

**PLEASE READ ALL THE INSTRUCTIONS CAREFULLY BEFORE MAKING ANY ENTRY IN THE ANSWER SHEET**

1. Check that Question paper contains 110 questions and if any unprinted/torn pages are found, get it replaced.
2. There will be 110 questions with four multiple choice answers. Each question carries equal marks.
3. **Candidates are required to fill Items No. 1 to 11 in the OMR answer sheet.**
4. The OMR answer sheet contains duplicate copy and **DO NOT ATTEMPT TO SEPARATE OR DISPLACE THE DUPLICATE COPY WHILE ANSWERING.**  
The shading/darkening done on the original OMR answer sheet will automatically appear on the Carbonless copy and hence no separate shading/darkening required on the carbonless copy.
5. Use only Blue/Black Ball Point Pen for writing/shading/darkening on the OMR sheet. **Gel pens/Pencils are not allowed.**
6. Please enter your Employee No. / PF No. in the box provided in the answer sheet and darken the corresponding circle.
7. Answers to Questions 1 to 110 are given in the multiple choice as A,B,C,D. Choose only one correct answer to each question from the multiple choice given (A,B,C,D) and darken/shade the appropriate circle fully. Changes are not permitted once answered.

**Correct method**



**Wrong methods**



8. Candidates are strictly advised to answer only 100 questions out of 110 questions. The first attempted 100 questions will be evaluated and answering more than 100 will be ignored even though correctly answered. Answering of questions in official language is **NOT COMPULSORY.**
9. **There will negative marking @ 1/3 mark for a wrong answer.**
10. Corrections of any type on the OMR sheet (eg. Overwriting, cutting, erasing or alterations of any type in the answer) **will not be accepted.** Zero marks will be given for such answers.
11. Please handover the OMR sheet along with its duplicate copy to the invigilator before leaving the examination hall. No OMR sheet copy should be carried by the candidate.
12. Candidates are **not allowed to keep mobile phones/electronic gadgets or any other documents/papers with them in the examination hall. In spite of all the instructions if any candidate is found to be carrying such equipments, candidates will be disqualified unconditionally.**
13. Candidates are allowed to take the question paper with them after the examination.
14. It may be noted that in the event of any doubt/discrepancy, the most apt option and the English version will prevail.
15. The candidates appearing for the exam are requested to clarify their doubts about any question/option, at the beginning of /during the examination, so that the same may be then clarified/corrected/substituted, for the benefit of all.

**Written Examination for the post of Ballast Train Checker – BTC (Ex-Cadre) in Level-4 of VII PC Matrix in Engineering Department – Chennai Division**

**Date of Examination: 21.11.2023**

**Time of Examination 1100 Hrs to 1300 Hrs**

**Duration : 2 Hrs**

**No. of questions : 110**

**Each question carries 1 mark**

- 1) Ballast collection for track utilization can be done by  
A) Cess collection B) Depot collection C) Both A & B D) Mid-section
- 2) Block stations under Absolute Block System are sub-classified as  
A) FLAG, CROSSING, NON CROSSING, RUN THROUGH  
B) REPORTING, NON REPORTING, CLASSIFIED, UNCLSSIFIED  
C) CLASS A, B, C & D  
D) ALL OF THE ABOVE
- 3) Block forward and Block back is permitted only on \_\_\_\_\_  
A) Single line B) Double line C) Triple line D) Ghat section
- 4) In colors light area distant signals are identified by  
A) S Marker B) G marker C) P Marker D) C marker
- 5) Banner flag is planted at a distance of  
A) at the work site  
B) at 1200m from work site  
C) at 30m from work site  
D) at 600m from work site
- 6) When ballast supply is made in wagons, shrinkage upto \_\_\_\_\_ shall be permitted at destination while verifying the booked quantities by the consignee.  
A) 8% B) 6% C) 10% D) 7%
- 7) Sleeper density for group 'A' route with traffic density more than 20 GMT is  
A) 1310 B) 1540 C) 1600 D) 1660
- 8) Calling – On signal shows \_\_\_\_\_ in 'On' position  
A) No light B) Red light C) Green light D) White light
- 9) Fish plate which is used to join two different rail section is \_\_\_\_\_  
A) Normal fish plate B) one metre long fish plate  
C) combination fishplate D) Joggled fish plate
- 10) In case of a rail breakage which one is best to use \_\_\_\_\_  
A) Normal fish plate B) one metre long fish plate  
C) Combination fishplate D) Joggled fish plate
- 11) Nominal gauge in PSC sleeper is \_\_\_\_\_  
A) 1673 mm B) 1676 mm C) 1676+/- 3mm D) none
- 12) Minimum check rail clearance in LC is \_\_\_\_\_  
A) 44mm B) 48mm C) 51mm D) 57mm
- 13) PSC sleepers marked by paint with "FTC" indicate  
A) Fit for track in curve B) Fit for transition curve  
C) Fit for track circuit D) All the above
- 14) Distance pieces to platform lines are provided at an interval of \_\_\_\_\_  
A) 30 m B) 25 m C) 35 m D) 50 m
- 15) No work shall be done within a distance of \_\_\_\_\_ metres from the live wire in electrified section without 'permit-to-work'/OHE block.  
A) 1 B) 1.5 C) 2 D) 2.5



