QUESTION PAPER FOR WRITTEN EXAMINATION FOR FORMATION OF GROUP-B PANEL FOR THE POST OF AEN IN EAST COAST RAILWAY AGAINST 70% QUOTA VACANCIES THROUGH LIMITED DEPARTMENTAL COMPETITIVE EXAMINATION (LDCE)

DATE OF EXAMINATION:

27.02.2022

TIME: 02.00 HOURS QUALIFYING MARKS: 60

FULL MARKS: 100

IMPORTANT INSTRUCTIONS

- 1. Candidates may attempt the answers as per instructions given on the reverse of the OMR Answer Sheets.
- 2. Candidates should not write their name, roll number or sign anywhere inside the answer booklet, including extra sheets attached, if any, except in the space provide for this purpose on the top sheet, failing which, their candidature shall be cancelled.
- 2.1. The candidates are advised to write their name, designation, examination details, total pages used etc. only on the top sheet i.e. on the space provided for in Section-A of the Answer Sheet and nowhere else. If they write their names, designation, roll number or put any other symbol/mark anywhere else in the answer sheet, their candidature will be cancelled, without assigning any reason thereof.
- 3. The Question paper may be taken away by the candidates at the end of the Examination.
- 4. Mobile phone and other electronic equipments are prohibited. Carrying Books, Manuals, Note Books, copying of materials of any type of physical form and canvassing among the candidates is strictly prohibited inside the Examination Hall. Any candidate found involved in these activities inside the Examination Hall may lead to disqualification followed by disciplinary action.
- 5. Hindi version of this Question Booklet is enclosed. In case of any ambiguity in Hindi version, the English version will stand valid.
- 6. The number of Questions to be answered in each part is as indicated therein.
- All Questions are 100% Objective type with 4(four) multiple choice answers in Capital letters viz.
 A, B, C, D. Answer to such questions should be given against any one of the choice.
- 8. Each Question carries 1 mark. There shall be negative marking for incorrect answers. One third of the marks allotted for each question will be deducted for every wrong answer.
- 9. Answers are to be marked on OMR Sheets provided to candidates in the Examination Hall.
- Out of 110 Questions set in this Question Booklet, candidates are required to attempt only 100 Questions. Section –A contains 80 questions including 10 questions on official language policy.

 10 Questions carrying 1 mark each from Official Language, are optional. Candidate has to attempt only 70 questions from Section-A. In case the candidates attempts more than 70 Questions from Section-A, the answers of first attempted 70 Questions will only be evaluated. All questions of Section-B are compulsory.
- 11. The candidates should get it noted that to ensure the authenticity of the answers to Multiple Choice Questions, no corrections of any type viz. cutting, overwriting, scoring off a ticked answer and ticking another answer thereof, erasing, modifying the answer in any way are permitted. ZERO Marks will be awarded in such cases of corrections, in terms of directives contained in RBE No. 53/2019.
- 12. There is one page containing instructions for the candidates and 13 pages containing questions each in Hindi and English.

SECTION-A

(Technical subject including official Language policy)

(Answer any 70 Questions from Section-A. 10 Questions of Official Language are optional) Each Question carries 1 mark each) (1x80= 80 Marks)

- 1. On top of formation, 1 in 30 cross slope is given in:
 - (A) Curves
 - (B) Straight
 - (C) Ghat Sections
 - (D) All locations ✓
- 2. Super Elevation (SE) on curved track is given to counter:
 - (A) Centrifugal Force √
 - (B) Frictional Force
 - (C) Centripetal Force
 - (D) All the above.
- 3. Generally buckling takes place during:
 - (A) Summer season√
 - (B) Winter season
 - (C) Monsoon season
 - (D) Spring season
- 4. Security patrolling of track is done during:
 - (A) Independence Day
 - (B) Republic Day
 - (C) Overdue Track Renewal
 - (D) Law & order problems ~
- 5. Night Foot Plate Inspection is to be done between:
 - (A) 18:00 to 00:00hrs.
 - (B) 20:00 to 00:00 hrs.
 - (C) 00:00 to 00.04 hrs.
 - (D) 00:00 to 00:06 hrs.
- 6. Toe Load is measured on:
 - (A) ERC ✓
 - (B) Rail Screw
 - (C) Plate Screw
 - (D) Hook Bolt
- 7. Detection of IMR defects on rails is done by:
 - (A) USFD test.✓
 - (B) OMS run.
 - (C) TRC run.
 - (D) FBW plant.
- 8. A working of lorry, without block protection, can be permitted:
 - (A) During day hours.
 - (B) During night times.
 - (C) At all time.
 - (D) None of the above. ✓

