



सत्यमेव जयते

रेल भर्ती बोर्ड / RAILWAY RECRUITMENT BOARDS



सी ई एन आर आर बी - ०२/२०२४ - CEN RRB - 02/2024

Test Date	29/12/2024
Test Time	9:00 AM - 10:30 AM
Subject	RRB Technicians Grade III

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB Technicians Grade III

Q.1 Evaluate the given expression.

$$(-18) + 6 \div 3 + 5$$

- Ans**
1. 11
 2. 1
 3. -1
 4. -11

Q.2 If each vowel in the word ARTICULATE is changed to the letter immediately following it in the English alphabetical order and each consonant is changed to the letter immediately preceding it in the English alphabetical order, then which of the following letters will appear more than twice in the group of letters thus formed?

- Ans**
1. J
 2. K
 3. S
 4. B

Q.3 Different cell organelles such as mitochondria, ribosome, etc., together constitute the basic unit of life called the:

- Ans**
1. tissue
 2. organ
 3. cell
 4. organ system

Q.4 Rani has borrowed an amount of ₹2,00,000 from a bank to start a business. How much simple interest will she pay at a rate of 7% per annum after 2 years?

- Ans**
1. ₹28,500
 2. ₹28,000
 3. ₹26,000
 4. ₹24,000

Q.5

- Ans
- 1. R
 - 2. Q
 - 3. B
 - 4. E

Q.6 If F_1 force is required to accelerate an object of 5 kg mass at 10 m s^{-2} and F_2 force to accelerate an object of 10 kg mass at 12 m s^{-2} , then which of the following statements is true?

- Ans
- 1. $F_2 > F_1$
 - 2. $F_1 = F_2$
 - 3. $F_2 = -2 \times F_1$
 - 4. $F_1 > F_2$

Q.7 A, B, C alone can do a piece of work in 9, 12 and 18 days, respectively. They all started the work together, but A left after 3 days. In how many days was the remaining work completed?

- Ans
- 1. $\frac{11}{4}$
 - 2. $\frac{5}{2}$
 - 3. 2
 - 4. $\frac{9}{5}$

Q.8 A pipe can fill a tank in 12 hours. Another pipe can empty the filled tank in 28 hours. If both the pipes are opened simultaneously, then the time (in hours) in which the tank will be one-third filled, is:

- Ans
- 1. 14
 - 2. 21
 - 3. 28
 - 4. 7

Q.9 Gas to liquid and liquid to solid conversion is:

- Ans
- 1. condensation and solidification respectively
 - 2. fusion and vaporisation respectively
 - 3. solidification and condensation respectively
 - 4. sublimation and fusion respectively

Q.10 Which of the following statements about the reaction of a non-metallic oxide with a base is/are correct?

Statement I: The reaction of non-metallic oxide with base produces salt and water.

Statement II: Non-metallic oxides are acidic in nature.

- Ans
- 1. Only statement I is correct.
 - 2. Both statements I and II are correct.
 - 3. Neither statement I nor II is correct.
 - 4. Only statement II is correct.

Q.11

Ans

1. Father's brother
2. Mother's father
3. Mother's brother
4. Father's father

Q.12 In a certain code language, 'WHELP' is coded as '24681' and 'HELPS' is coded as '12674'. What is the code for 'W' in the given code language?

Ans

1. 1
2. 4
3. 2
4. 8

Q.13 Select the set in which the numbers are related in the same way as are the numbers of the following sets.
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)
(4, 12, 48)
(7, 21, 84)

Ans

1. (5, 45, 180)
2. (15, 45, 180)
3. (15, 45, 170)
4. (15, 25, 180)

Q.14 Which of the following statements is correct?

Ans

1. At maturity, the rate of general body growth in humans begins to get faster.
2. In sexual mode of reproduction, germ-cells from one individual have to join together.
3. At maturity, the rate of general body growth in humans begins to slow down.
4. At maturity, the reproductive tissue stops to mature in humans.

Q.15 What is the energy currency for most cellular processes?

