

Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2019

Course: Advanced Transportation Engineering	Semester: VII
Programme: B. Tech (CIVIL + ID)	Time: 03 hrs.
Max. Marks: 100	Course Code: CEEG338

Instructions: Write your assumptions carefully and attempt all the questions

Set A

SECTION A

S. No.		Marks	CO
Q1.	What are the advantages and disadvantages of drilling and blasting for tunneling?	4	CO1
Q2.	What are the factors to be considered for site selection for tunneling, and what are the various available alternatives?	4	CO1
Q3.	What is the definition of high speed and super-high speed rails? Discuss the difference between the two.	4	CO2
Q4.	Why grade-separation and fencing are required for high speed rail operation?	4	CO3
Q5.	What is measured shovel packing? Define and discuss the method.	4	CO4

SECTION B

Q6.	Write a note on methods of lining, and sequence of construction of lining supported by labelled cross-section diagrams.	10	CO1
Q7.	Define and illustrate the various components of the Indian railways track.	10	CO2
Q8.	Explain and outline the qualifying criteria for rails?	10	CO3
OR			
Q8.	What is track tolerance? Discuss the various track parameters considered for track tolerance.	10	CO4
Q9.	Discuss the three-tier system of track maintenance of railways.	10	CO4

SECTION C

Q10.	What are various methods of construction of tunnels? Discuss any one in details with labeled illustrations for each stage of construction.	20	CO1
OR			
Q10.	Discuss in detail the modern methods of track maintenance for railways, and the various parameters to be addressed for the railway authority to adapt to them.	20	CO3

Q11.	What are the various high-powered locomotives, and discuss which one is the best suited for the modernization of railways in India, by comparative analysis amongst any two.	20	CO2
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