

SOUTHERN RAILWAY

CHENNAI DIVISION

QUESTION PAPER FOR THE SELECTION FOR THE POST OF JE/WORKS IN LEVEL 7 OF VII PC AGAINST 25% PRQ - DATE OF EXAMINATION – 15.07.2023

INSTRUCTIONS TO THE CANDIDATES: -

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

1. Please check that the 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 and Darkening done on the original OMR sheet will automatically appear on the carbonless copy and hence no separate shading /darkening requires on the carbonless copy.

5. Use only Blue /Black 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. Answer 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.

i. 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 not be negative marking 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 all 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/electric 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 will be 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 English version will prevail.**

15. **The candidates appearing for the exam are requested to clarify their doubts about any questions/option at the beginning of / during the examination, so that same may be then itself clarified / corrected /substituted, for the benefit of all.**

QUESTIONS BEGIN

1. Bilaspur is the Head Quarters of which Railway?
A) SEC RAILWAY B) SE RAILWAY C) ECO RAILWAY D) EC RAILWAY
2. EARLIER ISI OF STANDARDS IS NOW CALLED AS _____.
A) ISS B) BIS C) IS D) ASI
3. How many pairs of Vande Bharat Expresses are running in Chennai Division now?
A) One B) TWO C) THREE D) NIL
4. Trees will release _____ Gas during photo synthesis.
A) Nitrogen B) Carbon-dioxide C) Oxygen D) Hydrogen
5. How many days are there in the month of February in 2024?
A) 30 B) 29 C) 28 D) 31
6. As on date, Indian cricket team is touring in _____ Country.
A) SRI LANKA B) AUSTRALIA C) ENGLAND D) WEST INDIES
7. WHICH IS THE CAPITAL OF UTTARAKHAND STATE?
A) SIMLA B) CHANDIGARH C) RANCHI D) DEHRADUN
8. Chennai Metro Rail Net work is on what Gauge?
A) BROAD GAUGE B) Standard Gauge c) Meter gauge and d) Narrow Gauge
9. Which of the following is not a type of surveying instrument?
A) Theodolite B) Total station C) Grader D) Leveling instrument
10. Which is the national flower of our country?
A) ROSE B) MARIGOLD C) LOTUS D) JASMINE
11. SID SRIRAM IS THE CELEBRITY DUE TO PROFICIENCY IN WHICH FIELD?
A) CRICKET B) PHOTOGRAPHY C) DANCER D) SINGER
12. WHO IS THE HEAD OF ENGINEERING DEPARTMENT AT RAILWAY BOARD LEVEL?
A) MEMBER TR B) MEMBER FINANCE C) MEMBER INFRA D) MEMBER RS
13. RECENT TRAGIC ACCIDENT AT BALASORE FALLS IN WHICH RAILWAY DIVISION?
A) BHUVANESHWAR B) CUTTACK C) KHARAGPUR D) ADRA
14. NATIONAL INSTITUTE OF OCEANOGRAPHY IS LOCATED AT _____.
A) GOA B) HYDERABAD C) MUMBAI. D) VISKHAPATTANAM

15. ANEMO METER IS USED FOR MEASURING WHICH PARAMETER?

- A) DISTANCE B) VERTICAL ANGLE C) HORIZONTAL ANGLE D) WIND SPEED

16. WHO IS THE MATERIAL PASSING OFFICER FOR THE WORK?

- A) ADEN B) SSE /WORKS C) JE/WORKS D) DEN

17. As per para 225 (b)(ii) of the IRWM, colony care committee should be formed for big colonies having more than

- A) More than 100 quarters normally B) more than 200 generally
C) More than 1000 quarters normally D) None of the above.

18. As per Para 554 of IRWM, samples of Raw and filtered water shall be tested once in _____.

- A. A MONTH B. A WEEK C. A YEAR D. A QUARTER

19. As per the Standard of quality for drinking water, the maximum desirable limit for calcium in mg/litre is ____.

- A) 50 B) 75 C) 100 D) 200

20. Which of the following tests is used to determine the workability of fresh concrete?

- A) Sieve analysis B) Compaction test C) Slump test D) California bearing ratio test

21. The process of removing salt from seawater to make it suitable for drinking is called:

- A) Desalination B) Distillation C) Sedimentation D) Filtration

22. Which of the following is a non-destructive testing method used to assess the quality of concrete?

- A) Ultrasonic testing B) Core testing C) Load testing D) Dye penetration testing

23. A benchmark is a:

- A) Tool used for measuring distances
B) Point of reference for leveling and setting out
C) Technique for calculating earthwork quantities
D) Device used for aligning walls and columns

24. What is the purpose of setting out the building layout on the ground?

- A) To estimate the total construction cost
B) To ensure proper alignment and positioning of the structure
C) To determine the structural stability of the building
D) To calculate the volume of concrete required

25. All the structures with Roof Trusses are to be inspected by SSE/ Works once _____.

- A) a Quarter B) a year C) a month D) in two years

26. What does the term "water-cement ratio" refer to in RCC?

- A) The ratio of cement to water content in the mix
- B) The ratio of water to aggregate content in the mix
- C) The ratio of water to sand content in the mix
- D) The ratio of water to admixture content in the mix

27. Which of the following tests is used to determine the consistency of freshly mixed concrete?

- A) Sieve analysis B) Slump test
- C) Liquid limit test D) Triaxial test

28. An imaginary line joining the points of equal elevation is called _____.

- A) BENCH MARK B) CHANGE POINT
- C) CONTOUR D) NONE OF ABOVE

29. Which of the following is NOT a common type of foundation used in civil engineering?

- A) Strip foundation B) Pile foundation
- C) Cantilever foundation D) Raft foundation

30. In case of a M20 concrete, the M20 refers to-

- A) A concrete mix of compressive strength 20N/sqmm after 7 day
- B) A concrete mix of shear strength 20N/sqmm after 7 days
- C) A concrete mix of shear strength 20N/sqmm after 14 days
- D) A concrete mix of compressive strength 20N/sqmm after 28 days

31. Schedule of Dimensions for Railway structures is issued by

- A) CCRS B. CRS C. PCE D. RAILWAY BOARD

32. Authorization for running the passenger trains on a newly constructed section can be given by

- A) CE CONSTRUCTION B. PCE C. CRS D. GM

33. Which of the following is the correct order of dimensions from smallest to largest?

- A) Narrow gauge, standard gauge, broad gauge
- B) Standard gauge, broad gauge, narrow gauge
- C) Broad gauge, narrow gauge, standard gauge
- D) Narrow gauge, broad gauge, standard gauge

34. What does the term "Gauge" refer to in railway schedule of dimensions?

- A) The length of a railway track
- B) The width between the inner edges or Gauge faces of two rails

C) The height of the railway platform

D) The distance between two railway stations

35. Indian Railway Works manual was published in the year _____.

- A. 2020 B. 2000 C. 1986 D. 2008

36. As per present classification of stations for Passenger amenity point of view, highest priority is given for _____ stations.