Ans

1. ATP
2. NAD
3. DNA
4. RNA

Q.16

- Ans
- 1. Only conclusion I follows
 - 2. Neither conclusion I nor II follows
 - 3. Only conclusion II follows
 - 4. Both conclusions I and II follow

Q.17 Which of the following options should come in place of the question mark (?) in the given series to make it logically complete?
194, 249, 199, 244, 204,?

- Ans
- 1. 239
 - 2. 219
 - 3. 224
 - 4. 234

Q.18 What was India’s rank out of 127 countries in the 2024 Global Hunger Index released in October 2024?

- Ans
- 1. 99
 - 2. 111
 - 3. 97
 - 4. 105

Q.19 Protein digesting enzyme pepsin is secreted in the:

- Ans
- 1. duodenum
 - 2. ileum
 - 3. stomach
 - 4. mouth

Q.20 To promote the dialogue of traditions, national values and cultures, India participated in the BRICS Literature Forum 2024 in _____.

- Ans
- 1. Bhutan
 - 2. Russia
 - 3. China
 - 4. Nepal

Q.21

Ans

- 1. Neither I nor II is a possible reason
- 2. Only II is a possible reason
- 3. Both I and II are possible reasons
- 4. Only I is a possible reason

Q.22

When a more reactive metal is placed in a salt solution containing a less reactive metal, it replaces the less reactive metal. This reaction is known as _____.

Ans

- 1. Neutralisation reaction
- 2. Combination reaction
- 3. Decomposition reaction
- 4. Displacement reaction

Q.23

The cost of 2 tables and 3 chairs is ₹540, while that of 2 tables and 1 chair is ₹470. What is the cost of 35 chairs?

Ans

- 1. ₹1,185
- 2. ₹1,205
- 3. ₹1,245
- 4. ₹1,225

Q.24

A porter lifts a luggage weighing 10 kg from the ground and puts it on his head 1 m above the ground. Then the work done by him on the luggage (g is acceleration due to gravity in SI unit) is _____.

Ans

- 1. 20g J
- 2. 15g J
- 3. 10g J
- 4. 18g J

Q.25

In January 2024, what significant milestone did the Indian Air Force (IAF) achieve in terms of landing operations?

Ans

- 1. First successful night landing at the Kargil airfield with a C-130J Super Hercules
- 2. First deployment of the Garud Special Forces using a C-130J Super Hercules
- 3. First operation of a C-130J Super Hercules at the world's highest airstrip
- 4. First landing of a C-130J Super Hercules aircraft at Daulat Beg Oldie

Q.26

- Ans
1. 225, 35
 2. 189, 31
 3. 243, 27
 4. 171, 18

Q.27 Which of the following statements is/are correct?

- A) Zinc and lead are more reactive elements than copper.
B) Zinc and lead are less reactive elements than copper.
C) An iron nail become yellow in colour when it is dipped in the copper sulphate solutions.

- Ans
1. Only A and C
 2. Only A
 3. Only C
 4. Only A and B

Q.28 Convex mirrors are fitted on the sides of vehicles because they always give _____.

- Ans
1. a real image
 2. an erect and an enlarged image
 3. a narrower field of the view
 4. an erect and diminished image

Q.29 If the focal length of a lens is -25 cm, the power of the lens will be:

- Ans
1. -0.04 D
 2. $+4$ D
 3. -4 D
 4. $+0.04$ D

Q.30 Which team of Indian Space Research Organisation (ISRO) won the Vigyan Team award in 2024?

- Ans
1. Chandrayaan-3 Team
 2. Chandrayaan-2 Team
 3. Aditya-L1 Team
 4. XPoSat Team

Q.31 In which of the pairs of the following numbers is none of the two numbers a prime number, but the two numbers are co-primes?

- Ans
1. (11, 17)
 2. (19, 27)
 3. (8, 25)
 4. (21, 35)

Q.32

- Ans
- 1.
 - 2. 8 cm
 - 3. 12 cm
 - 4. 5 cm

Q.33 Using the empirical relation between the mean, median and mode, find the value of the mode if the median is 30 and mean is 25.

