

S. B. Roll. No.....

RAILWAYS, BRIDGES AND TUNNELS
5th Exam/Civil/9511/Nov'24
(For 2018 Batch Onwards)

Duration: 3Hrs.

M.Marks:75

SECTION-A

Q1. a) Give answer in one line.

15x1=15

- i. When the first train in India was run?
- ii. Headquarter of northern railways is situated in?
- iii. SER stands for?
- iv. Define permanent way.
- v. Which material is commonly used for the manufacturing of rails?

b) Fill in the blanks.

- vi. The broad gauge is also known as _____
- vii. The cost of laying railway line should be _____
- viii. A _____ is the combination of rails, sleepers, ballast and formation.
- ix. _____ is the intermediate support in the bridge.
- x. An abutment serves both as a pier and _____

c) State True or False.

- xi. Bearing plates are used in soft wooden sleepers.
- xii. Rocker and roller bearings are suitable for spans more than 20 meters.
- xiii. Special maintenance of bridge is conducted at intervals of 5 to 6 years.
- xiv. Repairs to cracks in piers fall under special maintenance.
- xv. The ventilation done by natural method is called natural ventilation.

SECTION-B

Q2. Attempt any six questions.

6x5=30

- a. What are the functions of railways?
- b. What are different types of railway surveys? Give brief description.
- c. Write a short note on the types of rail gauges practiced in India.
- d. What are the functions of sleepers?
- e. What are different types of foundations used in bridges?
- f. What are the purposes of providing bridge bearings?
- g. Define tunnel. What is the necessity of tunnels?
- h. Define i) Drainage of tunnels, ii) Lighting of tunnels. How these two facilities are provided in tunnels?

SECTION-C

Q3. Attempt any three questions.

3x10=30

- i. Define different components of a permanent way with the help of diagram.
- ii. What are different types of rails and write their advantages and disadvantages?
- iii. What are different components of a bridge? Explain them with the help of diagrams.
- iv. What are different classifications of bridges?
- v. What do you mean by ventilation in tunnels? What are its objectives? What are different methods of providing ventilation in tunnels?

P.S.B.T.E.&I.T.