- 9. Workability is a terminology in: (A) Earthwork (B) Concrete work 🗸 (C) Ballasting (D) Painting. 10. Chamfering of bolt holes in rails is done to: (A) Harden the periphery of holes. \checkmark (B) Increase the diameter of hole. (C) Measure the diameter of hole. (D) All the above. 11. In RCC structure, the strength of structure increases by: (A) Only Steel (B) Only cement (C) Proper ratio of cement, sand, steel, aggregate and water. \checkmark (D) Water. 12. Concrete can withstand more to: (A) Compressive force. (B) Tensile force. (C) Both compressive and Tensile Forces. (D) Depending on its ingredients. 13. A beam fixed at one end and uniformly loaded, the Bending Moment will be maximum at:
 - (A) both ends
 - (B) Free end
 - (C) Middle
 - (D) Fixed end ✓
 - 14. The residual chlorine in Water Supply Engineering is essential:
 - (A) To develop smell of chlorine in water.
 - (B) To give clear color.
 - (C) To kill all the bacteria in water up to last point of supply. \checkmark
 - (D) All the above.
 - 15. If a plot for a residential building is having hard rock at ground level, the action required is:
 - (A) RCC columns can be directly cast over the rock and continue to execute the work.
 - (B) Keying arrangement for columns can be done and continue to execute the work.
 - (C) Change the site and continue to execute the work.
 - (D) Any of the above.
 - 16. The correction for sag in surveying work is:
 - (A) Always additive.
 - (B) Always subtractive.✓
 - (C) Always zero
 - (D) Sometimes additive and sometime subtractive.
 - 17. If the voids of soil mass are only full of air, then the soil is termed as:
 - (A) Normal soil.
 - (B) Partially saturated soil.
 - (C) Dry soil.✓
 - (D) Dehydrated soil.

 18. The sewer pipes: (A) Carry sewage as gravity conduits. (B) Are designed to generate self-cleaning velocities at different discharge points. (C) Should resist the wear and tear caused due to abrasion. (D) All the above.
 19. The strength of concrete increases with: (A) Increase in water-cement ratio. (B) Increase in fineness of cement. (C) Decrease in curing time. (D) All the above.
 20. Admixtures, which cause early setting and hardening of concrete, are called: (A) Workability admixtures. (B) Accelerators. ✓ (C) Retarders. (D) Air entraining agents.
 21. In East Coast Railway, the Track Machine Depot at KUR is: (A) Satellite. (B) IOH. ✓ (C) POH. (D) Assembly
 22. The hydraulic pipes mostly fail during: (A) Monsoon (B) Winter (C) Summer (D) Wrong operation. ✓
23. DTS shall be used just after: (A) BCM (B) CSM (C) PQRS (D) BRM
 (a) 1 year. (b) 2 years. (c) 3 years. (d) 1 year. (e) 2 years. (f) 2 years. (g) 2 years. (h) 2 years. (h) 2 years. (i) 3 years. (i) Depending upon its condition.
 25. The track can be maintained by: (A) Track recording car. (B) Track Machines. (C) OMS (D) All the above.
26. Duomatic Track machine is deployed for:

(D) Packing of track.

(A) Lifting of track.(B) Distressing of rails.

(C) TFR work.