- A) NSG 1 B) NSG 2 C) NSG 3 D) NSG 4

37. While working out water requirement what quantity is taken for flushing per head per day in Litres?

- A) 200 B) 135 C) 45 D) 100

38. What is the minimum Residual Chlorine expected at the farthest end of supply?

- A) 0.1 MG/ LITRE B) 0.2 MG/LITRE
C) 0.5 MG/LITRE D) 1 MG /LITRE

39. What is the software used for on line measurement recording and billing for civil works in Railway?

- A) IREPS B) IR-WCMS C) GEM D) None of above

40. What is the lowest permissible value of PH value for Drinking water?

- A) 6 B) 6.5 C) 7 D) 8.5

41. What is the highest permissible value of PH value for Drinking water?

- A) 6 B) 6.5 C) 7 D) 8.5

42. What is the Turbidity permissible on NTU scale for Drinking water?

- A) 10 B) 20 C) 5 D) 40

43. What is the lower range of height of platform from rail level for high level platform?

- A) 900 MM B) 760 MM C) 650 MM D) 1000 MM

44. On a platform, yellow line marking is done at _____ m from edge of platform.

- A) 1.2 B) 0.6 C) 1.8 D) 2.4

45. What is the desirable limit of Total Hardness for Drinking water in terms of Ca Co₃ mg/l?

- A) 500 B) 300 C) 1000 D) 200

46. What is the value of π ?

- A) 3.14 B) 4.13 C) 1.43 D) None of above

47. To find our free lime content in cement _____ test is conducted.

- A) Fineness Test B) Cube test

C) Soundness test D) None of above

48. Blue babies disease is caused due to _____ in the Drinking water.

A) NITRATE B) Flourides C) Arsenic D) Lead

49. What is the higher range of height of platform from rail level for high level platform?

A) 840 MM B) 760 MM C) 650 MM D) 1000 MM

50. What is the full form of PAMS?

A) Passenger Amenity multiple system
B) Passenger Amenity Management System
C) Parcel amenity measurement system
D) None of above

51. SSE /Works is categorized under _____

A) Essentially Intermittent B) Continuous
C) Intensive D) Excluded

52. As per Para 608 C of IRWM, maximum velocity of flow in sewer is not to exceed _____ metre per second

A) 5 B) 1.2 C) 2 D) None of above

53. What is the type of reinforcement used in Railways now a days?

A) HYSD B) TOR C) MS PLAIN BARS D) TMT

54. What is the full form of TMT ?

A) Thermo mechanically Treated
B) Treatment Managed Tor
C) Thermal Managed TOR
D) None of above

55. What is the highest size of standard Drawing sheet ?

A) A4 B) A3 C) A0 D) A2

56. Title Block shall be provided at _____ corner of the Drawing.

A) Left Top B) Left Bottom
C) Right Top D) Right bottom

57. In a cantilever beam or slab, main reinforcement is provided at _____.

A) TOP B) BOTTOM C) MIDDLE D) None of above

58. As per Para 226 of IRWM, interior steel work and wood work other than kitchens is painted once in ____ years

- A) 2 to 3 years
- B) 5 to 7 years
- C) 4
- D) None of above

59. Fine aggregate of which zone gradation is preferable for use in concrete works?

- A) Zone I
- B) Zone II
- C) Zone III
- D) Zone IV

60. How many litres will make one cubic metre?

- A) 10000
- B) 100
- C) 1000
- D) None of above

61. What is the percentage taken for air voids in concrete mix design?

- A) 1
- B) 2
- C) 3
- D) 4

62. what is the slope of ramp provided at end of the platform?

- A) 1 IN 2
- B) 1 IN 3
- C) 1 IN 5
- D) 1 IN 6

63. Blue letters on white back ground shall be used for which indication sign boards as per Para 425 of IRWM at larger stations?

- A) Passenger Amenity Items
- B) Important offices
- C) Other offices
- D) None of above

64. Bearing capacity of a water-logged soil can be Increased by-

- A) Compacting the soil
- B) Increasing the depth of foundation
- C) Draining the water from the soil
- D) Chemical treatment of water

65. The device used for measuring the thickness of paint is-

- A) Anemometer
- B) Elco meter
- C) Digi meter
- D) None of above

66. The weight of furniture in a building comes under

- A) Erection load
- B) Live Load
- C) Dead load
- D) None of above

67. For a simply supported beam with UDL maximum Bending moment occurs at _____.

- A) At support
- B) At middle
- C) At 1/3rd distance from support
- D) None of above

68. What is the volume of a cylinder of r radius and h height when compared to volume of cone of r radius and h height?

- A) Cylinder volume is equal to cone Volume
- B) Cylinder volume is 2 times cone volume
- C) Cylinder volume is half of cone volume
- D) Cylinder volume is 3 times cone volume

69. What is the initial setting time of ordinary cement?

- A) 30 minutes
- B) 10 Hours
- C) One hour
- D) None of above

70. What is the duration of life of RMC concrete at 20 degree centigrade ambient temperature?

- A) One Hour
- B) Two Hours
- C) One and half Hour
- D) No restriction

71. Chamfering of drilled holes is carried out to _____

- A) To avoid finger cutting
- B) To increase size of holes
- C) To work harden the location and to avoid crack propagation
- D) None of above

72. At present, Commonly manufactured rail section is _____.

- A) 60 KG
- B) 52 KG
- C) 70 KG
- D) None of above

73. What tool is commonly used by carpenters to create holes in wood?

- A) Screwdriver
- B) Pliers
- C) Drill
- D) Sledgehammer

74. What protective gear is essential for welders doing Arc welding ?

- A) Safety goggles
- B) Work gloves
- C) Respirator mask
- D) All of the above

75. Which of the following is NOT a type of joint commonly used in carpentry?

- A) Butt joint
- B) Dovetail joint
- C) Lap joint
- D) Tack joint

76. What tool is commonly used by blacksmiths to shape metal by striking it with a hammer?

- A) Drill
- B) Saw
- C) Anvil
- D) Welding torch

77. What is the primary purpose of a carpenter's level?

- A) To measure angles B) To cut wood C) To smooth surfaces D) To ensure horizontal or vertical alignment

78. Which of the following masonry structures is typically used to support an arch or a lintel?

- A) Sill B) Column C) Beam D) Wall

79. Which of the following materials is commonly used as a decorative facing for masonry walls?

- A) Stucco B) Vinyl C) Asphalt D) Plywood

80. What is the purpose of a weep hole in masonry construction?

- A) To provide ventilation
B) To allow water drainage
C) To enhance structural stability
D) To provide access for inspection

81. Which type of bond is commonly used in brickwork where all the bricks are laid flat with their long sides parallel to the wall?

- A) Flemish bond B) English bond
C) Stretcher bond D) Header bond

82. What is the primary purpose of mortar in masonry construction?

- A) To provide structural support
B) To enhance the aesthetic appearance
C) To provide insulation
D) To bond masonry units together

83. What is the purpose of a damp-proof course (DPC) in bricklaying?

- A) To provide a level surface for brick placement
B) To strengthen the structural integrity of the wall
C) To prevent rising damp from entering the brickwork
D) To create a decorative pattern on the brick surface

84. Which tool is used to measure the vertical and horizontal alignment of bricks?

- A) Trowel B) Chisel C) Level D) Brick jointer

85. Which of the following bonds is commonly used in bricklaying to create a strong and stable structure?

- A) Stretcher bond B) Flemish bond C) English bond D) Header bond

86. Which tool is commonly used to spread mortar evenly on the surface before laying bricks?
A) Trowel B) Chisel C) Level D) Hammer
87. What is the primary function of a leveling instrument in surveying?
A) To measure horizontal angles B) To measure vertical angles
C) To measure distances D) To determine differences in elevation
88. What is the unit of measurement for distances in surveying?
A) Meters B) Feet C) Yards D) All of the above
89. Which instrument is used to measure horizontal angles in surveying?
A) Theodolite B) Chains C) Level D) GPS receiver
90. What is the purpose of a survey?
A) To measure land boundaries B) To create maps and charts
C) To determine elevation and topography D) All of the above
91. Which of the following is NOT a factor that affects civil works estimating?
A) Site conditions B) Project location C) Local regulations D) Time of day
92. Le-Chatelier's device is used for the determination of-
A) Initial setting time of cement B) Soundness of cement
C) Tensile strength of cement D) None
93. A drop manhole is provided where:
A) A sewer drops
B) A branch of sewer joins the main sewer at a higher level.
C) To reduce the flow velocity of sewerage discharge
D) None of above
94. Which of the following is an indirect cost in civil works estimating?
A) Concrete B) Labor C) Materials D) Overhead expenses
95. Minimum distance from centre line of the track to coping face of platform as per SOD
A) 1670 mm B) 1680 mm C) 1905 mm D) None of above
96. Maximum distance from centre line of the track to coping face of platform as per SOD
A) 1670 mm B) 1680 mm C) 1905 mm D) None of above
97. Minimum implantation distance in Electrified Section is
A) 2500 mm B) 1680 mm C) 2360 mm D) 1905 mm

