B.E. Civil Engineering Sem-VIII
CE802 - Transportation Engineering-II

––

Notes : 1. All questions carry equal marks.
2. Due credit will be given to neatness and adequate dimensions.
3. Assume suitable data wherever necessary.
4. Diagrams and chemical equation should be given wherever necessary.
5. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) What are different gauges used in India? Discuss the factors which affect the selection of gauges. **8**

 b) Explain the various resistances which a train has to overcome before starting or to keep its motion? **8**

OR

2. a) What is creep of rail? What are its causes & preventive measures to be taken. **8**

 b) Explain with a neat sketch "coning of wheels". **8**

3. a) When a curve of 6° branches off a 3° main curve in opposite direction on a B. G. layout. Calculate the maximum speed that is allowed on the main line, if the speed on the branch line is restricted to 50 kmph. Assume suitable cant deficiency for B. G. line. **8**

 b) Define sleeper density. Calculate the number of sleepers required for laying a B. G. track of 640m length using sleeper density of (n+5). **8**

OR

4. a) Draw a neat sketch of left – hand turnout and explain its various parts. **8**

 b) Explain with the help of neat sketches. **8**
 1) Semaphore signal
 2) Reception signal
 3) Routing signal
 4) Stauter signal

5. Write short notes **any four**. **16**
 a) Marshalling yard.
 b) Railway track maintenance.
 c) Centralized traffic control systems.
 d) Types of crossings.
 e) ANC and TNC.

OR

6.	a)	Explain the various points to be considered while selecting a suitable site for an airport.	**8**
	b)	Discuss the important aircraft characteristics which affect the design of airports.	**8**
7.	a)	Compute the actual runway length for the following data:- i) Basic runway length = 1800m ii) Airport elevation = 1100 m above MSL iii) Effective gradient = 0.35% iv) Airport reference temperature = 38ºC.	**8**
	b)	Discuss the orientation of runway with the help of wind – rose diagram comment on calm period.	**8**

OR

8.	a)	Enlist various 'Airport lightings'. With the neat sketch. Explain approach lighting system.	**8**
	b)	Describe various aircraft parking system.	**8**
9.	a)	Explain the necessity of ventilation during the construction of tunnel. How it is provided.	**8**
	b)	List the tunneling methods in hard ground. Describe any one in details.	**8**

OR

| **10.** | | Write short notes **any four**.
a)   Tunnel surveys.
b)   Drainage in tunnels.
c)   Runway markings.
d)   Zoning laws.
e)   Exit taxiway | **16** |

****