	27.	The quality and output of Track Machines depends mainly on:
		(A) Quality of machine and knowledge of operators.
		(B) Quality of Machines only.
		(C) Knowledge of staff only.
		(D) Availability of labour at site.
/	28.	Camping coach shall be inspected by:
		(A) Officers from HQ Track Machine Organization.
		(B) Divisional officers.
		(C) A & B
		(D) All are not true.
	29.	Water level to be maintained in the Track Machines in:
		(A) Transmission Gear Box.
		(B) Radiator.√
		(C) Water Bottles.
		(D) Filters.
/	30.	Deep screening of plain track and Turnouts can be done by: (A) Unimat
		(A) Unimat
		(B) BCM
		(C) BRM
		(D) Duomatic
	31.	Assistance Divisional Engineer shall inspect the bridges annually: (A) Except ROB/RUB
		(A) Except ROB/RUB
		(B) Except new bridges
		(C) If required as per the conditions recorded in a second
_	22	(D) All the bridges.
	32.	Assistant Engineer (Bridge) shall conduct test check of the bridges annually, inspected by JE/SSE(Br):
		JE/SSE(Br): the bridges annually, inspected by
		(A) 20%
		(B) 15%
		(C) 10% <i>(C)</i>
		(D) 5%
3	33.	Painting shall be done in dry weather. However the humidity shall not be more than:
		(A) 80%.
		(B) 85%. ×
		(C) 90%. ✓
		(D) 95%.
3	34.	The reason for substructure defects can be:
		(A) Weathering.
		(B) Leaching of Mortar.
		(C) Cracks in masonry.
		(D) All the above ✓
3	35.	Admixtures to improve flowability of grout can be added with the approval of :
		(A) Sectional DEN/Sr.DEN ✓
		(B) Sectional ADEN
		(C) SSE In-charge.
		(D) All the above.

36. The camber in girders shall be provided for : (A) Dead Load. (B) Live Load. (C) Dead Load + Live Load.✓ (D) As per the seismic zone criteria. 37. After mixing the Red Lead Paint, it should be used within: (A) 1 Hour. (B) 1 Day. (C) 5Hours. (D) 5Days. 38. The best way to rehabilitate a Cracked Diagonal Steel Bracing is by: (A) Replacement. (B) Welding. (C) Riveting. (D) Repairing with epoxy material. 39. The solution for shaken RCC bed block is: (A) Grouting the gaps. (B) Replacement and fixing with grouting. (C) Both A&B. ✓ (D) None of the above. 40. Before replacing a Stone Top Bridge with precast box segments, the soil exploration of site is required to ascertain the: (A) Type of ground strata. (B) Type of foundation. (C) Quantum of protection work. (D) All the above. ✓ 41. On detection of IMR on USFD test immediate action: (A) SR of 30kmph (B) stop dead and proceed, (C) suspend the traffic and renew the rail, (D) SR as decided by Mate 42. On straight and level track it is easier to maintain the track with: (A) Single rails, (B) SWR, (C) 120m panel rail, (D) LWR 43. In case of obstruction in a BG track 3 detonators shall be placed from the location at a distance towards approaching train: at the spot, (A) 30m, (B) 600m, (C) 1200m, < (D) Wherever possible. 44. Census of LCs are taken continuously for: (A) 12 Hrs, (B) 24hrs,

(C) 7 days, 💇

(D) As decided by Sr DEN

J 45	Distressing of rails is done to avoid:
	(v) Naii Fracture
	(B) Buckling,
	(C) A &B,
	(D) None
/46	Speed trial by CRS in a section before commissioning with desired sectional speed of 90 km.
	to be done at a speed of:
	(A) 90kmph.
	(B) 99kmph, ✓
	(C) 100kmph, •
47	(D) to be decided by SSE/P. Way sitting on Engine. Minimum grade of each of the same of t
47.	Minimum grade of concrete to be used in RCC work as per IS:456-1978 is (A) M25,
	(A) M25,
	(B) M15, ✓
	(C) M20, *
40	(D) M10
40.	For vertical faces of all structural members the formwork is generally removed after:
	(A) 24-48 Hrs, \checkmark
	(B) 3day,
	(C) 7day,
40	(D) 14day
49.	In a simply supported uniformly loaded beam the Bending Moment will be maximum at:
	(A) both end,
	(B) 1/4 th of span
	(C) 1/3 rd of span,
50	(D) Middle /
50.	In coastal area the steel RCC work shall be preferably:
	(A) Treshly rolled
	(B) cement coated
	(C) epoxy coated 🗸
	(D) stainless steel
51.	Most common method of prestressing used in sleeper plants is:
	(A) Long line method, \checkmark
	(B) Freyssinet system,
	(C) as per site condition,
	(D) isolated for individual sleepers.
~ 52 .	Proper consolidation of formation is attained by :
	(A) vibratory rollers,
	(B) compactors,
	(C) teethed rollers,
	(D) after passing of one monsoon
	The track can be perfectly maintained efficiently by;
	(A) Trackman,
	•
	(B) Track machines, ✓
	(C) by TRT,
	(D) all above are correct