98. In the cross-section of a rectangular beam, bottom portion is subjected to _____.
- A) Compression B) Shear C) No stress D) Tension
99. Area of a triangle with b as base and h as height is
- A) 0.5 bh B) bh
C) 0.33 bh D) 3 bh
100. Rail wheel plant is situated at _____.
- A) Yelhanka B) Bela
C) At both places D) None of the above
101. When is the Hindi Diwas in India?
- A) 14th September B) 21st June
C) 21st September D) 14th November
102. Which of the following is an official language of India
- A) English B) Hindi C) Both A and B D) None
103. What is the main duty of Official Language Implementation Committee?
- A) To review all the languages
B) Implementation of Hindi Language
C) Conduct of Hindi course in central Govt. Office.
D) None of the above
104. Which ministry takes important decisions pertaining to Official Language?
- A) Ministry of Finance
B) Ministry of Defence
C) Ministry of Home affairs
D) Ministry of Law.
105. In which year was the official Language act passed?
- A) 1963
B) 1965
C) 1970
D) 1973
106. Who is the chairman of the Central Hindi Samiti?
- A) President of India C) Prime Minister
B) Home Minister D) Defence Minister

107. How many Rajya Sabha members are there in the Parliamentary committee on official language ?

- A) 8 members
- B) 12 members
- C) 10 members
- D) 9 members

108. How many Lok Sabha members are there in the Parliamentary committee?

- A) 25 members C) 18 members
- B) 22 members D) 20 members

109. Which is the elementary Hindi Course prescribed for Central Govt Employees?

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

110. When was the Parliamentary Committee on Official Language constituted?

- A) Jan'1974 C) March'1974
- B) Jan'1976 D) March'1975

(CONCLUDED)

S.R.

part I $10 \times 1 = 10M$
part II $20 \times 1 = 20M$
part III $20 \times 1 = 20M$
part IV $5 \times 1 = 5M$
part V $5 \times 2 = 10M$
65M

part VI $7 \times 5 = 35M$
part VII $3 \times 10 = 30M$
35M

$80 - 4 \times 2.5 = 10$
(6)

SOUTHERN RAILWAY
CHENNAI DIVISION

QUESTION PAPER FOR WRITTEN EXAMINATION FOR SELECTION FOR THE POST OF JUNIOR ENGINEER (WORKS) AGAINST LDCE QUOTA VIDE NOTIFICATION DATED 22.11.2018

DATE OF EXAMINATION-25.05.2019

MAXIMUM MARKS : 100

TIME: 3 HOURS

Instructions to the CANDIDATES: -

1. "Candidates should write their name, designation, office, roll number or staff number etc **ONLY** in the space provided in the fly leaf and **NOT** in any page of the answer books or additional sheets."
2. **Any names / roll numbers if found in the answer books or additional sheets, such papers shall be disqualified.**
3. In the answers to the **objective type questions, no correction of any type is permitted.** In case, any correction is made, that answer shall not be evaluated at all for eg. Corrections made in the objective type questions such as a) Cutting b) overwriting c) Erasing d) scoring off a ticket answer in multiple choice and ticking another answer and e) modifying answer in anyway **will not be evaluated at all.**
4. Question paper **consists of V parts** and all parts are to be answered as per the instructions given in the respective parts.
5. **Each question carries 1 mark. There is no negative mark.**
6. Where ever choice is given, if extra questions are answered, **first required number only will be evaluated and marks allotted accordingly**

PART - I $10 \times 1 = 10M$

Answer all. Each correct Answer carries one mark. Write full form of following abbreviations in the context of CIVIL Engineering

1. RMC
2. OPC
3. IRSOD
4. PSC
5. TMT
6. PVC FULL FORM IN PIPES
7. PVC FULL FORM IN CONTRACTS
8. RWH
9. USSOR
10. SMB

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PART-II

Answer any 20 out of total 25 questions by filling up the blanks with one word answer. If more than 20 questions are answered, only first twenty questions will be evaluated.

11. ----- is the Technical Head of the civil Engineering Department in the Zonal Railway.
12. Indian Railway Works manual is published in ----- year.
13. Compaction of earth work is checked by finding _____
14. Flow discharge is calculated by multiplying velocity with _____.
15. Compressive strength of concrete is tested by casting cubes of _____ size and strength is tested after curing ____ days.
16. Le-Chatlier's apparatus is used for finding _____ property of cement.
17. If M25 grade concrete is used for a work, ____ is the property 25 indicates and its unit is _____.
18. Slump cone test is used to check _____ property of concrete.
19. Plasticity Index is difference of _____ and Plastic Limit.
20. Platform number board of _____ size should be provided.
21. Chennai Central is _____ class station from passenger amenity based classification point of view.
22. _____ is the minimum and _____ is the maximum distance permissible from centre line of the track to face of coping of the passenger platform as per IR SOD.
23. Official language Act is passed in _____ year.
24. Prabodh, _____ and _____ are the courses conducted for imparting training in Hindi, as a part of official language implementation.
25. If an employee scores 80% marks in the examination conducted in the course of Prabodh, Rs _____ is given as incentive.
26. _____ is the official language in the state of Arunachal Pradesh.
27. Hindi in _____ script is declared as official language of India.
28. TAMILNADU falls in _____ category state from official language implementation classification.
29. Agartala is the capital of _____.
30. Minimum permissible height of a High level platform as per SOD is _____ mm and maximum permissible height is _____ mm.
31. For quotations, annual ceiling of Sr.DEN is Rs. _____ Lakhs



32. Demarcation Line should be drawn at _____ m. from edge of the Platform.
33. Platform Number sign board should be with _____ colour letter on _____ colour back ground as per IR Works Manual.
34. The slope of platform end ramp should be 1 in _____.
35. While estimating requirement of water for office, _____ Litres of water will be taken per Head.

PART-III

Answer all the 20 multiple choice questions. Each question carries one mark.

36. Methaemoglobinaemia or Blue babies disease is caused by presence of _____ in Drinking water.
a) Sulphates b) Chlorides c) Nitrates and d) Calcium
37. When protection against viral infection is required, _____ should be residual chlorine in mg/L.
a) 0.1 mg/L b) 1.2 mg/L c) 2 mg/L and d) 0.5 mg/L
38. USSOR 2011 has _____ chapters.
a) 28 b) 25 c) 19 and d) 34
39. Chapter 7 of the USSOR 2011 deals with _____ work.
a) Wood work b) Earth work c) Roofs and ceiling and d) Brick work
40. Shri _____ was the first south Indian, who worked as Prime Minister of India.
a) R. Venkataraman b) Abdul Kalam c) H.D. Deve Gowda & d) P.V. Narasimharao
41. Additions and alterations of permanent nature in staff quarters shall be carried out with the prior approval of
a) Sr. DEN b) DRM c) PCE and d) SSE/Works
42. Title block in a drawing is drawn at _____ corner of drawing.
a) Left Bottom b) Right Bottom c) Left Top and d) Right Top
43. The classification of soils met with in excavation of the work shall be determined by
a) Sr. SE/Works b) AXEN / ADEN c) DEN/XEN d) PCE

44. PH value is the symbol of _____ concentration.
a) Hydrogen Ion b) Nitrogen Ion c) Calcium Ion d) Oxygen Ion
45. Minimum Distance of centre to centre of tracks for new works / additions to existing works is
a) 4265 mm b) 4725 mm c) 5300 mm and d) 6850 mm
46. Minimum horizontal distance from centre of track to any structure except for a platform for new works from 1065 mm above rail level to 3355 mm is
a) 2135mm b) 2360 mm c) 1905 mm d) 2505 mm
47. What is the frequency of Inspection of all the structures and buildings in his jurisdiction by JE or SSE/Works in Open Line?
a) Once in 5 years b) Once in 2 years c) Once in a year and d) No Schedule
48. When annual rainfall of an area exceeds _____ mm, Exterior colour washing of a building become once a year from Once in two years.
a) 1500 mm b) 2000 mm c) 1250 mm and d) 1000 mm
49. Index plan and Section is to be drawn to A0 size which is _____.
a) 594 x 841mm b) 841 x 1189 mm c) 210 x 297 mm and d) 297 x 420 mm
50. The first reading taken on staff during surveying using Levelling instrument on a bench mark of known elevation is called as _____.
a) Intermediate sight b) Foresight c) TBM sight and d) Back sight
51. What is Capital of Malaysia?
a) Tokyo b) Kuala Lumpur c) Beijing and d) Thimphu
52. What is the currency of Bangladesh?
a) Rupee b) Dinar c) Taka and d) Euro
53. Last general census in India was conducted during _____.
a) 2014 b) 2018 c) 2009 and d) 2011
54. Dogri language is used in _____ state
a) Jammu and Kashmir b) Bihar c) Assam and d) Jharkhand

