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Vedic Mathematics

The Railway Group D exam typically consists of 100 questions covering four main subjects: Mathematics, General Intelligence & Reasoning, General Science, and General Awareness & Current Affairs. Here's a sample set of 100 questions, reflecting the typical difficulty and topics found in the exam.

Please note: This is a sample set, and actual exam questions may vary. It's highly recommended to practice with previous year's papers and comprehensive study materials.

I. General Science (25 Questions)

Physics

1. Which of the following is a scalar quantity?
a) Velocity b) Force
c) Acceleration d) Speed

2. What is the SI unit of power?
a) Joule b) Watt
c) Newton d) Pascal

3. According to Newton's First Law of Motion, an object at rest tends to stay at rest and an object in motion tends to stay in motion with the same speed and in the same direction unless acted upon by an unbalanced force. This law is also known as:
a) Law of Conservation of Momentum
b) Law of Inertia
c) Law of Action-Reaction
d) Law of Gravitation

4. The phenomenon responsible for the twinkling of stars is:
a) Reflection of light
b) Dispersion of light
c) Atmospheric refraction of light
d) Scattering of light

5. Which type of mirror is used as a rear-view mirror in vehicles?
a) Concave mirror b) Plane mirror
c) Convex mirror d) Cylindrical mirror

6. What is the formula for calculating work done?
a) Work = Force / Displacement
b) Work = Force × Displacement
c) Work = Mass × Acceleration
d) Work = Power × Time

7. Sound waves are an example of which type of waves?
a) Transverse waves
b) Electromagnetic waves
c) Longitudinal waves
d) Standing waves

8. The SI unit of electric current is:
a) Volt b) Ohm
c) Ampere d) Watt

9. Which of the following materials is a good conductor of electricity?
a) Wood b) Glass
c) Copper d) Rubber

10. What is the principle behind the working of a hydraulic lift?
a) Archimedes' Principle
b) Bernoulli's Principle
c) Pascal's Principle
d) Newton's Third Law

Chemistry

1. Which of the following is considered a universal solvent?
a) Alcohol b) Benzene
c) Water d) Acetone

2. What is the chemical symbol for Sodium?
a) So b) Na
c) Sd d) Sm

3. The gas responsible for the depletion of the ozone layer is primarily:
a) Carbon dioxide
b) Methane
c) Chlorofluorocarbons (CFCs)

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d) Oxygen

4. Which acid is commonly found in lemons and oranges?
a) Acetic acid b) Lactic acid
c) Citric acid d) Sulfuric acid

5. What is the process by which a solid directly changes into a gas without passing through a liquid state?
a) Evaporation b) Condensation
c) Sublimation d) Melting

6. The main component of natural gas is:
a) Butane b) Propane
c) Methane d) Ethane

7. Which of the following elements is a metalloid?
a) Iron b) Silicon
c) Gold d) Oxygen

8. The rusting of iron is an example of:
a) Oxidation b) Reduction
c) Neutralization d) Decomposition

9. What is the pH value of a neutral solution?
a) Less than 7 b) Equal to 7
c) Greater than 7 d) Between 0 and 1

10. The hardest natural substance known is:
a) Iron b) Gold
c) Graphite d) Diamond

Biology

1. Which of the following is known as the "powerhouse of the cell"?
a) Nucleus b) Mitochondria
c) Ribosome d) Cytoplasm

2. What is the primary function of red blood cells (RBCs)?
a) Fighting infection
b) Clotting blood
c) Transporting oxygen
d) Producing antibodies

3. Which part of the plant absorbs water and minerals from the soil?
a) Stem b) Leaves
c) Roots d) Flowers

4. The process by which green plants make their own food using sunlight is called:
a) Respiration b) Transpiration
c) Photosynthesis d) Fermentation

5. Which of the following diseases is caused by a virus?
a) Tuberculosis b) Cholera
c) Common Cold d) Typhoid

6. The functional unit of heredity is:
a) Chromosome b) Gene
c) DNA d) Nucleotide

7. What is the largest organ in the human body?
a) Brain b) Heart
c) Liver d) Skin

8. Which gas is essential for respiration in living organisms?
a) Carbon dioxide b) Nitrogen
c) Oxygen d) Hydrogen

9. The deficiency of which vitamin leads to night blindness?
a) Vitamin C b) Vitamin D
c) Vitamin A d) Vitamin B12

10. Which of the following is a cold-blooded animal?
a) Human b) Bird
c) Snake d) Cow

II. Mathematics (25 Questions)

1) $\frac{2}{2+\frac{2}{3+\frac{2}{3+\frac{2}{3}}\times 0.39}}$ is simplified to :
a) None of these b) 6
c) 2 d) $\frac{1}{3}$

