



INSTITUTE OF AERONAUTICAL ENGINEERING

(AUTONOMOUS)

Dundigal, Hyderabad - 500 043

CIVIL ENGINEERING

ASSIGNMENT QUESTIONS

Course Name	:	TRANSPORTATION ENGINEERING-II
Course Code	:	A70143-R15
Class	:	IV B. Tech I Semester
Branch	:	Civil Engineering
Year	:	2018 – 2019
Course Coordinator	:	Ms. K. Anusha Hadassa, Assistant Professor, CE
Course Faculty	:	Ms. K. Anusha Hadassa, Assistant Professor, CE

S. No.	Question	Blooms Taxonomy Level	Course Outcome
UNIT-I			
INTRODUCTION TO RAILWAY ENGINEERING			
1	Define gauge ?What are the different types of Rail gauges used in India	Remember	1
2	What is rail? Explain with the help of neat sketches the various types of rail failures? What are the tests required to test the sustainability of rail?	Understand	3
3	What is the need of providing super elevation on curves of railway tracks? Describe relation between super elevation, guage, speed and radius of curve?	Remember	2
4	When and between which two stations the first railway service was started?	Remember	2
5	Write about Whyte system and give an example ?	Remember	3
6	What are the factors governing the choice of gauge while construction of a railway line? Explain?	Understand	2
7	Write about the centrifugal force on a curved track with neat sketch? Explain about Equilibrium super elevation with necessary derivation?	Understand	3
8	Give a typical cross section of a permanent way on an embankment indicating various components and describe their functions?	Remember	3
9	Explain the classification of Railway stations? What are the considerations for site selection of railway stations?	Understand	5
10	What are the types of colored light signals and write what each signal indicate? Write about trap indicator?	Remember	5
UNIT-II			
GEOMETRIC DESIGN OF RAILWAY TRACKS			
1	What are vertical curves? Name the types of vertical curves?	Understand	5
2	What is the function of vertical curve? Define turnout in railway track.	Remember	5
3	Define grade compensation. Write its values for BG, MG and NG.	Understand	6
4	What is negative super elevation?	Remember	6
5	Define cant deficiency.What are its considerations.	Understand	5
6	state the points to be considered while design of railway track? State the various components of cross section of railway track?	Remember	6
7	Define gradient in railway track and state the various classifications in gradients in railway track.	Understand	7
8	What is function transition curve in railway track? Define super elevation in railway track and state the advantages?	Understand	7

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9	What is meant by cant deficiency? what are the points and crossing and state their objects? Define turnout in railway track?	Understand	7
10	What are the types of sleepers and under points and crossings railway tracks?	Remember	9
UNIT-III AIRPORT Engineering			
1	What any four major problems faced by Airlines?	Understand	1
2	Explain in detail about the effect of performance requirements imposed by the government on aircraft manufactures and operators on runway length.	Remember	2
3	What are the different drawings and maps that should be prepared for the finally selected site for developing an airport?	Understand	6
4	Write a short note on Apron?	Remember	6
5	Distinguish topographical survey and soil survey for the selection of site at airport. How it is used in determining the adjustment to be made in the length of runway?	Understand	7
6	What is orientation of run way? Explain briefly. What are the characteristics of modern type of international airport and explain briefly.	Understand	6
7	State and explain various landing aids of medium type of airport. And also explain various methods of drainage at the airport campus.	Understand	5
8	Explain why top of hill is more suitable for locating an airport than the valley site.	Remember	4
9	State the items to be taken in to account in the selection of a site and layout for an airport from the points of the view of the following 1. Physical 2. Operational 3. Metrological considerations.	Understand	3
10	What is standard atmosphere? How it is used in determining the adjustment to be made in the length of runway?	Remember	2
UNIT-IV PORT AND HARBOUR ENGINEERING			
1.	Define inland water transport. also explain various methods of drainage at the airport campus.	Remember	1
2	What do you understand by Tidal range?	Understand	1
3	Define break waters. also explain various methods of drainage at the airport campus.	Remember	3
4	Define piers. Explain about advanced traffic management systems in ITS	Remember	9
5	What are floating light stations? Define ITS safety and security.	Remember	9
6	What are the factors that influence the site selection of a harbour?	Understand	10
7	Define port? Explain classification of ports.	Understand	8
8	What are the factors to be considered while designing a port? Write the requirements of a good port?	Remember	10
9	What are break waters? Write about classification of break waters? Explain any one of them?	Understand	9
10	What are the different aspects to be considered in the design of break? Discuss them.	Remember	8
UNIT-V INTELLIGENT TRANSPORT SYSTEMS			
1	Explain about ITS architecture? Explain about how ITS can be used in India.	Understand	11
2	Define ITS. Explain about advanced traffic management systems in ITS	Remember	11
3	What do you understand by electronic payment?	Understand	12
4	Write about lateral collision avoidance? Explain about how ITS can be used in India.	Remember	11

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5	Define Ramp metering. Define ITS safety and security.	Understand	12
6	What is orientation of run way?	Remember	11
7	Explain in detail about the applications used in intelligent transport system.	Understand	11
8	Explain about ITS components and standards.	Understand	12
9	Write an overview of ITS implementation in developed countries.	Understand	11
10.	Explain about how ITS can be used in India.	Remember	12

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