55. Which will be the head quarters of new South Coast Railway?

- a) Amaravati b) Vijayawada c) Visakhapatnam and d) Rayagada

PART IV

MATCH THE FOLLOWING in either set A or set B. EACH CARRIES ONE MARK

SET A

- I
56. Drinking water specification
57. Code for Aggregates
58. Code for RCC
59. Code for Pile foundations
60. Code for PSC

- II
a) IS 456-2000
b) IS 2911-2010
c) IS 383-2016
d) IS 1343-2012
e) IS 10500-1991

SET B

61. Head quarters of SEC Railway
62. Head quarters of ECO Railway
63. Head quarters of WHO
64. Head quarters of United Nations
65. Head quarters of UNESCO

- a) Geneva
b) Bilaspur
c) Newyork
d) Paris
e) Bhuvaneshwar

PART V - 10

Write short notes on any 5 of the following each question carries 2 marks.
Answer should be restricted to 4 valid sentences.

66. Tests conducted on Brick.
67. Different types of pipes used in water supply.
68. Importance of Zonal Contract.
69. What is the Cash award given for passing Pragma exam a) if marks scored or greater than 70% b) Scored less than 60%?
70. a) Hindi day is celebrated on which date every year?
b) What is the Cash award given for passing Prabodh with a score of 65%?
71. Name the states which come under Region C in view of the classification made for implementation of Official language?
72. Tests conducted on cement.
73. Constituent ingredients of cement
74. Organizational set up of Engineering Department in Division
75. General complaints received in Railway quarters of Chennai Division.

PART VI

This question is compulsory and carries 5 marks

76. List out any 10 duties of JE or SSE/Works.

PART VII (5)

Answer any 3 questions from the following. Each carries 10 marks

77. Please make an estimate for construction of a gate lodge of 3 x 3 m size with open foundation. Brick wall thickness is of 23 cms, basement with 34 cm brick wall with 45 cm deep with 2 footings of 45 cm with 45 cm deep and 60 cm with 45 cm deep. PCC of 150mm thick and sand filling of 300 mm thick. Natural Ground level is at a level where basement lift starts. Work out estimate for sand filling, PCC, Brick work in Foundation, in basement and super structure. One door of 1 x 2 m and 3 windows of 1.2 m x 1.4 m to be provided.

78. a) Give a Write up on quality control in Earth work in railway projects.

5 marks

b) Write a short notes on quality control in massive concrete structure execution. Write 10 sentences

5 marks

79. a) Explain water treatment as laid down in works manual. 5 marks

b) What are the physical and chemical standards of quality of Drinking water . List out Desirable limits at least for 10 Characteristics as laid down in IRWM. 5 marks

80. Write short Notes in 4 sentences on any 4 of the Following. Each carries 2.5 marks: -

a) Bulking of sand b) Soundness test on Cement c) English Bond brick work d) Various types of curing of concrete e) Various types of compaction of concrete and f) Setting out Building.

81.a) List out 10 minimum essential amenities to be provided at A class stations. 5 marks

81 b) Find out Reduced Level of Platform coping at X & TBM2 from the following table: - Each carries equal marks

Back sight	Intermediate sight	Foresight	Height of Instrument	Reduced Level	Remarks
0.970				38.860	RL of TBM1
	1.83				PF coping at X
		2.83			TBM 2

(CONCLUDED)

Page 6 of 6

SOUTHERN RAILWAY

SELECTION FOR THE POST OF JUNIOR ENGINEER/WORKS IN LEVEL-6 IN PAY MATRIX
AGAINST 25% PROMOTIONAL QUOTA – ENGINEERING BRANCH- CHENNAI DIVISION

Date: 30.11.2019
Time: 10 AM

Total marks:100
Duration: 120 minutes

Instruction to the Candidate:

1. Candidate should write their name, designation office, roll number/staff number etc., ONLY in the space provided in the fly leaf and not in any of the page in the answer books or additional sheets.
2. Any names/Roll numbers if found in the answer books or additional sheets, such papers will be disqualified.
3. In the answers to the objective type questions, no correction of any type is permitted in case any correction is made, that answer shall not be evaluated at all for e.g (A) cutting (B) overwriting (C) Erasing (D) scoring off a ticked answer in multiple choice and ticking another answer and (e) modifying the answer in any way will not be evaluated at all.
4. Each Questions carries 1 mark
5. There are 110 questions of Multiple choice answers to this questions paper.
6. Questions Nos 1 to 85 are related to Professional subject and Questions Nos 86 to 100 are related to General knowledge and Question Nos.101 to 110 are on Official Language Policy and Rules, which are optional. The candidates should Choose any 100 questions (100 only) out of the 110 questions asked.
7. The questions on Official Language are not compulsory.
8. There will be no negative marking for incorrect answers.
9. The candidates are not allowed to keep mobile phones /Electronic gadgets or any other documents/papers within the examination hall.
10. The Question Paper has 08 pages.

-
1. Which of the following estimate involves technical sanction for a work?
A) Detailed estimate B) Abstract estimate C) Revised estimate
D) Completion Estimate
 2. Which of the following is correct?
A) 1 hecter = 1000 acres B) 1 acre = 1000 cents C) 1 hecter = 2.47 acres
D) 1 acre = 436 Sq.ft
 3. Reassessment period of building rent in Railways?
A)Once in 10 years B) Once in 3 years C) Once in 5 years D) Once in 4 years
 4. What is the size of modular bricks?
A)20cm X 10cm X10cm B) 19cm X 9cm X9cm C) 9"X 4.5" X3"
D) 20cm X 10cm X9cm
 5. Nominal mix of M20 grade concrete?
A)1:2:4 B) 1:3:6 C) 1:1.5:3 D) 1:4:8
 6. 1:4:8 ratio of cement concrete means?
A) 1 part Cement, 4 part CA, 8 part FA B) 1 part Cement, 4 part FA, 8 part CA
C) 1 part FA, 4 part CA, 8 part Cement D) 1 part CA, 4 part FA, 8 part Cement
 7. The schedule of rate which is currently adopted in Railways?
A) BSR B) USSOR C) IRPWM D) IR-Work manual
 8. Compressive strength of concrete is determined by _____?
A) Permeability test B) Aeration test C) Slump test D) Cube test