- 16) Permanent way staffs are advised to keep clear of the tracks and avoid contact with the rails when an electrically hauled train is within \_\_\_\_\_  
A) 150 m                      B) 200 m                      C) 250 m                      D) 300 m.
- 17) When unloading rails along tracks, care shall be taken to ensure that rails do not touch each other to form a continuous metallic mass of length greater than \_\_\_\_\_ metres.  
A) 300                      B) 200                      C) 250                      D) 500
- 18) The total traffic carried on a line, is expressed as  
A) load                      B) CC                      C) GMT                      D) No. of trains
- 19) Protection of track for works which will be carried for more than one day is done by \_\_\_\_\_  
A) walky talkie                      B) look out men                      C) HS flags, banner flags & detonators  
D) Engineering fixed indicators
- 20) Life of a detonator can be extended upto maximum \_\_\_\_\_ years with certain tests.  
A) 7                      b) 8                      C) 10                      D) 12
- 21) SR (Speed restriction) board should be placed at distance of \_\_\_\_\_ metres from work spot.  
A) 30 m                      B) 600m                      C) 800m                      D) 1200m
- 22) The amount by which one of the rail is raised with reference to the other rail of a track is called as  
A) Cant deficiency                      B) Cant excess                      C) Cross level                      D) Super elevation
- 23) Expand CRS:  
A) Controller of Railway Supervisor                      B) Commissioner of railway safety  
C) Chief Railway Superintendent                      D) Carbon Railway Steel
- 24) Expand PIN in a Pincode  
A) Postal Index Number  
B) Postal Identity Number  
C) Postal Information Number  
D) Personal Identification Number
- 25) Caution and Termination indicators are placed \_\_\_\_\_ & \_\_\_\_\_ of work spot respectively.  
A) after and before                      B) middle of work spot                      C) before and after                      D) anywhere of work spot
- 26) Safety range of Detonator is \_\_\_\_\_  
A) 40m                      B) 30m                      C) 45m                      D) 10m
- 27) Abbreviation of BPC in Railways  
A) Break Pulling Certificate                      B) Break Power Certificate  
C) Break Pulling Chord                      D) None of the above
- 28) BPC is given with validity period of  
A) 30 days                      B) 60 days                      C) 90 days                      D) 45 days
- 29) On down gradient steeper than \_\_\_\_\_, pushing of Material train is not permitted.  
A) 1 in 1000                      B) 1 in 200                      C) 1 in 750                      D) 1 in 100
- 30) Break Power for material train should be \_\_\_\_\_  
A) not less than 90%                      B) not less than 98%  
C) not less than 80%                      D) None of the above
- 31) While doing short duration works the track is protected with \_\_\_\_\_

