Code: 9A01707

R09

B.Tech IV Year I Semester (R09) Supplementary Examinations, May 2013

RAILWAYS, DOCKS AND HARBOR ENGINEERING

(Civil Engineering)

Time: 3 hours Max. Marks: 70

Answer any FIVE questions

All questions carry equal marks

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1 (a) What are the ideal requirements of permanent ways? Draw a neat sketch of permanent way in embankment and cutting.

(b) What are various fastenings used to faster rails to sleepers? Discuss their merits and demerits.

2 (a) Derive the expression for can't and explain the maximum permissible can't for different gauges?

(b) In an layout of a B.G yard, a $7°28'$ curve branches off from a $4°$ an opposite direction. If speed is restricted to 35.85 km/h and permissible value of can't deficiency is 6.71 cm, determine the speed restrictions on main line.

3 (a) Explain the classification of station yard.

(b) Define signaling and interlocking. What essential purposes are served by signaling and interlocking?

4 (a) Define tunneling. What are the different types of tunneling? Why are railway tunnel necessary?

(b) What is the importance of ventilation during tunneling? Describe the various methods of providing ventilations in tunneling.

5 (a) Write a brief note on Mediterranean and Cretan harbors.

(b) Explain with neat sketch on the working process of spillway.

6 (a) Discuss the constriction of dock wall with different reference to location and internal arrangements of design loads.

(b) Discuss briefly the various methods of mound construction.

7 (a) Write a brief note on walls of precast blocks and walls on wells.

(b) Write a short note on following:

(i) Wharves.

(ii) Masonry or mass concrete walls.

(iii) Spring fenders.

8 (a) Explain with a neat sketch the operations of ladder dredger and mention any special advantages of it.

(b) Make a neat sketch dipper dredge and describe its uses. What are the special advantages of these types of dredge?

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