9. Which of the following is set in proper order?
 A) Foundation, Masonry, Roof, Lintel B) Foundation, Lintel, Plinth, Roof
 C) Foundation, Plinth, Masonry, Lintel D) Foundation, Masonry, Plinth, Lintel
10. Unit of measurement of Masonry, concrete, steel work, Plastering respectively are?
 A) Sqm, Sqm, MT, Cum B) Cum, Sqm, Sqm, MT C) MT, MT, Sqm, Cum
 D) Cum, Cum, MT, Sqm
11. Which of the following is NOT correct?
 A) 1 quintal = 100 Kg B) 1 cum = 1000 litres C) 1 MT = 10000 T D) 1 foot = 12 inches
12. Unit measurement of the Cement & Reinforcement are?
 A) MT, MT B) Cum, Cum C) Sqm, MT D) Sqm, Sqm
13. Reinforcement for a work is identified by ?
 A) Length of reinforcement B) Diameter of the reinforcement C) Weight of reinforcement
 D) None of the above
14. The works executed by contractor are recorded in?
 A) Contractor's part bill B) Design Drawings C) Diary of JE/SSE
 D) Measurement book
15. The Measurement of works are to be jointly recoded by?
 A) SSE, ADEN B) SSE, Contractor C) JE, SSE D) All of the above
16. Which of the following is correct in terms of measurement in M book?
 A) New items of work are to be processed for approval B) All the items do not require 100% TC from ADEN C) Reinforcement item requires 100% TC from ADEN
 D) All of the above
17. Which of the following is certified by JE/SSE and contractor in record measurement and bills?
 A) Usage of Railway material in Contract works B) Engagement of contract labours
 C) No claim against the agreement D) All of the above
18. Measurement book is identified by?
 A) Color of the book B) Size of the book C) Specific No of the book D) Type of book
19. Which of the following is in correct order?
 1: Final bill 2: Part bill 3: Record measurement 4: Completion certificate
 A) 3 2 1 4 B) 2 3 4 1 C) 1 2 3 4 D) 4 2 3 1
20. Present Classification of stations based on which of the following?
 A) Earnings and outward passengers of stations B) Foot fall of station C) Only Earnings of station D) None of the above
21. How many groups of stations are classified in at present?
 A) 3 B) 5 C) 10 D) 4
22. The categories of NSG, SG, and HG group of stations are ____ respectively?
 A) 3,3,6 B) 3,5,6 C) 6,3,3 D) 6,3,5
23. What is the plinth area of Type-III quarters as per works manual?
 A) 34 sqm B) 55.75 sqm C) 83.60 sq cm D) 34 sq cm
24. The height of the high level Platform from the rail level? _____
 A) 15 cm B) 45 cm C) 60 cm D) 84 cm

25. Which of the following is not a Minimum Essential Amenities as per the revised list?
 A) FOB B)Public telephone C)Both A & B D)None of the above
26. How many types of Residential Quarters are there in Indian Railways?
 A)Only Four B)Only Six C)Only Five D)Only Three
27. HG3 category of stations covers which of the following station?
 A)Non-sub Urban B)Halt station C)Both A & B D)None of the above
28. Which of the following are the Minimum Essential Amenities in a station?
 A)Drinking water, waiting hall B)High level Platforms, Platform shelter
 C)Lighting, FOB D)All of the above
29. Which of the following stations have the Maximum Passenger Amenities?
 A)NSG - 6 B)SG - 3 C)NSG - 1 D)HG - 3
30. The period of Zonal contract in Railways? _____
 A)Jan - Dec B)April - March C)August - July D)None of the above
31. Zonal contract falls under which of the following type of contract ?
 A)Service contract B)Piece meal contract C)Lump sum contract
 D)None of the above
32. The Maximum value of Zonal work order can be passed as per the revised SOP is _____?
 A)5 lakhs B)2 lakhs C)1 lakhs D)10 lakhs
33. Normally the zonal contract in the jurisdiction of _____?
 A)Jurisdiction of SSE/Works B)Jurisdiction of ADEN C)Jurisdiction of SSE/P.Way
 D)All of the above
34. How many bills can be processed for each work order under zonal contract?
 A)3 B)4 C)Any of the bills D)1
35. The lateral clearance of coping wall edge from the central line of track as per SOD is _____?
 A)1905 mm B)1676 mm C)1670 - 1680 mm D)None of the above
36. The height of the medium level platform as per SOD from rail level is _____?
 A)1000 mm B)500 mm C)670 mm D)450 mm
37. The minimum distance of FOB structures/OHE mast from C/L of track other than Platform is _____?
 A)3.36 m B)2.63 m C)5.0 m D)2.36 m
38. Minimum height of FOB from Rail level as per SOD is _____?
 A)3 m B)5.25 m C)6.25 m D)10.0m
39. The minimum clearance of FOB from C/L of track on a platform as per SOD is _____?
 A)5.33m B)10 m C)6.25 m D)None of the above
40. The minimum distance of isolated structure from C/L of track in island platform is _____?
 A)4.72 m B)5.33 m C)6.25 m D)None of the above
41. The minimum distance of building or structure from C/L of track in single line Platform is _____?
 A)5.33 m B)6.83 m C)6.25 m D)10.0 m
42. How many zones are there in IR and who is heading each Zone?
 A)16 / General Manager B)67 / DRM C)6 / DRM D)67/ General Manager

43. Who is heading the Engineering Department in Zonal level?
A)GM B)DRM C)Sr.DEN D)PCE
44. The department which is responsible for the revenue to Indian Railway in zones _____?
A)Engineering B)Traffic C)Finance D)Commerce
45. For assessment of demand of water supply, how much is considered per capita demand in residential area?
A)200 lit B)500 lit C)100 lit D)50 lit
46. The method of disinfection carried in water supply _____?
A)Oxidation B)Chlorination C)Hydration D)All of the above
47. Which of the following method is not involved in drinking water treatment?
A)Sedimentation B)Coagulation C)Filtration D)Aeration
48. What is the pH value of drinking water?
A)7 B)15 C)14 D)1
49. In case of all new construction, minimum height of embankment should not be less than _____?
A)1.5 meter B)3.0 meter C)1.0 meter D)6.0 meter
50. Blanket material should generally conform to which of the following specifications?
A)Coarse, granular, well graded, $C_u < 4$ and C_c 1 & 2
B)Coarse, granular, well graded, $C_u > 4$ and C_c 1 & 2
C)Coarse, granular, well graded, $C_u > 4$ and C_c 1 & 3
D)Coarse, granular, well graded, $C_u < 4$ and C_c 1 & 3
51. What is the full form of OMC?
A)Original Moisture Content B)Optimum Moisture Content C)Organic Material Content D)None of Above
52. Core cutter method is used to find which of the following parameters?
A)Degree of compaction & moisture content B)In-situ dry density & moisture content
C)Bulk density & dry density D)Bulk density and moisture density
53. The schedule of inspection of petty repair book & complaint book _____?
A)Once in Three month B)Once in fortnight C)Very frequently D)Once in six month
54. Inspection schedule of advertisement hoardings situated alongside the running lines by section engineer works/ junior engineer _____?
A)Once in two months by rotation B)Once in three months by rotation C)Once in six months by rotation D)Once in a months by rotation
55. The unit of measurement for the centre line is _____?
A) A chain of 30 meter B)A chain of 20 meter C)A chain of 200 meter
D)A chain of 100 meter
56. Which survey is done to prepare a predicted section of the route?
A)Final location survey B)Preliminary survey C)Reconnaissance survey.
D)Detailed survey
57. The datum to which all levels are referred is _____?
A)Bench mark B)Mean sea Level C)Temporary datum D)Mean datum level
58. A rising gradient of 0.5meter in hundred meters is described as _____?
A)Rise 1 in 100 B)Rise 1 in 200 C)Rise 1 in 1000 D)Rise 1 in 150

59. The index plan and section should be drawn to a scale of _____?
 A) 0.5m to a cm horizontal and 5m to a cm vertical B) 50m to a cm horizontal and 5m to a cm vertical
 C) 0.5Km to a cm horizontal and 10m to a cm vertical
 D) 0.5km to a cm horizontal and 5m to a cm vertical
60. The plans of the station yards should be drawn to a scale of _____?
 A) 10 meters to a cm B) 100 meters to a cm C) 1000 meters to a cm
 D) 0.5 meters to a cm
61. Which of the chapter (item of rates) is not included in USSOR-2011?
 A) Earth work B) Wood work C) Supply of materials D) Aluminum works.
62. Which of the following details can't be obtained from USSOR for an item of a work?
 A) Measurement unit of item B) Quantity of an item C) Unit rate for an item.
 D) Description of an item
63. How many chapters are there in USSOR 2011?
 A) 23 B) 11 C) 25 D) 22
64. How many Dustbins are to be provided at SG category stations as per MEA norms?
 A) 2 per 50 sqm area B) 1 per 50 sqm area C) 1 per 100 sqm area D) 4 per 500 sqm area
65. Section engineer works should inspect all the building, water supply installation, sewerage installation and drainage arrangements _____?
 A) Once in six months B) Once in a year C) Once in two years D) Once in fortnight
66. Chairman of the colony committee is _____?
 A) Divisional Engineer B) Asst. Divisional Engineer C) Senior Section Engineer works
 D) Senior Section Engineer Permanent way
67. Which is the base for estimating the quantities for periodical white washing or colour washing & painting?
 A) Measurement book B) Unified standard schedule of rates C) Standard measurement book
 D) Section Register
68. All suburban station classified as _____ as per revised norms?
 A) Category D B) Category C C) Category SG D) None of the above
69. Minimum residual chlorine available at the farthest end shall be _____?
 A) 0.1 mg per litre B) 0.3 mg per litre C) 0.2 mg per litre D) 2.0 mg per litre
70. Which of the following type quarter having maximum plinth area?
 A) Type IV B) Type IV Special C) Type V D) Type VII
71. What is the schedule of colour washing and distemping of officers bungalow's?
 A) Once in a year B) Once in three years C) Once in two years D) Once in six Months
72. Frequency of the colour washing exterior plastered surface of Gate- lodges?
 A) Once in a year B) Once in six months C) Once in the two years D) Once in five years
73. Norms of minimum essential amenities of platform shelter at SG3 Category _____?
 A) 100 Sq. Meter B) 200 Sq. Meter C) 500 Sq. Meter D) 1000 Sq. Meter
74. The minimum required level of platforms at HG1 station as per MEA norms is _____?
 A) Low level Platform B) High level Platform C) Medium level Platform D) Ground level Platform

