

23281

M.Tech. 2nd Semester Civil Engineering
(Transportation Engg.) (Elective IV) Examination,

July-2022

ADVANCED RAILWAY ENGINEERING

Paper-CE-649

Time allowed : 3 hours] [Maximum marks : 100

Before answering the questions, candidates should ensure that they have been supplied correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt five questions. All questions carry equal marks.

1. Give complete classification of a railway line as adopted by Indian Railways ? 20
2. What is meant by wear of rails ? Categorize the types of rail wear and enumerate methods by which wear in rails is measured ? 20

(2)

23281

3. What is formation width? Give the standard formation width for BG track in embankment. 20
4. (a) Why point and crossings provided in a railway track? 5
(b) Explain main constituents of a crossing and a left turnout with neat sketch. 15
5. (a) Give classification of signals according to their locations in station yards along with suitable sketches. 10
(b) Briefly explain absolute blocking system of controlling train movement. 10
6. (a) Discuss the need for modernization of railways in India. 10
(b) Write a short note on high speed track on Advanced railways of the world. 10

23281

(3)

23281

7. (a) Explain how the maintenance of track proper is carried out? 10
(b) Why is maintenance of track necessary? What are advantages of good track maintenance? 10
8. (a) State the reasons for renewal of the ballast material used in a railway track? 10
(b) With neat sketches, discuss the advantages and disadvantages of the following type of sleepers (i) steel sleepers (ii) concrete sleepers. 10

23281