April 2018

Time – Three hours
(Maximum Marks: 75)

[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory. Answer any FOUR questions from the remaining in each PART – A and PART – B

(2) Answer division (a) or division (b) of each question in PART – C.

(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and 10 marks in PART – C.]

PART – A

1. Define camber.

2. Define reconnaissance survey.

3. Write any two functions of rails.

4. Write two objects of signalling.

5. Write the purpose of bearings.

6. What is the use of turn table?

7. Define economic span.

8. Define super elevation.

PART – B

9. What are the requirements of an ideal road?

10. Write any three objects of soil stabilization.

11. State any three requirements of a good sleeper.

12. Explain marshalling yard and its functions.

13. Explain scour and afflux.

14. What are the objects of providing signals?

15. What are the factors considered in alignment of hill road?

16. Briefly explain coning of wheels with a neat sketch.

[Turn over.....

PART – C

17. (a) Define sight distance and explain with sketches the different types of sight distances.

(Or)

(b) (i) Explain the different types of road gradient.
(ii) What are the objects of road arboriculture?

18. (a) Explain in detail about the laying of water bound Macadam road with a sketch.

(Or)

(b) (i) Write briefly about the maintenance of bituminous roads.
(ii) What are the merits of concrete road?

19. (a) (i) What are the functions and requirements of good ballast materials?
(ii) Explain any two types of rail joint.

(Or)

(b) Explain the different methods of plate laying in detail.

20. (a) How railway stations are classified according to functions? Explain them in detail.

(Or)

(b) State the principles of interlocking. Explain tappets and lock system.

21. (a) Classify road culverts according to the construction and explain it with sketches.

(Or)

(b) Explain the different types of bearings with neat sketches.

185/655—2