Dr Sunil Sharma

Roll no.:..... 5/5/2023

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National Institute of Technology, Hamirpur (HP)

End Semester Exam – B Tech

Branch: Civil Engineering
Course Name: Railways and Airport Engineering
Time: 3 Hours

Semester: 6th
Course Code: CE-323
Maximum Marks: 50

1. What are different types of welded rails and what are the advantages of welding of rails
2. Compare railway sleepers of different materials
3. Distinguish wayside, junction, and terminal stations with the help of diagrams
4. Draw neat sketches of scissors cross-over, symmetrical split, and Gauntlet track
5. Show the location and describe the functioning of the following railway signals with the help of a diagram: starter, home, advance starter, outer, and distant.
6. Explain the working principle of absolute block system of railway signaling with the help of a diagram.
7. Discuss various factors to be considered for site selection of an airport
8. Draw a typical Wind Rose Diagram (WRD) and show a suitable airport runway layout on the WRD
9. The length of a runway at sea level under standard atmospheric conditions on a flat gradient is supposed to be 2100 m. An airport site has an elevation of 900 m and the reference temperature is 25°C. If the proposed runway gradient is 0.1 percent, determine the required runway length on this site.
10. Draw the layout of a typical airport

Each question carries 5 marks