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2) The value of $(\sqrt{4^3 + 15^2})^3$ is :
a) 3943 b) 4913
c) 4193 d) 4313

3) $(5.5)^3 - (4.5)^3$ is equal to :
a) 75.25 b) 1
c)74.25 d)75

4) $\frac{(3.63)^2-(2.37)^2}{3.63+2.37}$ is simplified to
a) 1.36 b) 2.26
c) 6 d) 1.26

5) The value of 25 - 5 [2 + 3 (2 - 2 (5 - 3) + 5) - 10] ÷ 4 is
a) 25 b) 5
c) 23.75 d) 23.25

6) $\frac{9}{20} - \left[\frac{1}{5} + \left(\frac{1}{4} + \left(\frac{5}{6} - \frac{1}{3} + \frac{1}{2}\right)\right)\right]$ is equal to
a) $\frac{9}{10}$ b) 0
c) $\frac{9}{20}$ d) 1

7) $\frac{1}{30} + \frac{1}{42} + \frac{1}{56} + \frac{1}{72} + \frac{1}{90} + \frac{1}{110} = ?$
a) $\frac{6}{55}$ b) $\sqrt{2}\frac{2}{27}$
c) $\frac{5}{27}$ d) $\frac{1}{9}$

8) The greatest number among 3^{50}, 4^{40}, 5^{30} and 6^{20} is :
a) 5^{30} b) 4^{40}
c) 3^{50} d) 6^{20}

9) Which of the following number is the least? $(0.5)^2$, $\sqrt{0.49}$, $\sqrt[3]{0.008}$, 0.23
a) $\sqrt[3]{0.008}$ b) $(0.5)^2$
C) $\sqrt{0.49}$ d) , 0.23

10) Given that $\sqrt{3} = 1.732$, the value of $\frac{3+\sqrt{6}}{5\sqrt{3}-2\sqrt{12}-\sqrt{32}+\sqrt{50}}$ is :
a) 1.732 b) 1.414
c) 4.899 d) 2.551

11) The H.C.F. of two numbers is 96 and their L.C.M. is 1296. If one of the number is 864, the other is
a) 132 b) 135
c) 140 d) 144

12) A number between 1000 and 2000 which when divided by 30, 36 and 80 gives a remainder 11 in each case is
a) 1451 b) 1712
c) 1641 d) 1523

13) Six friends have an average height of 167 cms. A boy with height 162 cm leaves the group. Find the new average height.
a) 169 cm b) 167 cm
c) 166 cm d) 168 cm

14) The average of 1, 3, 5, 7, 9, 11, -------- to 25 terms is
a) 625 b) 50
c) 25 d) 125

15) In a big garden 60% of the trees are coconut trees, 25% of the number of coconut trees are mango trees and 20% of the number of mango trees are apple trees. If the number of apple trees are 1500, then the number of trees in the garden is :
a) 51000 b) 45000
c) 48000 d) 50000

16) Half of 1 per cent, written as a decimal, is
a) 0.005 b) 0.05
c) 0.2 d) 0.02

17) Nisha bought a number of oranges at 2 for a rupee and an equal number at 3 for a rupee. To make a profit of 20% she should sell a dozen for
a) Rs.10 b) Rs.8
c) Rs.6 d) Rs.12

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18) By selling a car for Rs.64,000, Mr. Rao lost 20%. Then the cost price of the car is :
a) Rs.80, 000 b) Rs.76, 800
c) Rs.72, 000 d) Rs.84, 000

19) A lent Rs.5000 to B for 2 years and Rs.3000 to C for 4 years on simple interest at the same rate of interest and received Rs.2200 in all from both as interest. The rate of interest per annum is
a) 5% b) 7%
c) 10% d) $7\frac{1}{8}\%$

20) The time in which Rs.80, 000 amounts to Rs.92,610 at 10% p.a. compound interest, interest being compounded semiannually is :
a) 3 years b) $1\frac{1}{2}$ years
c) $2\frac{1}{2}$ years d) 2 years

