

Roll No.

Total Pages : 2

002622

May 2024

**B.Tech. (Civil) VI SEMESTER
Railway Engineering (PEC-CV-402-4)**

Time : 3 Hours]

[Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*
2. *Answer any four questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART-A

1. (a) Define track gauge. (1.5)
- (b) What is alignment of railway lines? (1.5)
- (c) What are the functions of ballasts? (1.5)
- (d) What do you understand by soil subgrade? (1.5)
- (e) What is the difference between crossing and crossovers? (1.5)
- (f) What do you understand by turnouts? (1.5)
- (g) Define tractive resistance. (1.5)
- (h) What is superelevation? (1.5)

- (i) What do mean by bored tunneling? (1.5)
(j) Enlist the methods of railway tunneling. (1.5)

PART-B

2. (a) What are the engineering surveys and construction of new lines? (10)
(b) Explain numerous tracks stresses. (5)
3. (a) What the specification of good ballast? (5)
(b) What do you understand by subgrade improvement also explain various techniques for subgrade improvement. (10)
4. Give brief explanation of various types of sleepers fastening. (15)
5. (a) Explain various railway crossings. (5)
(b) Derive an expression for the super-elevation. (10)
6. (a) What are the modern methods of track maintenance also explain them? (10)
(b) What is the difference between railway stations and yards? (5)
7. What are the engineering principles of signals also explain the various classifications of signals? (15)
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