- Ans
- 1. 40
 - 2. 60
 - 3. 50
 - 4. 30

Q.34 The value of $\frac{\sin^2 48^\circ + \sin^2 42^\circ}{\tan^2 40^\circ - \operatorname{cosec}^2 50^\circ}$ is:

- Ans
- 1. 1
 - 2. 0
 - 3. -1
 - 4. 2

Q.35 If 50 is subtracted from 60% of a number, then the result is 40. 60% of the same number is:

- Ans
- 1. 90
 - 2. 120
 - 3. 150
 - 4. 60

Q.36 Manju ranked 17th from the bottom and 8th from the top in his class. How many students are there in his class?

- Ans
- 1. 25
 - 2. 24
 - 3. 23
 - 4. 22

Q.37 Study the following table and answer the question.
Number of candidates appeared and qualified in a competitive examination from different states over the years.

State	Year			
	2020		2021	
	Appeared	Qualified	Appeared	Qualified
A	500	100	600	150
B	600	200	800	250
C	400	50	500	100
D	300	60	400	80

For which state did the percentage of students qualified did NOT change from 2020 to 2021?

- Ans
- 1. D
 - 2. C
 - 3. A
 - 4. B

Q.38

Ans

1. Catenation
2. Polymerisation
3. Cyclisation
4. Metallic bonding

Q.39 Which of the following statements is true?

Ans

1. The weight of an object is the power with which it is attracted towards the earth.
2. The mass of an object is constant and does not change from place to place.
3. The weight is equal to the product of velocity and acceleration due to gravity.
4. The weight of an object is constant and does not change from place to place.

Q.40 If the mass of a football is 3 kg, then what would be its weight on the earth? (Given, $g = 9.8 \text{ m s}^{-2}$)

Ans

1. 35 N
2. 29.4 N
3. 25 N
4. 30.5 N

Q.41 Sodium or potassium salt of long chain carboxylic acid is known as which of the following?

Ans

1. Both detergent and soap
2. Micelle
3. Soap
4. Detergent

Q.42 A dentist usually uses:

Ans

1. a plano-convex mirror
2. a convex mirror
3. a concave mirror
4. a plane mirror

Q.43 Which of the following is NOT a property of a colloid?

Ans

1. Particles of colloids do not settle down when left undisturbed.
2. Colloids cannot be separated by filtration.
3. Colloid is a heterogeneous mixture.
4. Colloid is a homogeneous mixture.

Q.44 In an ecosystem, physical factors like temperature, rainfall, wind, soil and minerals are:

Ans

1. decomposers
2. abiotic components
- 3.
- 4.

Q.45

- Ans
1. 5 years
 2. 6 years
 3. 4 years
 4. 2 years

Q.46 Who among the following scientists was the first to use a glass prism to discover the spectrum of sunlight?

- Ans
1. Sir Isaac Newton
 2. Albert Einstein
 3. Prof CV Raman
 4. Archimedes

Q.47 If $x + \frac{1}{x} = 6$, then $x^2 + \frac{1}{x^2} = ?$

- Ans
1. 38
 2. 36
 3. 34
 4. 32

Q.48 Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster does not belong to that group ?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster.)

- Ans
1. IPL
 2. ELH
 3. LSP
 4. CJF

Q.49 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

ACY, MOK, YAW, KMI, ?

- Ans
1. WZU
 2. WYU
 3. WZV
 4. WYV

Q.50 Which of the following methods is used for refining impure metals?

- Ans
1. Electrolytic refining
 2. Oiling
 3. Galvanisation
 4. Painting

Q.51

Ans

- 1. $27\sqrt{3}$
- 2. $\frac{9\sqrt{3}}{2}$
- 3. $\frac{9\sqrt{3}}{4}$
- 4. $48\sqrt{3}$

Q.52

The mean proportional between two numbers is given as the positive square root of the product of those two numbers. If 72 is the mean proportional between 18 and y, then the value of y is:

Ans

- 1. 588
- 2. 488
- 3. 388
- 4. 288

Q.53

Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

DJC, YEX, TZS, OUN,?