- A) fixed signals      B) hand signals C) operating signals D) none of these
- 32) IRSOD Is \_\_\_\_\_  
A) Indian railway standard overall dimensions.  
B) Indian railway schedule of damages.  
C) Indian railway schedule of dimensions.  
D) Indian railway schedule of official dimensions.
- 33) What is the width of flange of 60kg rail  
A) 150mm  
B) 176mm  
C) 145mm  
D) 155mm
- 34) RBMV is \_\_\_\_\_  
A) Rail borne maintenance vehicle      B) Railway board maintenance vehicle  
C) Railway board monitoring vehicle      D) Railway ballast moving van
- 35) \_\_\_\_\_ Indication shown to loco pilot to proceed slowly reducing speed during night time at work site.  
A) Waving Red light vertically up and down  
B) Waving white light vertically up and down  
C) Waving green light vertically up and down  
D) None
- 36) \_\_\_\_\_ Indication shown to loco pilot to proceed slowly reducing speed during day time at work site  
A) Waving Red flag      B) Waving red flag vertically up and down  
C) Waving green flag      D) Waving green flag vertically up and down
- 37) When hot axle, hanging chains, hanging battery, a vehicle /wagon /train/ battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains is noticed \_\_\_\_\_ shall be shown during night time.  
A) Red light      B) Green light      C) White light      D) Both B & C
- 38) \_\_\_\_\_ installed at each end of LWR/CWR to permit expansion /contraction of the adjoining breathing lengths due to temperature variations.  
A) Switch expansion joint    B) Buffer rail C) Both a & b D) None of the above
- 39) Width of flange of 52kg rail \_\_\_\_\_  
A) 136mm    B) 132mm    C) 140mm    D) 138mm
- 40) Fouling marks should be fixed at a point at which spacing between tracks is not less than \_\_\_\_\_ for existing yards  
A) 4255 mm    B) 4265 mm      C) 4275 mm      D) 4285 mm
- 41) Battering of rail ends occur when the \_\_\_\_\_  
A) Steep rising gradients    B) Improper rail table  
C) Different rail section    D) Joint gaps are more
- 42) Wheel burns causes  
A) Hammering on rails      B) Packing is loosened  
C) Fittings get loose      D) All the above
- 43) While unloading BT should  
A) Move in only one direction      B) No pushing back to be done.



- C) Not work BT after sunset and foggy days D) All the above
- 44) Formation width for new track double line BG is \_\_\_\_\_  
 A) 13190 mm B) 13180 mm C) 13170 mm D) 13160 mm
- 45) Full form of CGRSP  
 A) Composite Grooved rubber sleeper pad B) Composite Grooved rubber sole pad  
 C) Composite Grooved rubber sole plate D) Composite Grooved rubber sleeper plate
- 46) How many sleepers are there in 1in12 fan shaped turnout excluding approach sleeper and exit sleeper  
 A)75 B)80 C) 83 D)77
- 47) To detach loco of a goods train having BOX N / BCN / BRH,etc., minimum \_\_\_\_\_ no. of vehicles hand brake are to be applied from both ends excluding BV.  
 A)15 B)10 C)5 D)12
- 48) Before starting from a station, the \_\_\_\_\_ should ensure that the train is equipped with requisite brake power prescribed for the load.  
 A)Guard B)PWI C)Station Master D)ALP
- 49) The permissible speed, for 1 in 8 ½ symmetrical split with curved switch on BG track, is \_\_\_\_\_  
 A)15 kmph B)30 kmph C)45 kmph D)10 mkph
- 50) Shunting order form no \_\_\_\_\_  
 A)T-409 B)T-806 C)T/A 410 D)T/S 410
- 51) As far as possible \_\_\_\_\_ Shape of ballast is used in railway track .  
 A)Circular B)Triangular C)Cubical D)None of the above
- 52) Before starting, \_\_\_\_\_ must be tied in front of the engine and also to the back of the rear brake-van to indicate to men working on the line that the train will push back.  
 A)green flag B)red flag C)White flag D)None of the above
- 53) Detention of ballast on 40mm sieve should not be more than  
 A)0.05 B)20-40% C)40-60% D)0.8
- 54) What is the frequency of training that the operator should undergo in train working rules  
 A)once in 3 years B)once in 5 years  
 C)once in 2 years D)Once in a year
- 55) Resistance due to friction offered by track when train moves?  
 A) 0.0016W B) 0.004W  
 C) 0.00008W D) 0.001W
- 56) Maximum distance apart of trolley refuges shall not exceed \_\_\_\_\_ m on High banks  
 A)200 B)500 C)750 D)1000
- 57) The Loco Pilot may detach the engine from a material train with the \_\_\_\_\_ permission.  
 A)ALP B)PWI C)Guard D)SM
- 58) The \_\_\_\_\_ shall not relinquish charge until he has satisfied himself that the material train has been protected as prescribed in this rule.  
 A)LP B)PWI C)Guard D)SM
- 59) Width of formation in Ballasted section of single line in single track  
 A) 4.2 4.5 4.72 4.87
- 60) What is the full form of TQI ?  
 A) track quality index B)Train quality index C) Train quantity index