54.	CSM shall be deployed after:
	(A) The clean ballast cushion is less than 150mm,
	(B) every monsoon,
	(C) TFR,
	(D) Deep screening ✓
55.	The tamping machine should work only in design mode except:
	(A) for initial round of tamping,
	(B) urgency due to commissioning target,
	(C) Both are correct,
	(D) both are not correct
56.	While tamping the joint sleepers:
•	(A) Additional insertion shall be given,
	(B) One insertion less than plain track,
	(C) same No. of insertions,
	(D) In new track same and in old track more insertion
57.	BCM also gives:
•	(A) Cross slope of formation,
	(B) improves track resiliency,
	(C) both A & B are true,
	(D) Both A & B are false
58 .	In BRM the broom is to:
	(A) removes dry grass/leafs from track,
	(B) removes ballast from top of sleepers,
	(C) removes all material from shoulder for cleaning,
	(D) all above are correct \checkmark
59.	The gauge for auxiliary track for PQRS shall be:
	(A) 1676mm,
	(B) 2400mm,
	(C) 2750mm,
	(D) 3400mm ✓
60.	The load capacity of a T-28 portal is:
	(A) 28T,
	(B) 30T,✓
	(C) 54T,
	(D) 60T
61.	The life of rails can be increased by using:
	(A) CSM,
	(B) RGM, ✓
	(C) TRT,
	(D) BRM
62.	Date of painting in steel work shall be painted in which colour:

(A) white,(B) black,(C) yellow,(D) Red

(A) CAO/C,	e in doubling may be approved by:
(B) CE/C,	
(C) CBE,	
(D) CE/Br.	
64. The Speed Restriction on distress bridges (A) 15kmph,	on group-I category can be up to:
(B) 25kmph,	
(C) 30kmph,	
(D) 50kmph	
65 71 .	*
 The danger level in a box culvert of size 4. (A) up to 150mm. 	5mx4 5m shall he
(A) up to 150mm,	Sinx 4.5in Shan be.
(B) up to 300mm, (C) up to 450mm,	
(D) Bottom of	
(D) Bottom of top slab 🗸	
66. Apron in Bridge protection is provided:	
(A) below foundation of bridge,	
(=) Scyolid toe.	
(C) at Return wall	
(D) behind abutment 🗸	
and the state of t	
67. During heavy rains the precaution in deep (A) Post watchman.) Cutting shall be
	reacting small be:
(B) Start drain work,	
(C) start pitching on slope,	
(D) stop traffic temporarily	
68. The bridge requires immediate attention in	
(A) 1,	the ORN is:
(B) 2,	
(Ĉ)₫ 3,	
(D) 4	
69. Gapless joint shall be ensured in;	
(A) SEJ	
(B) Fish plated joints	
(C) Back leg of crossing	si r e :
(D) At all above locations 🗸	
(B) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	
70. The clearance between the Checkrail in Le	vel crossings shall be
(A) 51-57mm	
(B) 44-48mm,	
(C) 38mm	
(D) 13mm	

os. The reduced water way in case of a bridge in doubling may be approved by:

OFFICIAL LANGUAGE

(1x10= 10 Marks)

71. 'Hindi Day' is celebrated every year on:	
(A) 13 th September	
(B) 14 th September 🗸	
(C) 15 th September	
(D) 16 th September	
72. The Official Language of Arunachal Pradesh is:	
(A) Hindi	
(B) English√	
(C) Bangla	
(D) Asamees	
73. The State coming under the Region 'A' is:	
(A) Odisha	
(B) MP√	
(C) West Bengal	
(D) Maharashtra	ent
(D) Maharashtra 74. The number of Hindi courses prescribed in Hindi Teaching Scheme for Central Government	
Employees is:	
(A) 1	
(B) 2	
(C) 3 ^{-/-}	
(D) 4	
75. The station name boards shall be in order of:	
(A) Regional - Hindi — English.	
(B) Hindi-English- Regional.	
(C) English- Regional- Hindi.	
(D) Depending on Zonal Railway System.	
76. AHindi day is celebrated on:	
✓(A) 10 January ✓	
(B) 10 February.	
(C) 10 March.	
(D) 10 April.77. Under the Official Language Policy, the Rubber Stamps are to be prepared in the state	0
77. Under the Official Language Policy, the Rubber Stamps are to be prepared in the	
Chhattisgarha in order of:	
(A) English-Hindi.	
(B) English-Hindi-Regional Language.	
(C) Hindi-English.	
(D) All the above.	
78. Under which section of the Official Language Act, the Agreements shall be issued in biling	,ua
form?	
(A) Section 4(4).	
(B) Section 3(3).✓	
(C) Section 3(4).	