Ans

- 1. JPM
- 2. JRI
- 3. JRM
- 4. JPI

Q.54

Who among the following has been appointed as the chairperson of the Lokpal in February 2024?

Ans

- 1. Justice Rajiv Shakdher
- 2. Justice Manmohan
- 3. Justice Ajay Manikrao Khanwilkar
- 4. Justice Suresh Kumar Kait

Q.55

The average of the eight numbers is 72. Find the least number if it is $\frac{1}{16}$ of the sum of the numbers.

Ans

- 1. 16
- 2. 18
- 3. 36
- 4. 28

Q.56

24-carat gold is called _____.

Ans

- 1. spongy gold
- 2. impure gold
- 3. pure gold
- 4. wrought gold

Q.57

Ans

- 1.
2. Chlorine gas
3. Hydrogen gas
4. Oxygen gas

Q.58

If an object is placed in front of a concave mirror at a distance of 20 cm and the image is formed on the same side at a distance of 40 cm, then the magnification of the mirror will be:

Ans

1. +0.4
2. +2.0
3. -0.4
4. -2.0

Q.59

The number of prime numbers lying between 400 and 430 is:

Ans

1. 6
2. 5
3. 4
4. 3

Q.60

In a certain code language, 'FIRE' is coded as '3718' and 'FARE' is coded as '1438'. What is the code for 'A' in the given code language?

Ans

1. 4
2. 8
3. 3
4. 1

Q.61

The kinetic energy of a moving body of mass 'm' and velocity 'v' is _____.

Ans

1. inversely proportional to its mass and square of its velocity
2. directly proportional to its mass but inversely proportional to its velocity
3. directly proportional to its velocity but inversely proportional to its mass
4. directly proportional to its mass and square of its velocity

Q.62

What will come in the place of '?' in the following equation, if '+' and '÷' are interchanged and '×' and '-' are interchanged?

$$27 \div 14 \times 21 + 3 - 4 = ?$$

Ans

1. 16
2. 10
3. 13
4. 15

Q.63

A dishonest shopkeeper pretends to sell his goods at cost price, but uses a false weights and gains $11\frac{1}{9}\%$. For a weight of a kg, he uses:

Ans

1. 900 gm weight
2. 950 gm weight
3. 850 gm weight
- 4.

Q.64

- Ans
- 1. DI – FK
 - 2. TY – VA
 - 3. XB – YC
 - 4. BG – DI

Q.65 Which of the following is NOT a sign of sexual maturity in girls?

- Ans
- 1. Cracking of voice
 - 2. Increase in breast size
 - 3. Menstruation
 - 4. Oily skin

Q.66 The value of a machine depreciates at the rate of 10% per annum. If its present value is ₹1,62,000, then what was the value of the machine 2 years ago?

- Ans
- 1. ₹2,00,000
 - 2. ₹2,04,000
 - 3. ₹1,90,000
 - 4. ₹1,86,000

Q.67 MPLO is related to RUQT in a certain way based on the English alphabetical order. In the same way, ILHK is related to NQMP. To which of the following options is FIEH related, following the same logic?

- Ans
- 1. NKMJ
 - 2. KNMJ
 - 3. KNJM
 - 4. NKJM

Q.68 What is the process by which autotrophs take in substance from outside and in the presence of sunlight, convert them into stored forms of energy?

- Ans
- 1. Photosynthesis
 - 2. Circulation
 - 3. Movement
 - 4. Digestion

Q.69 In how many years will a sum of ₹12,000 become ₹14,520 at a rate of 10% per annum on compound interest, compounded annually?

- Ans
- 1. 5
 - 2. 2
 - 3. 4
 - 4. 3

Q.70 The Union Finance Minister, on 9 November 2024, inaugurated Nari Shakti Branches of which of the following banks in Bengaluru, Chennai, Visakhapatnam, and Jaipur?