- D) Track quantity index
- 61) Pushing of Material Trains The speed will be restricted to \_\_\_\_\_, if the brake van is not leading.  
A) 5 kmph B) 15kmph C) 30 kmph D) 10kmph
- 62) BPC for a goods train is issued after examination in goods checking yards by \_\_\_\_\_.  
A) JE/SSE/P.way B) JE/SSE/C&W C) Loco Inspector D) any one of above
- 63) The brake power on enroute should be \_\_\_\_\_ or more.  
A) 50% B) 98% C) 90% D) 70%
- 64) In a Material Train, the railway material may include  
A) boulders B) ballast C) rails, sleepers D) all the above
- 65) What is the height and thickness of letter printed/painted on T/P or T/G boards as per IRPWM.  
A) 250mm & 40mm thk B) 250mm high & 50mm thk  
C) 200mm high & 30mm thk D) 200mm high & 40mm thk
- 66) Volume capacity of Bobyn is \_\_\_\_\_ cu.m.  
A) 60 B) 45 C) 40 D) 50
- 67) For carrying out track works requiring speed restriction, the speed indicator board shall be fixed at a height of ..... metres from the Rail Level.  
A) 3.0 m (B) 2.5 m (C) 2.0 m (D) 1.65 m
- 68) "Fit to run" is issued by whom for a material train?  
A) Loco pilot B) Guard C) ALP D) JE pway
- 69) \_\_\_\_\_ prevent vehicles escaping from the station and trying to enter into the next block section.  
A) Catch siding B) Derailing switch  
C) Slip siding D) Snag dead end
- 70) Rail Dolley shall not be worked on sections having gradients steeper than  
A) 1 in 150 B) 1 in 200 C) 1 in 250 D) 1 in 350
- 71) An easement curve which has curvature change throughout its length.  
A) Transition curve B) Horizontal curve  
C) Vertical curve D) Turn in curve
- 72) \_\_\_\_\_ is used for lining the top and bottom edges of the ballast section  
A) Hemp chord B) Straight edge C) Rammer D) Shovel
- 73) 2 Degree of curve has a radius of \_\_\_\_\_ m subtended by a chord of 30.5m  
A) 1750m B) 3500m C) 875m D) 350m
- 74) What do you mean by LWR  
A) Long welded Rail B) Long weld able Rail C) Linear welded rail  
D) None of above.
- 75) ACD means  
A) Anti collision Devise B) Accidents causing death (C) Accidents causing derailment (D) None of the above