75. Minimum Essential Amenities Norms for drinking water taps at NSG5 station category is _____?
 A)20Nos. taps/PF B)10Nos. taps/PF C)2Nos. taps/PF D)8Nos. taps/PF
76. How many seating arrangement to be made at NSG 1 station as per Minimum Essential Amenities?
 A)125 seats / PF B)150 seats / PF C)200 seats / PF D)500 seats/ PF
77. Recommended distance of any building or longitudinal boundary fence from the centre line of track of a passenger platform, which is not an island platform is _____?
 A)5330mm B)6830mm C)12130mm D)4115mm
78. The minimum landing width permitted in case of FOB Landing _____?
 A)25% of platform width B)10% of platform width C)50% of platform width.
 D)15% of platform width
79. Permissible limit of fluorides in drinking water (mg/l) _____?
 A)2.0 B)1.8 C)1.5 D)2.5
80. Where there is Sanitation Committees do not exist, who shall be primarily responsible for maintaining Sanitary and hygienic condition in station yards, staff colonies and their surroundings?
 A)Senior Section Engineer works B)Chief Medical Officer C)Station Master.
 D)Assistant Engineer
81. Whenever new roads are being constructed which of the following parameter are to be considered (i) Loading (ii) Drainage (iii) Sub- grade strength (iv) Sub grade colour.
 A)Only (i) and (ii) B)Only (i), (ii) and (iii) C)Only (iii) D)All of the above
82. Slab length is 11.67m, Breadth is 4.96m, thickness of slab is 130mm and room height is 3m, how much is the quantity of concrete required to cast that slab _____?
 A)7.525 Sq. M B)752.482 Cum C)7.525 Cum D)7525 Cum
83. What are the parameters required to calculate quantity of a plastering work of a wall?
 A)Length and Breadth B)Length and Height C)Length, Breadth and Height
 D)Length and Thickness
84. The parameters required for calculate the quantity of a brick work in foundation and plinth? _____
 A)Length, Breadth and Height B)Length, Breadth and Thickness
 C)Breadth, Height and Thickness D)Length and Height.
85. Which of the following estimate 'Not' Existing in Railway Engineering?
 A) Abstract Estimate B) Secondary estimate C) Supplementary estimate
 D) Completion estimate
86. When was the first train started off in India?
 A)1848 B)1853 C)1875 D)1880
87. Which train in India has the longest rout length?
 A)Howrah - Jammu Tawi Himgiri Express B)Kanyakumari - Jammu Tawi
 HimsagarExperss C)Kanyakumari - DibugarhVivek Express D)Guwahati
 - Thiruvananthapuram Express
88. Who of the following was the first Railway Minister of Independent India?
 A)John Mathai B)LalBahadurshastri C)Jawaharlal Nehru D)ShanmugamShetty

89. Murugappa Gold Cup is related to which among the following sport?
 A)Foot ball B)Hockey C)Cricket D)Table tennis
90. The 13th Prime Minister of India was?
 A)AtalBihari Vajpayee B)I.K Gujral C)Dr. Manmohan Singh
 D)P.V Narasimha Rao
91. Which of the following statement is not correct?
 A)India is the second largest producer of fruits in the world B)India is the biggest
 producer of the vegetables in the world C)Production of fruits, vegetables and
 spices called horticulture D)Uttar Pradesh is the largest producer of the wheat in India
92. Which of the following is the commercial crop in India?
 A)Mustard B)Tobacco C) Jute D)All of the above
93. Valmiki National Park and Wildlife sanctuary is located at?
 A)Uttrakhand B)Uttar Pradesh C)Maharashtra D)Bihar
94. SMOG is caused due to?
 A)Emission from vehicles B)From incinerators C)Oil paints D)All of the above
95. Which of the following is responsible for turning TajMahal in to yellow?
 A)Nitrogen dioxide B)Sulphur C)Chlorine D)Sulphur Dioxide
96. Match the following
- | | |
|---------------|----------------|
| a)Vembanad | 1. Kerala |
| b)Bhitakanika | 2. Odisha |
| c)Ratnagiri | 3. Maharashtra |
| d)Londapur | 4. Kamataka |
- Code: a b c d
- | | | | | |
|----|---|---|---|---|
| A. | 1 | 2 | 3 | 4 |
| B. | 4 | 3 | 2 | 1 |
| C. | 4 | 1 | 3 | 2 |
| D. | 1 | 4 | 2 | 3 |
97. Which state has the largest area?
 A)Maharashtra B)Madhya Pradesh C)Uttar Pradesh D)Rajasthan
98. The salary and allowance of the Ministers of the Government of India are determined by whom?
 A)Prime Minister B)President C)Council of Ministers D)Parliament
99. Which of the following is the world's busies t metro system?
 A)Tokyo Subway, Japan B)Beijing Subway, China C)Seoul Subway, South Korea
 D)Shanghai Metro, China
100. Which is the India's first double decker train?
 A)Ahmedabad - Mumbai Central Double Decker Express B)Samjhuata Express
 C)Guwahati Thiruvananthapuram Express D)Ernakulum HazratNizamudinDuranto
 Express
101. When is Hindi day celebrated?
 A) 14th November B) 14th September C) 14th August D)14th December
102. How many regions are there as per the provisions made in the official language
 rules
 A) Three B) Four C) five D) two

103. The state of Tamilnadu is coming under which region as per official language rules
A) Region A B) Region B C) Region C D) Region D
104. How many modes of training facilities available for writing Hindi examinations.
A)Five B)Four C)Three D)two
105. What is the word in Hindi for English verb "To accept"
A) Swikar karna B)Niyukth karna C)Anumodith karna D)Upasthith hona
106. What is the English word for the hindi word 'Pareeksha'
A)circular B)examination C)correspondence D)course
107. The incentive allowed to stenographers for doing their official work in Hindi is _____
A)Rs.120/month B)Rs.240/month C)Rs.180/month D)Rs.140/month
108. What is the word in Hindi for English verb "To ensure"
A) preshith karna B)sunishchith karna C) spasht karna D)Agreshith karna
109. What is the word in Hindi for English verb "To explain"
A) preshith karna B)sunishchith karna C) spasht karna D)Agreshith karna
110. What is the English word for the Hindi word 'Karmachari'
A)Employee B)memorandum C)correspondence D)course
-

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.

