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October 2014

Time – Three hours
(Maximum Marks: 75)

[N.B: (1) Answer any fifteen questions in PART - A and division (A) or division (B) of each question in PART - B.

(2) Each question carries 1 (one) mark in PART - A and 12 (twelve) marks in PART - B.]

PART – A

1. What is meant by super elevation?
2. What is sight distance?
3. What is Nagpur plan?
4. Define Atterberg limit.
5. State any two types of engineering survey in road alignment.
6. What is the use of bulldozer?
7. List out any two methods of soil stabilization.
8. State any four advantages of concrete road.
9. What is the function of loading gauge?
10. What do you mean by hogged rails?
11. What is the use of bearing plate?
12. What is meant by rolling stock?
13. Define yard.
14. Write two types of crossings.
15. Define interlocking.
16. What is meant by turnout?
17. What do you mean by waterway?
18. When would you prefer caisson foundation in bridge construction?
19. Differentiate abutment and pier.
20. Write any two functions of bridge bearings.

PART – B

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|-----|-----|--|-------|
| 21. | (A) | (i) Briefly describe ribbon development. | Marks |
| | | (ii) Define road intersection. Explain the different types of grade intersection with neat sketches. | 4 |
| | | | 8 |

[Turn over.....

(Or)

- (B) (i) Distinguish between road camber and road gradient. 4
(ii) Define and state the objects of road arboriculture. What are the factors that influence the selection of road side trees? 8
22. (A) (i) What is meant by soil stabilization? State the objects of soil stabilisation. 4
(ii) Explain the construction procedure of WBM road with neat sketch. 8

(Or)

- (B) (i) Briefly explain surface dressing of bituminous road. 4
(ii) With neat sketches, explain hairpin bend and retaining wall in hill roads. 8
23. (A) (i) What are the causes and prevention of creep? 4
(ii) Explain different types of rails with neat sketches. 8

(Or)

- (B) (i) What are the requirements of good sleepers? 4
(ii) Define plate lying. Explain the PQRS method of plate laying. 8
24. (A) (i) Differentiate triangle and turn table. 4
(ii) Explain the different types of railway stations with sketches. 8

(Or)

- (B) (i) What are the objects of signalling? 4
(ii) What are the methods of interlocking? Explain the tappets and locks system of interlocking with sketch. 8
25. (A) (i) Write short notes on scour and economic span. 4
(ii) Explain with neat sketches the different types of causeways. 8

(Or)

- (B) (i) Define pier. What are the different types of pier? 4
(ii) Explain a bow-string girder bridge with neat sketch. 8