- 76) Maximum curvature permitted on B.G. is  
A) 8 degree B) 10 degree C) 12 degree D) 16 degree
- 77) The permissible speed on 1 in 8.5 curved switch is  
A) 15 kmph B) 25 kmph C) 30 kmph D) 40 kmph
- 78) A low-speed track section distinct from a running line or through route such as a main line or branch line is called as  
A) Siding B) Loop line C) Shunting neck D) Goods line
- 79) What is the maximum permissible speed for 1 in 12 TWS switch on turnout  
A) 30 kmph B) 50 kmph  
C) 70 kmph D) 45 kmph
- 80) what is the quantity of ballast per metre for 300mm cushion on straight  
A) 2.002 cum B) 2.282 cum C) 1.800 cum D) 2.078 cum
- 81) Rectification of buckled track can be done by \_\_\_\_\_  
A) Hot weather patrol man B) Gang mate C) JE /P.way D) incharge sse only
- 82) Procedure of p.way material trucking on material trolley is \_\_\_\_\_  
A) Carefully with lookout man B) With HS and banner flag  
C) With walky talkies D) with block protection
- 83) Shape of caution indicator is \_\_\_\_\_  
A) Round B) rectangle C) triangle D) fish tailed
- 84) No part of the tree shall be nearer than \_\_\_\_ meters from the nearest live conductor.  
A) 2.5 B) 3 C) 3.5 D) 4
- 85) In curved switches for 1 in 12 turnout , upto a minimum \_\_\_\_\_ numbers of sleepers tongue rail should have proper housing with stock rail.  
A) 4 B) 5 C) 3 D) 6
- 86) In thick web switches for 1 in 12 turnout, housing between tongue and stock rail is achieved up to sleeper number \_\_\_\_\_  
A) 10 B) 11 C) 12 D) 13
- 87) Works of long duration are those works which are completed  
A) Within three hours B) within 6 hours  
C) Taking more than a day D) none of these
- 88) Clearance between guard rail and running rail is  
A)  $200 \pm 50$  mm B)  $250 \pm 40$  mm C)  $200 \pm 40$  mm D)  $250 \pm 50$  mm
- 89) \_\_\_\_\_ is provided between sleeper and rail to give cushioning effect  
A) Bearing plate B) Ballast C) Formation D) Rubber pad

- 90) Distance between successive Hectometre posts  
A) 100 cm      B) 1000m      C) 100m      D) 200m
- 91) Shunting means  
A) movement of vehicles for attaching  
B) movement of vehicles for detaching  
C) Transfer from one line to other line  
D) all the above
- 92) Rail panels are loaded in  
A) old coaches      B) BFR's      C) Bobyns      D) all the above
- 93) \_\_\_\_\_ means a departmental train intended solely or mainly for carriage of railway material  
A) Goods Train      B) Material Train      C) Passenger Train      D) Special train
- 94) As per HOER employees are divided in \_\_\_\_\_ categories  
A) 3      B) 4      C) 5      D) 6
- 95) Employees in intensive category have weekly rest of \_\_\_\_\_ hours  
A) 30      B) 24      C) 12      D) 36
- 96) A \_\_\_\_\_ is simply a vehicle's unladen weight and is commonly displayed on the side of railway wagons.  
A) Gross weight      B) Tare weight      C) unit weight      D) any of above
- 97) Quantity of ballast in a stack should not be less than \_\_\_\_\_ CUM  
A) 10      B) 20      C) 30      D) 50
- 98) The tamping machines having not function of \_\_\_\_\_  
A) Correction of Alignment      B) Correction of Gauge      C) correction of cross level  
D) All of above
- 99) Slope of the formation top at ballast level shall be \_\_\_\_\_  
A) 1 in 40      B) 1 in 30      C) 1 in 20      D) 1 in 50
- 100) Line block can be cleared after \_\_\_\_\_  
A) BT clears the section      B) Immediately after unloading of ballast  
C) ballst clear off the top table of the rail and flange way  
D) 15 min. after clearing section
- 101) As per Article 343(1) of the constitution when Hindi became the official language of the Union of India?  
26.01.1967      B) 26.01.1965      C) 15.08.1947      D) 26.01.1954
- 102) At present how many languages are enlisted in the Eighth Schedule of the Constitution?  
A) Twenty-two      B) Eighteen      C) Sixteen      D) Twenty three
- 103) When was Official Languages Rules passed?  
A) 1968      B) 1965      C) 1976      D) 1954



104) Which Ministry takes important decisions pertaining to Official Language?

- A) Ministry of Home Affairs B) Ministry of External affairs  
C) Ministry of National Affairs D) Ministry of Corporate affairs

105) How many members are there in the Parliamentary Committee on Official Language?

- A) 20 B) 10 C) 15 D) 30

106) Who is the Chairman of Central Hindi Samiti (Committee)?

- A) Education Minister B) Prime Minister C) President of India  
D) Vice President of India

107) What is the periodicity of the meetings of Town Official Language Implementation Committee?

- A) Once in 6 months B) once in 3 months  
C) once in a year D) once in 2 months

108) Which is the final Hindi course prescribed for Central Govt. employees?