- Ans
- 1. Canara Bank
 - 2. Union Bank of India
 - 3. State Bank of India
 - 4. Bank of Baroda

Q.71 How much prize money was announced by the BCCI for the men’s T20 cricket World Cup 2024 winner team?

- Ans**
- 1. ₹100 crore
 - 2. ₹50 crore
 - 3. ₹150 crore
 - 4. ₹125 crore

Q.72 A single discount equivalent to successive discounts of 40% and 20% is:

- Ans**
- 1. 55%
 - 2. 60%
 - 3. 52%
 - 4. 50%

Q.73 50 men took a dip in a water tank 40 m long and 20 m broad on a religious day. If the average displacement of water by a man is 4 m³, then the rise in the water level in the tank will be:

- Ans**
- 1. 35 cm
 - 2. 20 cm
 - 3. 50 cm
 - 4. 25 cm

Q.74 TQSO is related to MJLH in a certain way based on the English alphabetical order. In the same way, VSUQ is related to OLNJ. To which of the following options is ROQM related, following the same logic ?

- Ans**
- 1. HKJF
 - 2. HKFJ
 - 3. KHFJ
 - 4. KHJF

Q.75 Refer to the given series and answer the question that follows (all numbers are single-digit numbers only, and all counting is to be done from left to right).

(Left) 5 6 5 8 6 4 9 5 2 2 4 4 9 3 0 7 5 7 2 9 9 8 8 1 9 1 3 7 2 5 (Right)

How many such odd digits are there, each of which is immediately preceded by an even digit and also immediately followed by an even digit?

- Ans**
- 1. 3
 - 2. 0
 - 3. 4
 - 4. 1

Q.76 A body of mass m and a body of mass 4m are dropped from the same height, the ratio of the time taken by the two bodies to reach the ground would be:

(Air resistance is neglected)

- Ans**
- 1. 4:1
 - 2. 1:4
 - 3. 1:1
 - 4. 1:2

Q.77

- Ans
1. Neither conclusion (I) nor (II) follows
 2. Both conclusions (I) and (II) follow
 3. Only conclusion (II) follows
 4. Only conclusion (I) follows

Q.78 The upward and downward growth of a plant is due to which of the following tropisms?

- Ans
1. Geotropism
 2. Phototropism
 3. Hydrotropism
 4. Chemotropism

Q.79 Express the speed of 25 m/s in km/h.

- Ans
1. 50 km/h
 2. 90 km/h
 3. 15 km/h
 4. 99 km/h

Q.80 Which of the following metals reacts with cold water?

- Ans
1. Zinc
 2. Iron
 3. Aluminium
 4. Sodium

Q.81 Gastric glands present in the wall of the stomach do NOT release:

- Ans
1. hydrochloric acid
 2. mucus
 3. saliva
 4. pepsin

Q.82 If 'A' stands for '+', 'B' stands for '×', 'C' stands for '+', and 'D' stands for '−', then the resultant of which of the following would be 99?

- Ans
1. 28 C 39 B 3 D 12 A 7
 2. 28 B 39 C 3 A 12 D 7
 - 3.
 - 4.

Q.83

- Ans
- 1. TXV
 - 2. OSP
 - 3. JNK
 - 4. EIF

Q.84 Which of the following is produced when acid reacts with metals?

- Ans
- 1. Only Salt
 - 2. Salt and water
 - 3. Only Hydrogen gas
 - 4. Salt and hydrogen gas

Q.85 ₹ 2,000 is divided between A and B such that half of A's part and one-third of B's part are equal. What is B's part (in ₹)?

- Ans
- 1. 1,200
 - 2. 800
 - 3. 1,000
 - 4. 600

Q.86 Which of the following is NOT a role played by NITI Aayog in the localisation of SDGs in India?