Wor

(D) Section 4(3).

	79. As per official Language Act, the State of Andhra Pradesh comes under Region: (A) 'A'.	
	(B) 'B'.	
	(C) 'C'.√ (D) 'D'.	
	80. According to Official Language Act, the State of Odisha falls under:	
	, A Weblott-M	
	(B) Region-B	
	(C) Region-C (D) Region-D	
	(5) VeRIOU-D	
	SECTION-B (ESTABLISHMENT & FINANCIAL RULES)	
	(Answer all 30 Questions carrying 1 mark each) (1x30= 30 Marks)	
81.	ESTABLISHMENT RULES (1X15=15 Marks)	
51 ,	According to RS(D&A) Rules, 1968, an order of Deemed Suspension is issued in:	
	(B) SF-2 \(\sigma \)	
	(C) SF-3	
	(D) SF-4	
82.	The higher Authority in RS/DS/A) But 1999	
	(B) DA. (C) RA.	
	(D) GM.	
83.		
	y John St. Ol OC GIIU 31 IU Kaliway Comitae	
	(b) Members of RPF/RPSF and All India Same	
	(C) Wellbers of Trade Unions holding Railway Son is	
84.	(b) Wellibers of Sports in Railway Service	
,	Minor Penalty is imposed under: (A) Rule 5 of RS(D&A) Rules, 1968.	
	(B) Rule 6 of RS(D&A) Rules, 1968.	
	(C) Rule 11 of RS(D&A) Rules, 1968.	
	(D) Rule 9 of RS(D&A) Rules, 1968.	
	n^{\prime} the second suppose n^{\prime} the second suppose n^{\prime}	
85.	Rule 18 of RS(Conduct) Rules, 1966 provides for:	•
	(A) Submission of Annual Income Tax Returns.	
	(B) Submission of Declaration for acquisition of loan.	7
	 (C) Submission of Annual Performance Appraisal Report. (D) Submission of Annual Immovable Property Returns. ✓ 	
86.	Paternity Leave admissible to a male Railway servant, on each occasion, for the	
	children is:	first 2 surviving
	(A) 15 Days. ✓	
	(B) 30 Days.	
	(C) 45 Days.	
	(D) 60 Days.	

- The number of persons, including a <u>dependent</u> member of the family of a Railway Servant, 87. allowed to travel on the authority of a privilege Pass, is limited to :
 - (A) 7.
 - (B) 6.
 - (C) 5.√
 - (D) 4.
- It will be violation of Railway Service Conduct Rules if a Railway Servant brings political pressure 88.
 - (A) Promotion.
 - (B) Transfer.
 - (C) Posting.
 - (D) All the above.√
- Production Linked Bonus (PLB) is not payable to Railway Servants: 89.
 - (A) On completion of 33 years of service.
 - (B) Under suspension.
 - (C) Having membership in Trade Unions.
 - (D) Attaining the age of 55 years or 33 years of service which is earlier.
- PREM in Indian Railways stands for: 90.
 - (A) Productive Return in Engineering Management.
 - (B) Participation of Railway Employees in Management.
 - (C) Persons Recruited in Engineering Management
 - (D) Periodic Review of Engineering Manuals
- When the transfer is within the same station or where the transfer does not involve a change of **/** 91. residence from one station to another. The joining time is:
 - (A) 1day.
 - (B) 2 days.
 - (C) 5 days.
 - (D) 10 days.
 - The concept of DCRG stands for: 92.
 - (A) Demand for Construction Reserve Groups.
 - (B) Demand for Competent Rest Givers.
 - (C) Demand for Complaint Redressing Grievances.
 - (D) Death cum Retirement Gratuity.
 - Extra Ordinary Leave (EOL) admissible to a Railway servant is: 93.
 - (A) Maximum 1 Year during the entire service career.
 - (B) Minimum 1 Year during the entire service career.
 - (C) Maximum 5 years during the entire service career.
 - (D) Minimum 6 months up to 15 years of qualifying service.
 - To avail Leave Encashment during service, a Railway Servant must avail: 94.
 - (A) Sanction of Final Withdrawal from SRPF.
 - (B) Sanction of Leave.
 - (C) Sanction of Restricted Holiday.
 - (D) Permission to leave Headquarters on Closed Holidays.

