

Integral Coach Factory, Chennai

Question paper for the post of AEN/ Group-B against 70% Quota of
Civil Engineering department to be held on 28-10-2014

Max. marks – 150
Duration 03 hours

*Answer any 10 questions in Part-A. Each question carries 06 marks.
Answer any 05 questions in Part-B. Each question carries 08 marks.
Answer any 25 questions in Part-C. Each question carries 02 marks.*

PART- A

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| 1a | What are the precautions to be taken while working in Track Circuited areas? | 03 |
| 1b | What are the various factors governing permanent way renewal for BG track? | 03 |
| 2 | What is the schedule of speed restrictions for track renewal work by manual packing and machine packing? | 06 |
| 3 | Describe in detail the procedure for protection in block section & procedure for passing of trains for works of short duration on BG section. | 06 |
| 4 | Describe the procedure in detail for disposal of steel scrap materials, from the stage of identification to final delivery. What are the precautions to be taken in scrap disposal? | 06 |
| 5 | What are the various type of track patrolling? Explain each in brief. | 06 |
| 6 | Explain the various operations in connection with track renewal of concrete sleepers with PQRS. Explain with a sketch. | 06 |

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| 7 | Write short notes on: | |
| | a) Water-Cement ratio | |
| | b) Workability of concrete | 06 |
| | c) Fineness modulus | |
| 8 a | What is transition curve? Why is it required? How is the length of transition curve decided? | 03 |
| 8 b | What are the essential equipment of level crossing? | 03 |
| 9 a | Differentiate Glued joint and Block joint . | 03 |
| 9 b | Write the permissible limits of physical properties of stone ballast to be used in BG 'A' route track. | 03 |
| 10a | What precautions should be taken in storing cement? | 03 |
| 10b | Describe OMC and MDD in relation to compaction of soil. | 03 |
| 11 | Describe in detail the important inspections to be carried out by ADEN. | 06 |
| 12a | Write the advantages and disadvantages of Concrete Sleepers. | 03 |
| 12b | Describe in brief the aspects of machine working to be looked for by the inspecting officers of division. | 03 |
| 13 | Discuss the following in brief: | |
| | a) Open tenders. | 06 |
| | b) Limited tenders. | |
| | c) Single tenders | |

PART - B

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| 1 | List the major and Minor penalties | 08 |
| 2 | Write short notes on: | |
| | a) Appointment on Compassionate grounds | 08 |
| | b) Staff Benefit Fund | |

- 3 What are the statutory obligations of the employer towards contract labour? 08
- 4 Write short notes on –
- a) Child care leave
 - b) Encashment of Leave.
 - c) Compensatory Casual leave. 08
 - d) Special Casual leave.
- 5 What is the Official Language Policy (OLP) of the government of India? What is the purpose of dividing states into A,B and C regions for implementation of the OLP? List the states in A,B and C regions. 08
- 6 List out classification under HOER and indicate roster hours under each classification. 08
- 7a Write a short note on Retirement Benefits. 04
- 7b What are the various items to be examined by the Colony Committee? 04
- 8 What are the documents under official language act that are invariably required to be prepared both in Hindi & English? 08

PART- C

(a) No corrections are permitted. Correction may be any of the following types viz. cutting, overwriting, erasing, scoring off a ticked answer in multiple choice and ticking another answer and modifying the answer in any way.

(b) Answers should be written in answer paper only

1. Points & crossings are laid at a cant of
a) 1 in 20 (b)1 in 10 (c)1 in 15 (d) NIL
2. Normal life of detonators is
a) 5 years (b)10 years (c) 7 Years (d) 6 years

3. Permissible creep in track is
 - a) 50mm (b) 100 mm (c) 125mm (d) 150mm
4. Maximum values of normal cant deficiency prescribed for BG, A&B groups is
 - a)75mm (b) 100mm (c)125mm (d)None of the above
5. SWR shall not be laid on curves sharper than _____radius in both BG and MG
 - a) 450 m (b) 500 m (c) 600 m (d)650 m
6. Which machine is used for turnout renewals
 - a) TRT (b)PQRS (c) T-28 (d) RAIL-VAC
7. PL number is available for
 - a) Stocked item (b) NS item (c) Both (d) None
8. What is the minimum length of fencing parallel to track with each gatepost on special & A class level crossings?
 - a)10 m (b) 15 m (c)20 m (d) none of the above
9. Hindi day is celebrated on
 - a) 26th Jan (b) 4th Aug (c) 15th Aug (d) 14th September
10. The volume (cum) of a bag of cement is about
 - (a) 0.035 (b)0.053 (c) 0.35 (d) 0.53
11. Soundness test of cement is done to determine its
 - a) Durability in sea water
 - b) Free lime content
 - c) Iron oxide content
 - d) Alumina content
12. Primary consolidation is due to
 - a) Expulsion of water
 - b) Compression of air
 - c) Compression of grains
 - d) Structural adjustment of grains
13. Maximum distance between two boundary stones is
 - a) 100m (b) 150m (c) 200m (d)None of these
14. Maximum licensing period of land for Kendriya vidyalaya is
 - a) 50 years (b) 60 years (c) 80 years (d) 99 years
15. Within station premises who is responsible for encroachment
 - a) SM & RPF (b) SSE (works) (c) SSE(works) & SSE/P.way
 - (d) All of them

16. Scale of authenticated land plans is
(a) Equal to revenue scale
(b) Half to revenue scale
(c) Double to revenue scale
(d) 1 cm to 40m
17. What is the minimum horizontal distance between centerline of track to pier
(a) 3550 mm (b) 3500 mm (c) 3525 mm (d) 3575 mm
18. How much TVUs are required for cost sharing of two lane ROB in lieu of level crossing
(a) 2,00,000 (b) 1,50,000 (c) 3,00,000 (d) 1,00,000
19. How much D&G (supervision) charges are levied on deposit/ BOT works of ROB/ RUBs in case of the work is executed by Railway
a) 12% (b) 13% (c) 11.5% (d) 12.5%
20. The number of languages in VII schedule of constitution
(a) 22 (b) 28 (c) 15 (d) 14
21. How many union representatives are allowed to attend PNM meeting at HQ level
a) 20 (b) No limit (c) 30 (d) None
22. A well graded sand has particles
a) Mainly of one size (b) mainly of sand combined with gravels
c) Of number of sizes (d) with uniformity coefficient very near to unity
23. Contractor has demanded an arbitration of Rs.9.50 lacs. How many arbitrators will be appointed
a) Sole arbitrator
b) Two arbitrators
c) Three arbitrators
d) None of the above
24. Delayed tender is
a) When tender is received before the due date and time
b) When tender is received after the due date and time, but before opening the tender
c) When tender is received after the due date and time and after opening the tender
d) None of the above
25. Water absorption in first class bricks should not be more than
a) 10% (b) 15% (c) 20% (d) 25%

26. Seasoning of timber is necessary to
- a) Increase the fire resistance
 - b) Increase the vermin resistance
 - c) Reduce the microbial substances
 - d) Expel the moisture present in timber
27. Study leave that can be granted at one time
- a) 24 months (b) 18 months (c) 12 months (d) none
28. Maximum LAP that can be accumulated by an employee is
- a) 240 (b) 300 (c) 15 (d) No limit
29. P.way engineers are classified as _____ category under HOER
- a) Intensive (b) continuous (c) excluded (d) None
30. _____ is the estate officer in railways in a division
- a) ADRM (b) AGM (c) ADEN (d) Sr.DEN

--END OF QUESTION PAPER--