Question paper for the written Examination for the post of JE/Works
(15% LDCE)

Duration: 120 Minutes

1. Super Elevation on roads is provided at
(A) Straight Portion (B) Curves (C) At Down Gradient (D) At up gradient
2. Deep Tube Wells are wells of
(A) 15m to 50m in depth or even 100m (B) depth less than 15m
(C) Both A&B (D) none of these
3. When Bridge is said to be distress then it means condition of bridge
(A) Is Unsound and needs immediate attention
(B) Is Unsound and needs routine maintenance
(C) Is sound
(D) none of these
4. PNM at Divisional level frequency is
(A) Once in 2 months (B) Once in 3 months
(C) Once in 4 months (D) none of these
5. Full form of PREM
(A) Performance of Railway Employee in Management
(B) Participation of Railway Employee in Management
(C) Participation of Railway Ex-employee in management
(D) none of these
6. Full form of AGM
(A) Additional General Manager (B) Assistant General Manager
(C) both A&B (D) none of these
7. Full form of PNM
(A) Permanent Negotiating Machinery (B) Permanent Normal maintenance
(C) Permanent Normal Machinery (D) none of these
8. Full form of CTG
(A) Composite Transfer Grant (B) Composite Training Grant
(C) Composite Transfer Generation (D) none of these
9. High Strength Concrete is
(A) M-10 to M-20 (B) M-25 to M-55 (C) M-60 to M-80 (D) none of these
10. What is Post Retirement benefit given to Railway employee
(A) Pension (B) Family pension (C) Medical facility (D) all of these
11. Stock verification in SSE/Works Store is done once in
(A) One year (B) Two year (C) Three year (D) none of these

12. In Measurement Book
(A) Measurement of Work done by Agency done is recorded
(B) Measurement of work done by staff is recorded.
(C) Measurement of work done by other department is recorded
(D) none of these
13. In Standard Measurement Register
(A) Standard measurement i.e all dimensions of Assets under SSE/Works is Recorded and kept
(B) only standard measurement is recorded and kept.
(C) both A&B
(D) none of these
14. What is the width of Embankment in Double line.
(A) 11.45m (B) 13.16m (C) 16.20m (D) none of these
15. Plinth Area of Type III Quarter is
(A) 34 sqm (B) 45 sqm (C) 55.75 sqm (D) 83.60 sqm
16. Plinth Area of Type I Quarter is
(A) 34 sqm (B) 45 sqm (C) 55.75 sqm (D) 83.60 sqm
17. Plinth Area of Type II Quarter is
(A) 34 sqm (B) 45 sqm (C) 55.75 sqm (D) 83.60 sqm
18. Plinth Area of Type IV Quarter is
(A) 34 sqm (B) 45 sqm (C) 55.75 sqm (D) 83.60 sqm
19. Rails are designated as 52Kg , 60 KG etc.
(A) False (B) True (C) Do not exist (D) none of these
20. Columns are designed to transfer
(A) Compressive Load (B) Tensile load (C) both A&B (D) none of these
21. Beams transfers loads to
(A) Columns (B) Foundation (C) both A&B (D) none of these
22. Initial Setting time of concrete is generally considered as
(A) 15min. (B) 30min. (C) 45 min. (D) 60min
23. Final Setting time of concrete should not be less than
(A) 1 hour (B) 5 hour (C) 10 hour (D) 15 hour
24. What is Admixture

- (A) Materials such as cement, water & aggregate
 (B) Materials other than cement, water & aggregate
 (C) No such exist
 (D) none of these
25. What is Afflux?
 (A) Additional Rise in Water level due to obstruction
 (B) Decrease in water level due to obstruction
 (C) Both a&b
 (D) none of these
26. Camber in Steel Bridges is provided to
 (A) Compensate for deflection under load (B) To drain out water
 (C) both a&b (D) none of these
27. Different types of filtration plants are
 (A) Slow sand filter (B) Rapid sand filter (C) pressure filter (D) all of these
28. What is full form of MSL
 (A) Mean Shore Level (B) Mean Sea level (C) Mean Sill Level (D) none of these.
29. Sill Level is generally kept
 (A) 0.65m from Floor Level (B) 0.90m from Floor level
 (C) 1.5m from Floor level (D) none of these
30. Generally Vertical clearance between floor and Ceiling in construction of Railway Quarters is kept at
 (A) 2.7m to 3.0m (B) 3.0m to 3.20m (C) 3.2m to 3.5m (D) 3.5m to 4.0m
31. Plinth Protection is provided
 (A) Outside Building (B) Inside Building (C) above Plinth (D) none of these
32. Sunshade over window in Railway Quarter is generally provided at
 (A) Plinth level (B) Lintel Level (C) Floor level (D) Soffit level
33. The weight of 8mm diameter steel rod per meter length is
 (A) 0.39 Kg (B) 0.45Kg (C) 0.5 kg (D) 0.62 Kg
34. The weight of 10mm diameter steel rod per meter length is
 (A) 0.39 Kg (B) 0.45Kg (C) 0.5 kg (D) 0.62 Kg
35. The weight of 12mm diameter steel rod per meter length is
 (A) 0.39 Kg (B) 0.45Kg (C) 0.62 kg (D) 0.89 Kg
36. The water is flowing from 25mm dia pipe line into 40mm dia pipe, the pressure of water will
 (A) Decrease (B) Increase (C) remain same (D) none of these
37. The water is flowing from 40mm dia pipe line into 25mm dia pipe, the

pressure of water will

(A) Decrease (B) Increase (C) remain same (D) none of these

38. Jacketing of Bridge is a method adopted to

(A) Strengthen the Bridge (B) give a architecture look
(C) Increase the span of Bridge (D) none of these

39. Guniting is a process in which

(A) Concrete is poured slowly over the surface.
(B) Concrete is sprayed in pressure over existing concrete structure.
(C) both a & b
(D) none of these

40. Minimum cushion provided in arch Bridge

(A) 600mm (B) 750mm (C) 1000mm (D) 1200mm

41. Potable water is also known as

(A) Recycle water (B) sewage water (C) drinking water (D) none of these

42. Water having pH value 7 indicates

(A) Acidic (B) Base (C) Neutral (D) none of these

43. Casual Leave (CL) for Line staff is

(A) 10 days (B) 15 days (C) 20 days (D) none of these

44. Maternity Leave is of

(A) 120 days (B) 135 days (C) 180 days (D) 200 days

45. Paternity Leave is of

(A) 10 days (B) 15 days (C) 20 days (D) 30 days

46. Detonator used in Railway by P-way staff is

(A) Signal (B) Cracker (C) Used for Blasting (D) none of these

47. Phosphorus Bronze, Rocker & Roller, Elastomeric are all types of

(A) Name of Bed Blocks (B) Bearings (C) Paints (D) none of these

48. By increasing the W/C ration of concrete strength of concrete

(A) Increase (B) Decrease (C) no affect (D) none of these

49. Rain water Harvesting means

(A) Collection & storage of rain water
(B) Collecting Rain water for charging ground water table
(C) both A&B
(D) none of these

50. Rate of an item is say Rs. 100/- if price escalation is given to agency @ 5% per year than what will be the new rate after 2 years

- (A)Rs. 110 (B) Rs. 110.25 (C)Rs. 110.50 (D) none of these
51. A garden is made on a land measuring 100mX100m and a pathway 2m wide runs on all four side, if grass is provided on entire area what will be the area of land having grass?
(A)10000 sqm (B)8100 sqm (C) 6400 sqm (D) none of these
52. In skew Level Crossing , the angle of crossing should not be less than
(A)20 Degrees (B) 30 Degrees (C) 45 degrees (D) none of these
53. To avoid water logging during Construction, Construction of Drain Should start
(A)from up gradient towards down gradient
(B) from down gradient towards Up gradient
(C) both A&B
(D)none of these
54. Water and Sewage pipe line should have min. Separation of
(A) 2m (B) 3m (C) 4.5m (D) 5.0m
55. The suction pipe at inlet of pump should be kept
(A)As short and straight as possible (B) Long and straight as possible
(C) both A&B (D) none of these
56. For carriage watering system the rate of flow at delivery end on hydrant shall not be less than. Litres per minute.
(A) 50 (B) 75 (C) 100 (D) 120
57. Survey of trees which branches is to be trimmed or tree to be cut near or parallel torailway track for safety reasons is done between
(A)Engineering & Electrical Department
(B)Engineering &TRD Department
(C) Between Engineering & Signal Department
(D) none of these
58. All track drains beyond station limits is cleaned before monsoon by
(A)Health Department (B) Engineering Works Department
(C)Engineering P-Way Department (D) none of these
59. Responsibility of Cleaning of Waterway of Bridges is laid upon
(A)SSE/Works (B) SSE/P-Way (C) SSE/Bridge (D) none of these
60. Honeycomb Structure is caused due to
(A)Improper formwork and shuttering causing water leakage from concrete.
(B) Improper Compaction of concrete
(C) both A&B
(D) none of these
61. Durability of concrete is defined as ability to resist