- 95. Major Penalty is imposed under:

 - (B)Rule 6 of RS(D&A) Rules, 1968.
 - (C)Rule 11 of RS(D&A) Rules, 1968.
 - (E) Rule 9 of RS(D&A) Rules, 1968.

FINANCIAL RULES (1X15= 15 Marks)

- 96. Security Deposit amount in any any contract is to be refunded after:
 - (A) Issue of Letter of Acceptance.
 - (B) Signing of Agreement.
 - (C) 1st on account bill.
 - (D) Final bill. ✓
- 97. When an expenditure cannot be met from the available grants and vote cannot be obtained due to Parliament not in session/dissolved, the expenditure to meet the unforeseen contingencies is met from the:
 - (A) Funds under the control of GM.
 - (B) Funds under the control of Member Finance, Railway Board.
 - (C) Funds under the control of Chairman & CEO, Railway Board.
 - (D) Contingency Fund of India. \checkmark
- 98. The funds spent from Contingency Fund of India are recouped from:
 - (A) Grants in Aid.
 - (B) MPLAD Fund.
 - (C) Funds under the control of Speaker of Lok Sabha.
 - (D) Consolidated Fund of India.
- 99. The expenditure met from Demand No.4 under the Classification 'B' is meant for:
 - (A) General superintendence & services.
 - (B) Repairs & Maintenance of Permanent Way and Works.
 - (C) Repairs & Maintenance of Motive Power.
 - (D) Repairs & Maintenance of Carriage & Wagons.
- 100. EBR in Railway funding stands for:
 - (A) External Budgetary Resources ✓
 - (B) Expenditure from Budget in Railway
 - (C) Execution of Bridge Rehabilitation
 - (D) Existing Budgetary Revenue
- Normally authority to spending a specific amount on a particular work is after: 101.
 - (A) Inclusion in PWP
 - (B) Inclusion in PB
 - (C) Preparation of Abstract Estimate
 - (D) Sanction of Detailed Estimate 🗸
- The expenditure towards purchase of land for construction of New line is charged to the 102. allocation:
 - (A) Capital✓
 - (B) DF
 - (C) DRF
 - (D) Revenue

103	3. Normally the currency of Sanction of estimate for work in progress is for a period of:
	(A) 1 year.
	(B) 2 years.
	(C) 3 years.
	(D) 5 years. \checkmark
104	·
	of suppliers for the particular item:
	(A) Open Tender.
	(B) EPC Tender.
	(C) Limited Tender.
	(D) Global tender.
105	
	(A) Agreement enforceable by Law.
	(B) Agreement enforceable by Departments.
	(C) Agreement enforceable by Compromise.
106.	(D) Agreement not enforceable by Contactors. Measurement of Ballast in depot supply is made by:
100.	(A) Measuring the volume of trucks.
	(B) Weight of Trucks loaded with ballast.
	(C) Dimensions of Ballast stack.√
	(D) All the above.
107	Lumsum payment can be made in works contract for the quantity not more than:
107.	(A) In the letter of acceptance.
	(B) In the Work Order.
	(C) Executed at site.
	(D) As per the discretion of the Agreement signing Authority.
108 .	Sanctioning power at Zonal level for new works under PH -16 is:
	(A) Rs. 1.50 Cr. *
	(B) Rs. 2.50Cr.
	(C) Rs. 5.00Cr.
	(D) Rs. 10.00Cr.
109.	Track renewal works are included under the PH:
	(A) 29.
	(B) 30.
	(C) 31×
	(D) 32.
110.	The second review of Rail Budget conducted in February is called:
	(A) Estimated Budgeting:
	(B) Accounts statement.
	(C) Reappropriation.
	(D) Final Modification.
