

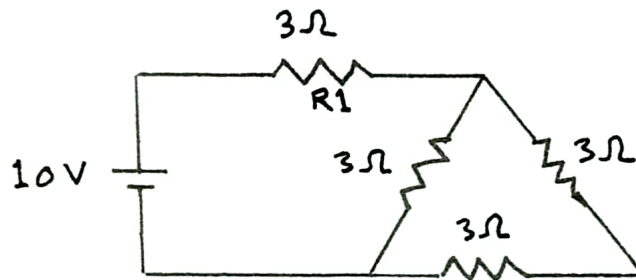
West Central Railway**Question Paper for Main written Examination for the selection of Group 'B' ASTE Post (LDCE30%).****Date: 10.06.22****Maximum Marks : 100****Time Allowed: 3 Hours****Instructions for Candidates:**

1. Attempt any 10 questions. Each question carries 10 Marks. Only 10 best answer will be considered for total marks obtained. *If more than 10 questions are attempted, only 1st Ten answer will be evaluated.*
2. Candidates should not write their name, Roll No., initial, designation, signature, address or any other identification mark anywhere on the answer papers except on the sheet on the space provided, as this will disqualify for the selection.
3. Candidate should not use multi colour pen/sketch pen etc. Use of these may lead to cancellation of the candidature.
4. Candidate should check the page numbers of the answer sheets before writing their roll number, name etc. on the fly leaf.
5. Candidate should ensure signature of invigilator/officer in-charge on Answer Book and also on extra sheet(s), if any used. Extra sheets should be taken after completion of main answer book only and should be attached to the last page of answer sheet.
6. On completion of examination, answer sheet should be submitted to invigilator.
7. In case any unfair means are adopted, the candidature will be forfeited.
8. Any blank space in the answer book and extra sheets if any should be scored out by drawing a diagonal line.
9. Question paper is being given both in English and Hindi languages. In case of any ambiguity in the two versions, English version will be considered as authentic. The candidate has the option to answer the questions in any of the two languages. All answers should be either English or in Hindi.
10. Use of any kind of electronic gadgets viz. mobiles, Tablets, Digital Diaries, Laptop or Notebook etc. is strictly prohibited and shall not be permitted.

1. (a) What are essentials of Interlocking? 5+5
 (b) What are various standards of Interlocking? Write important features of these standards of Interlocking.

2. Write short notes on any two of the following- 10
 (a) Proprietary Article Certificate
 (b) Approved Special Instructions
 (c) Red Lamp protection

3. (i) For the circuit given below, calculate- 6
 (a) Single equivalent Resistance of the complete circuit
 (b) Total Current and power drawn from the supply
 (c) Current in, voltage across and power dissipated by R1

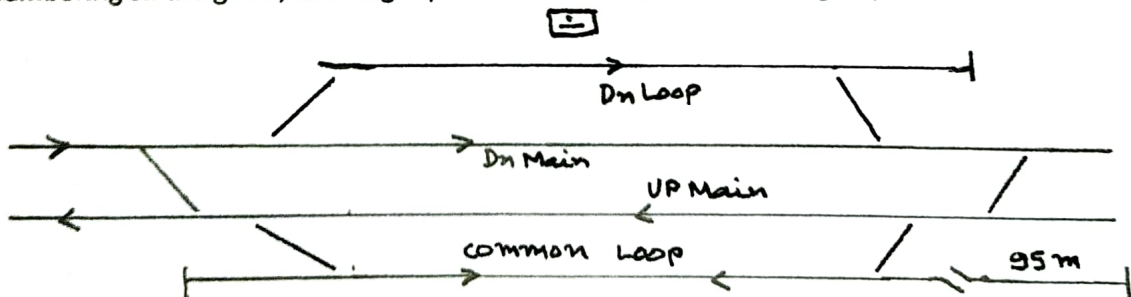


- (ii) What are important performance parameters of 6 Quad cable? 4

4. Explain Slip siding and catch siding with a suitable sketch. 10

5. (i) Explain with Circuit Diagrams the Intra signal cascading and inter signal cascading. 5+5
 (ii) Explain Approach locking and dead approach locking

6. For the double line yard layout given below, prepare the SIP as per WCR practices, numbering all the gears, showing aspect control chart, crank handle group. 10



7. Write selection table of all the routes of Up and Dn Home Signals of SIP prepared with above. 10

8. Write short notes on any two of the following- 10
 (a) Warm and Hot standby EI system
 (b) UFSBI
 (c) MPLS

9. Which section of WCR is to be equipped with KAVACH under Mission Raftar? 10
List out main features of KAVACH (TCAS) and its main components.
10. (i) List out the Pre- Commissioning check-lists required to be completed and signed before commissioning of an EI installation. 5
(ii) With the help of a neat diagram, please draw the Track circuit bonding arrangement in a point zone indicating the current path. 5
11. (i) Describe IP based CCTV system for a railway station. 5
(ii) List Advantages Of Electronic Interlocking System Over Relay Interlocking 5
12. (i) What are common Cyber Threats/Crimes? 5
(ii) What are 5 main Data networks of IR? 5
13. (i) Explain system configuration of IPIS. 5
(ii) Explain the functions of MDCH and PDCH. 5
14. Write short notes on any two of the following- 5+5
(a) CTC
(b) VOIP
(c) QBAT Relays