- (A) Weathering action (B) Chemical attack (C) Abrasion (D) all of these
62. In surveying B.M is termed as
 (A) Bench mark (B) Back Marking (C) Big margin (D) none of these
63. At junction point of two roads crossing at 90 Degree a curve is provided on all sides to provide visibility to road traffic
 (A) True (B) False (C) no curve is provided (D) none of these
64. Flooring recommended in Workshops dealing with heavy load
 (A) Concrete Flooring (B) Ironite Flooring (C) RCC Flooring (D) none of these
65. Decorative Work done outside Station Building on walls is done by providing
 (A) APP (B) ACP (C) ABP (D) none of these
66. Main cause of roof leakage during rainy season in buildings are
 (A) Rain water pipe not clean
 (B) Dumped material on roofs causing water stagnation
 (C) improper slope of roofs
 (D) all of these
67. Water taps recommended on Platform water booth to avoid water wastage
 (A) Push Cock (B) Bib cock (C) both A&B (D) none of these
68. The frequency of inspection of Encroachment shall be at least once in
 (A) A month (B) two month (C) three month (D) none of these
69. Adjustment done in a Levelling Instrument
 (A) Permanent Adjustment (B) Temporary Adjustment
 (C) both A&B (D) none of these
70. Construction Joints are considered as a weak point in concrete if not provided in its actual designed place
 (A) True (B) False (C) Construction joint does not exist (D) none of these
71. Full form of H.D Bolts
 (A) High Density Bolts (B) Holding Down Bolts
 (C) Heavy Density Bolts (D) none of these
72. Clear Span is termed as
 (A) Clear Distance between tow supports
 (B) Centre to Centre distance of bearing
 (C) Over all length of the Girder
 (D) none of these
73. Effective Span in termed as
 (A) Clear Distance between tow supports
 (B) Centre to Centre distance of bearing
 (C) Over all length of the Girder

- (D) none of these
74. Over all span is termed as
 (A) Clear Distance between two supports
 (B) Centre to Centre distance of bearing
 (C) Over all length of the Girder
 (D) none of these
75. Igneous rock are formed by
 (A) Gradual deposition of particles of pre-existing rock under water
 (B) cooling of molten lava
 (C) alternation of original structure under heat and pressure
 (D) none of these
76. Sedimentary Rock are formed by
 (A) Gradual deposition of particles of pre-existing rock under water
 (B) cooling of molten lava
 (C) alternation of original structure under heat and pressure
 (D) none of these
77. Metamorphic Rock are formed by
 (A) Gradual deposition of particles of pre-existing rock under water
 (B) cooling of molten lava
 (C) alternation of original structure under heat and pressure
 (D) none of these
78. Jhama bricks are
 (A) Well burnt bricks
 (B) Over burnt Bricks
 (C) Slightly over burnt bricks
 (D) Not properly burnt bricks
79. First Class Bricks are
 (A) Well burnt bricks
 (B) Over burnt Bricks
 (C) Slightly over burnt bricks
 (D) Not properly burnt bricks
80. Second Class Bricks are
 (A) Well burnt bricks
 (B) Over burnt Bricks
 (C) Slightly over burnt bricks
 (D) Not properly burnt bricks
81. Third Class Bricks are
 (A) Well burnt bricks
 (B) Over burnt Bricks
 (C) Slightly over burnt bricks
 (D) Not properly burnt bricks & not good in quality
82. Water absorption of well burnt brick should not absorb water more than ___ percent of its dry weight after 24 hours immersion in cold water
 (A) 5% (B) 10% (C) 20% (D) 30%

83. Workability of Concrete can be measured by
 (A) Slump test (B) Compaction factor test (C) Vee-Bee test (D) all of these
84. OPC-43, OPC-53, PPC are types of
 (A) Steel (B) Paint (C) Cement (D) none of these
85. Silt & Clay are termed as
 (A) Fine grained Soil (B) Coarse grained Soil (C) Organic Soil (D) none of these
86. Sand & Gravels are termed as
 (A) Fine grained Soil (B) Coarse grained Soil (C) Organic Soil (D) none of these
87. Constituents of Soil are
 (A) Air (B) Water
 (C) Solids (D) all of these
88. The end supports of a bridge is called
 (A) Pier (B) Abutment (C) Parapet Wall (D) none of these
89. The intermediate supports of the bridge superstructure is called
 (A) Pier (B) Abutment (C) Parapet Wall (D) none of these
90. Venturimeter is used for
 (A) Measuring rate of flow in pipes (B) Measuring pressure in pipes
 (C) both A&B (D) none of these
91. Sub Structure is defined as
 (A) Bridge portion below bearing (B) Bridge portion above bearing
 (C) Bridge structure below bed level (D) none of these
92. Super Structure is defined as
 (A) Bridge portion below bearing (B) Bridge portion above bearing
 (C) Bridge structure below bed level (D) none of these
93. Head Quarter of Southern Railway (SR) is
 (A) Garden Reach Kolkata (B) Chennai (C) Bilaspur (D) Secunderabad
94. Head Quarter of South Eastern Railway (SER)
 (A) Garden Reach Kolkata (B) Chennai (C) Bilaspur (D) Secunderabad
95. Head Quarter of South East Central Railway (SECR)
 (A) Garden Reach Kolkata (B) Chennai (C) Bilaspur (D) Secunderabad
96. Head Quarter of South Central Railway (SCR)
 (A) Reach Kolkata (B) Chennai (C) Bilaspur (D) Secunderabad
97. Head Quarter of South Western Railway (SWR)
 (A) Hubli (B) Baroda House, N. Delhi (C) Gorakhpur (D) Allahabad

98. Head Quarter of Northern Railway (NR)
(A)Hubli (B) Baroda House, N. Delhi (C) Gorakhpur (D) Allahabad

99. Head Quarter of North Eastern Railway (NER)
(A)Hubli (B) Baroda House, N. Delhi (C) Gorakhpur (D) Allahabad

100. Head Quarter of North Central Railway (NCR)
(A)Hubli (B) Baroda House, N. Delhi (C) Gorakhpur (D) Allahabad

101. What is the lumpsum award for passing Hindi typewriting examination by private study?
(A)Rs.1600/- (B)Rs.1800/- (C)Rs.1400/- (D)Rs.1200/-

102. When was the Official Languages rules passed?
(A)1967 (B)1976 (C) 1982 (D)1972

103. What is the duration for Hindi conversation course?
(A) 30 hrs (B) 20 hrs (C)10 hrs (D) 50 hrs

104. What is the Official Language of Arunachal Pradesh?
(A) Hindi (B) Marathi (C) English (D) Gujarathi

105. When is 'Hindi Day' celebrated every year?
(A)25th August (B)18th April (C)20th October (D)14th September

106. Sections 6 & 7 of Official Language Act 1963 do not apply in which State?
(A)Jharkhand (B)Uttar Pradesh (C)Jammu & Kashmir (D) Tamil Nadu

107. How many members are there in the Parliamentary Committee on Official Language?
(A)30 (B) 50 (C)20 (D)45

108. What is the cash award amount for the first prize under Collective Cash Award Scheme?
(A)Rs.1500/- (B)Rs.3000/- (C)Rs.5000/- (D)Rs.2500/-

109. What is the amount for passing Hindi Stenography with 95% or more marks?
(A)Rs.2400/- (B)Rs.3600/- (C)Rs.1500/- (D)Rs.2000/-

110. In which article is the provision regarding OL policy available in Part V of the constitution?

(A)Article – 210 (B) Article – 100 (C) Article – 256 (D) Article – 120