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53 (CE 603) TREN-II

2017

TRANSPORTATION ENGINEERING-II

Paper : CE 603

Full Marks : 100

Time : Three hours

**The figures in the margin indicate
full marks for the questions.**

Answer **All** questions.

1. (a) Compare different modes of transportation. 5
- (b) Write the Headquarter of following railway zones 5
(1) CR (2) ER (3) NR (4) NER (5) SR
- (c) What are the components of railway track? Write their functions. 5
- (d) What are the purposes of coning of wheels? 5

Contd.

2. (a) What are the functions of Rails ? 5
- (b) Write the steps to be taken to reduce wear of rails. 5
- (c) What are the advantages of welding of rails ? 5
- (d) What are the merits and demerits of wooden sleeper ? 5
3. (a) What are the functions of Ballast ? 5
- (b) What is the equilibrium cant on a 2° curve on a broad gauge if 15 trains, 10 trains, 5 trains and 2 trains are running at speeds of 50kmph , 60kmph , 70kmph and 80kmph respectively ? 5
- (c) On a BG, 3° curve, the equilibrium cant is provided for a speed of 70kmph .
- (i) Calculate the value of equilibrium cant
- (ii) Allowing a maximum cant deficiency, what would be the maximum permissible speed on curve ? 5

- (d) What are the different types of gradients adopted on a railway lines? 5
4. (a) What are the merits and demerits of Air transportation? 5
- (b) Explain in detail various data to be collected before planning an airport. 10
- (c) What are the various surveys conducted for selecting a site for an airport? 5
5. (a) The length of runway under standard conditions is 1700m. The airport site has an elevation of 300m. Its reference temperature is 34°C. If the runway is to be constructed with an effective gradient of 0.2%, determine the corrected runway length. 10
- (b) Write short notes on : 10
- (i) Taxiway
- (ii) Terminal area.
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