- Ans
- 1. Benchmarking states based on SDG performance metrics
 - 2. Preparing the National Indicator Framework (NIF)
 - 3. Serving as a platform for collaboration among states
 - 4. Fostering competitive federalism among states and UTs

Q.87 If the power of a lens is +1 Dioptre, then the focal length of the lens will be:

- Ans
- 1. 0.5 m
 - 2. 0.25 m
 - 3. 1 m
 - 4. 0.75 m

Q.88 Seven people, A, B, C, L, X, Y and Z are sitting in a row, facing north. Only three people sit between B and L. C sits to the immediate left of L. No one sits to the right of Y. Only two people sit between Y and C. Z sits to the immediate right of A. How many people sit between X and Z?

- Ans
- 1. Two
 - 2. Three
 - 3. Four
 - 4. One

Q.89

Ans

- 1. $\frac{40}{7} \Omega$
- 2. $\frac{20}{7} \Omega$
- 3. 35Ω
- 4. 20Ω

Q.90 The HCF of 240, 360 and 480 is:

Ans

- 1. 160
- 2. 360
- 3. 480
- 4. 120

Q.91 Who among the following was appointed Indian men’s cricket team’s full time T20 international captain in July 2024?

Ans

- 1. Ravindra Jadeja
- 2. Shubman Gill
- 3. Suryakumar Yadav
- 4. Hardik Pandya

Q.92 Refer to the given number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 5 % 4 6 @ 8 S 7 & 3 Ω 9 2 % # 1 * £ 5 (Right)

How many such symbols are there, each of which is immediately preceded by an odd number and also immediately followed by an odd number?

Ans

- 1. More than two
- 2. None
- 3. Two
- 4. One

Q.93 All activities inside the cell and interactions of the cell with its environment are possible due to three important features observed in almost every cell. Which are the three features?

Ans

- 1. Mitochondria, nucleus and cytoplasm
- 2. Mitochondria, nucleus and Golgi apparatus
- 3. Plasma membrane, nucleus and cytoplasm
- 4. Plasma membrane, nucleus and Golgi apparatus

Q.94 The value of $[(10)^{150} \div (10)^{146}]$ is:

Ans

- 1. 10000
- 2. 10^6
- 3. 10^5
- 4. 1000

Q.95

Ans

- 1. It has a single chromosome.
- 2. Nuclear region is well defined and surrounded by nuclear membrane.
- 3. Membrane bound cell organelles are present.
- 4. It has more than one chromosome.

Q.96 Read the given statements and select the correct option.

Statement I: Sarvepalli Radhakrishnan and C Rajagopalachari were the first recipients of the Bharat Ratna.

Statements II: Sachin Tendulkar was the first and only cricketer awarded with Bharat Ratna till 2024.

Ans

- 1. Both statement I and statement II are correct.
- 2. Statement I is incorrect, while statement II is correct.
- 3. Both statement I and statement II are incorrect.
- 4. Statement I is correct, while statement II is incorrect.

Q.97 Besides products of photosynthesis, which of the following substances are transported by the phloem in plants?

Ans

- 1. Only Sucrose
- 2. Only Water
- 3. Both amino acids and sucrose
- 4. Only Amino acids

Q.98 The rigid outer covering present outside the plasma membrane in plants is called the:

Ans

- 1. nuclear membrane
- 2. cell wall
- 3. selectively permeable membrane
- 4. cell envelope

Q.99 Match the class of organic compounds (Column I) with the suffix used (Column II).

	Column I		Column II
(i)	Ketone	(a)	-al (-CHO)
(ii)	Alkene	(b)	-one (-C=O)
(iii)	Aldehyde	(c)	-ene (-C=C-)
(iv)	Carboxylic acid	(d)	-oic acid (-COOH)

Ans

- 1. (i)-(b); (ii)-(c); (iii)-(a); (iv)-(d)
- 2. (i)-(b); (ii)-(c); (iii)-(d); (iv)-(a)
- 3. (i)-(c); (ii)-(d); (iii)-(b); (iv)-(a)
- 4. (i)-(c); (ii)-(b); (iii)-(a); (iv)-(d)

Q.100

Ans

1. Decomposer
2. primary consumer
3. secondary consumer
4. producer

2024/12/30-09:29:07