefly.
5. State the various types of piers? Explain briefly.
6. What are the various types of wing walls? Explain briefly with neat sketch.
7. Explain (i) Balanced cantilever bridge (ii) Suspension bridge (iii) Steel arched bridge.
8. What are the types of bearing used in a bridge? Explain with neat sketch.