- A) Prabodh B) Praveen C) Pragya D) None of the above

109) What is the amount of Lumpsum Award for passing Pragya course?

- A) Rs.2400 B) Rs.1600 C) Rs.3000 D) Rs.1500

110) What are all the months in which Hindi examinations are usually conducted?

- A) April & November B) May & November  
C) February & August D) May & December

**इंजीनियरिंग विभाग - चेन्नई डिवीजन में बैलेस्ट ट्रेन चेकर (बीटीसी) पद के लिए परीक्षण**

- 1) ट्रैक उपयोग के लिए बैलेस्ट संग्रहण कौन से तरीके से किया जा सकता है?  
A) सेस संग्रहण B) डिपो संग्रहण C) दोनों A और B D) मिड सेक्शन
- 2) अब्सोल्यूट ब्लॉक सिस्टम के अंतर्गत ब्लॉक स्टेशनों को उप-श्रेणीबद्ध किया जाता है  
A) फ्लैग, क्रॉसिंग, नॉन क्रॉसिंग, रन सहित B) रिपोर्टिंग, नॉन रिपोर्टिंग, क्लासीफाइड, अनक्लासीफाइड  
C) क्लास A, B, C और D D) ऑल ऑफ दी एबव
- 3) ब्लॉक फॉरवर्ड और ब्लॉक बैक केवल \_\_\_\_\_ पर परमिट किया जाता है  
A) सिंगल लाइन B) डबल लाइन C) ट्रिपल लाइन D) घाट सेक्शन
- 4) रंगीन प्रकाश क्षेत्र में दूरस्थ सिग्नल्स की पहचान कैसे की जाती है  
A) एस मार्कर B) जी मार्कर C) पी मार्कर D) सी मार्कर
- 5) बैनर फ्लैग को कितनी दूरी पर रोपित किया जाता है  
A) काम स्थल पर B) काम स्थल से 1200 मीटर की दूरी पर  
C) काम स्थल से 30 मीटर की दूरी पर D) काम स्थल से 600 मीटर की दूरी पर
- 6) जब बैलेस्ट सप्लाय वैगनों में की जाती है, तो प्राप्तिस्थल पर यात्री द्वारा बुक की गई मात्रा को सत्यापित करते समय मंजूर \_\_\_\_\_ के यहां होना चाहिए  
A) 8% B) 6% C) 10% D) 7%
- 7) ग्रुप 'ए' मार्ग के लिए स्लीपर घनत्व जिसमें यातायात घनत्व 20 जीएमटी से अधिक है  
A) 1310 B) 1540 C) 1600 D) 1660
- 8) कॉलिंग-ऑन सिग्नल 'ऑन' पोजिशन में \_\_\_\_\_ दिखाता है  
A) कोई प्रकाश नहीं B) लाल प्रकाश C) हरा प्रकाश D) सफेद प्रकाश
- 9) दो विभिन्न रेल सेक्शन को जोड़ने के लिए कौन-सा फिश प्लेट है  
A) नॉर्मल फिश प्लेट B) वन मीटर लॉन्ग फिश प्लेट  
C) कॉम्बिनेशन फिश प्लेट D) जॉगल्ड फिश प्लेट
- 10) रेल टूटने के मामले में कौन-सा फिश प्लेट सर्वोत्तम है  
A) नॉर्मल फिश प्लेट B) वन मीटर लॉन्ग फिश प्लेट  
C) कॉम्बिनेशन फिश प्लेट D) जॉगल्ड फिश प्लेट
- 11) PSC स्लीपर में नॉमिनल गेज क्या है?  
A) 1673 मिमी B) 1676 मिमी C) 1676+/- 3मिमी D) कोई नहीं
- 12) एलसी में न्यूनतम चेक रेल क्लियरेंस क्या है?  
A) 44 मिमी B) 48 मिमी C) 51 मिमी D) 57 मिमी
- 13) "FTC" से पेंट से चिह्नित PSC स्लीपर का क्या सूचित करता है?  
A) कर्व में ट्रैक के लिए फिट B) संक्रमण करव के लिए फिट  
C) ट्रैक सर्किट के लिए फिट D) उपरोक्त सभी