JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech IV Year II Semester Examinations, July/August - 2022
AIRPORT, RAILWAYS AND WATERWAYS
(Civil Engineering)

Time: 3 Hours   Max.Marks:75

Answer any five questions
All questions carry equal marks
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1.a) What are the factors affecting in site selection for airport?
 b) Present the layout of airport and explain functionality of each component.   [7+8]

2.a) Explain the procedure and corrections to be made to measure runway length.
 b) Explain the procedure to identify orientation of runway by wind rose diagram.   [7+8]

3.a) Draw the cross sectional view of permanent way and explain the functionality of each component.
 b) Explain the features and functional view of
   i) MRTS & METRO RAIL
   ii) MONO RAIL
   iii) LRT.   [7+8]

4.a) What are the different types of rails and explain their features?
 b) Describe the features and functions of sleepers.   [8+7]

5.a) Develop the super elevation equation from fundamental theories.
 b) What are the different types of gradients and present their functional features?   [7+8]

6.a) Describe the design considerations of vertical curves.
 b) How do you generate transition curves dimensions and present their computational forms?   [7+8]

7.a) Develop the conceptual and operational plan for railway station and yards.
 b) What are the features of points and crossings and explain them?   [8+7]

8.a) Present the architecture of port and explain functions of each component.
 b) Present the features and design requirements for dry port and wet port.   [7+8]

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