21) At what rate per cent per annum will a sum of Rs.1, 000 amounts to Rs.1, 102.50 in 2 years at compound interest ?
a) 6.5% b) 5%
c) 6% d) 5.5%

22) A alone can complete a work in 12 days. A and B together can complete it in 8 days. How long will B alone take to complete the work ?
a) 20 days b) 16 days
c) 24 days d) 18 days

23) Two pipes can fill a cistern separately in 10 hours and 15 hours. They can together fill the cistern in
a) 9 hours b) 6 hours
c) 7 hours d) 8 hours

24) A train starts from a place A at 6 a.m. and arrives at another place B at 4.30 p.m. on the same day. If the speed of the train is 40 km per hour, find the distance travelled by the train ?
a) 400 km b) 320 km
c) 230 km d) 420 km

25) A moving train passes a platform 50 metres long in 14 seconds and a lamp-post in 10 seconds. The speed of the train is
a) 36 km/hr. b) 40 km/hr.
c) 45 km/hr. d) 24 km/hr.

III. Reasoning 30 Questions

Series & Pattern Completion

1. Find the missing number in the series: 1, 8, 27, ?, 125, 216
a) 36 b) 49
c) 64 d) 81

2. Find the next term in the series: 7, 14, 28, 56, ?
a) 102 b) 110
c) 112 d) 114

3. Complete the alphabetical series: B, D, G, K, P, ?
a) U b) V
c) W d) X

4. Identify the missing number in the sequence: 100, 95, 85, 70, ?, 25
a) 50 b) 55
c) 60 d) 65

5. Which group of letters completes the pattern?
AZ, BY, CX, DW, ?
a) EV b) FV
c) EU d) FE

Coding-Decoding - 2

6. In a certain code language, if "ORANGE" is coded as "SPBHMF", how is "APPLE" coded in that language?
a) BQQMF b) BQQPM
c) BQQME d) BQQLF

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7. If "WATER" is coded as "XBUFS", then how will "FIRE" be coded?
a) GJSF b) GJRF
c) HGSR d) GJSE

8. In a certain code, "RAIN" is written as "TCKP". How is "CLOUD" written in that code?
a) ENQWF b) EQNWF
c) EOQWG d) ENQWE

9. If "MUMBAI" is coded as "LTLAZH", then how is "DELHI" coded?
a) CDKGH b) CCKGH
c) CDLFG d) EFMHI

10. How many numbers of triangle

a) 1 b) 2
c) 4 d) 3

11) NEEDLE is related to SEWING in the same way as SCISSORS is related to
a) EATING b) TAILORING
c) CUTTING d) SLICING

12) SODIUM is related to SALT in the same way as OXYGEN is related to
a) HYDROGEN b) CHEMISTRY
c) SUGAR d) WATER

13) LINE is related to SQUARE in the same way as ARC is related to
a) RING b) BALL
c) CIRCLE d) SPHERE

14) DRAMA is related to DIRECTOR in the same way as MAGAZINE is related to
a) SPONSOR b) PLAYWRIGHT
c) EDITOR d) OWNER

15) TREE is related to FOREST in the same way as SOLIDIER is related to
a) BATTLE b) ARMY
c) GUN d) GENERAL

16. If – stands for stands for ÷, + stands for x, ÷ stands for – and x stands for +. find out which one is correct.
(1) 49 x 7+ 3 + 5 ÷ 8 = 16
(2) 49 ÷ 7 x 3 +5 – 8 = 26
(3) 49 + 7 – 3 x 5 ÷ 8 = 20
(4) 49 – 7 + 3 ÷ 5 x 8 = 24

Directions: (17 – 19) Four words have been given out of which three are alike in some manner and one is different. Select the odd word.

17)
(A) Kilometer (B) Meter
(C) Centimeter (D) Liter

18)
(A) Gold (B) Silver
(C) Copper (D) Plastic

19)
(A) Bengaluru (B) Mumbai
(C) Chennai (D) Delhi

20) In a row of 68 students. Piyush is 39th from left end. What is his position from right end?
a) 30 b) 31 c) 29
d) 34 e) None of these

21) Statements:
All pens are pencils.
Some pencils are erasers.
Conclusions:

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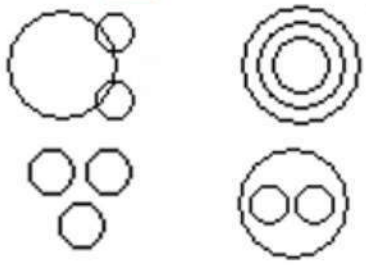
I. Some pens are erasers.
II. No pen is an eraser.

