

WRITTEN EXAMINATION

Name of the post : *Senior Instructor* at Loco Simulator
Centre, DTTC/GOC – Rs. 9300-34800
with GP of Rs. 4200/-
Date of Written Exam : 28-08-2010 (Saturday)
Time : 1000 hrs to 1300 hrs (Three Hours)
Total marks : 100 (One hundred)

Instruction to candidates:

- 1) Candidates should follow strictly the instructions given in Answer Book.
- 2) Since the candidates are permitted to keep the Question Paper with them, all answers should be written in the Answer Book only.
- 3) Candidates should follow strictly any other instructions that will be given by the officer conducting the written exam.
- 4) Candidates should remain in their seats till such time they are permitted to leave by the Officer conducting the written exam.

Part – I

Answer any FIVE questions

5 x 10 = 50 marks

- 1) What are the modifications carried out in 3100/3300 HP locos over 2400/2600 HP locos.
- 2) List the safety devices in diesel locos and explain any two in detail.
- 3) Explain the air intake system of WDM2 loco, giving a neat sketch.
- 4) Write short notes on any two:
 - a) Stiffer Unit Camshaft.
 - b) Larger after cooler
 - c) Permanent & Temporary speed restrictions
- 5) Trouble shoot any two:
 - a) Continuous wheel slip.
 - b) BP not dropping while applying A9
 - c) GF contactor not picking up.
- 6) Explain 'load box test' and the significance of any two readings.
- 7) What are the incentives for promoting use of Official Language in office.

Part – II

A)

Match the following

10 marks

- | | |
|-------------------|--|
| a) LLOB | Convert mechanical energy into electrical energy |
| b) Generator | Traction motor works as generator |
| c) Dynamic brakes | Wood ward Governor |
| d) Radiator fan | SP - 150 |
| e) Expressor sump | 74 degree C |

B)

Say True or False

10 marks

- a) Invertors are used to convert AC to DC
- b) Dynamic brakes are operated by SA9
- c) In WDM2 loco, transition is based on the speed of the loco
- d) Minimum required IR on traction motor is 1 mega ohm
- e) Traction motor converts electrical energy into mechanical energy.
- f) Alternator produces AC
- g) Voltage of lead acid cell is 2.2 V
- h) Crank shaft deflection can be corrected by tramelling.
- i) White smoke from chimney indicates oil in exhaust.
- j) Tell tale pipe in water pump indicates failure of water pump shaft.

C)

Fill in the blanks

20 marks

- a) Speed of water pump when engine runs at 1000 rpm in WDM2 is _____ rpm
- b) Spit gear bolts are torqued to a value of _____ ft-lb
- c) Supercharging is _____
- d) Tappet clearance is _____
- e) Thick black smoke from chimney indicates _____
- f) Total auxiliary power consumption in WDM2 loco is _____
- g) Tractive effort is _____
- h) Tramelling of bogie frame done during _____
- i) Ultrasonic test means _____
- j) Cam shaft bearings are lubricated through _____

D)

Expand the following

10 marks

- 1) EMD
 - 2) DMW
 - 3) VRP
 - 4) LWS
 - 5) VCD
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