22) Statements:
Some books are papers.
All papers are notes.
Conclusions:
I. Some books are notes.
II. All notes are books.

23) Statements:
No fruit is a vegetable.
All vegetables are healthy.
Conclusions:
I. No fruit is healthy.
II. Some healthy things are not fruits.

24) Which of the following diagrams indicates the best relation between Factory, Product and Machinery ?



Directions : Two statements are given followed by two conclusions I and II. you have to consider the two statements to be at variance form commonly known facts. You have to decide which one of the given conclusions are definitely drawn from the given statements

25. Statements:
Some peons are poor,
X is poor,
Conclusions:
I. X is a peon.
II. X has a large family.
(1) Only I follow
(2) Only II follows
(3) Both I & II follow
(4) Neither I nor II follows

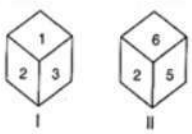
26)
1. Independence day
2. Christmas
3. Diwali
4. Holi
5. Republic day

a) 5 – 4 – 1 – 3 – 2
b) 5 – 1 – 4 – 3 – 2
c) 4 – 1 – 5 – 3 – 2
d) 2 – 3 – 4 – 1 – 5

27) A man walks 5 km toward south and then turns to the right. After walking 3 km he turns to the left and walks 5 km. Now in which direction is he from the starting place?
A. West B. South
C. North-East D. South-West

28) A man said to a woman, "Your husband's daughter is the daughter of my brother". How is the man related to the woman's daughter?
(a) Mother's brother (b) Brother
(c) Father's brother (d) Father

29) Where is the invisible number in the two positions of the same cube?



(a) Opposite of 2 (b) Opposite of 3
(c) Opposite of 4 (d) Opposite of 6

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30) An accurate clock shows 8 o'clock in the morning. Through how may degrees will the hour hand rotate when the clock shows 2 o'clock in the afternoon?
a) 144° b) 150°
c) 168° d) 180°

IV. General Awareness (20 Questions)

Indian History

1. Who founded the Mauryan Empire in ancient India?
(A) Ashoka
(B) Bindusara
(C) Chandragupta Maurya
(D) Samudragupta

2. The Battle of Plassey, a significant event in Indian history, was fought in which year?
(A) 1757 (B) 1764
(C) 1526 (D) 1857

Indian Geography

3. Which of the following is the longest river in India that flows entirely within Indian territory?
(A) Brahmaputra (B) Indus
(C) Godavari (D) Ganga

4. The Western Ghats are an important mountain range along the western coast of India. What is another name for them?
(A) Purvanchal Range
(B) Aravalli Range
(C) Sahyadri Range
(D) Eastern Ghats

Indian Polity & Constitution

5. How many schedules are there in the Constitution of India?
(A) 10 (B) 12
(C) 14 (D) 8

6. Who is known as the "Father of the Indian Constitution"?
(A) Mahatma Gandhi
(B) Jawaharlal Nehru
(C) Sardar Vallabhbhai Patel
(D) Dr. B.R. Ambedkar

Indian Economy

7. What is the primary purpose of the Reserve Bank of India (RBI)?
(A) To manage public sector banks
(B) To act as a central bank for the government and commercial banks
(C) To promote agricultural development
(D) To regulate stock markets

8. Which of the following is an example of a 'service sector' activity in the Indian economy?
(A) Agriculture (B) Manufacturing
(C) Fishing (D) Banking

Current Affairs

9. Recently, Indian Railways has successfully trialled India's first hydrogen-powered train at Integral Coach Factory located at which place?
A. New Delhi B. Gurugram
C. Jaipur D. Chennai

10. Recently, Indian Army and Singapore Armed Forces have started joint military exercise 'Bold Kurukshetra 2025' at which place?
A. Jodhpur B. Kolkata
C. Panipat D. New Delhi

11. Recently, which country has announced to give free visa to 40 countries to promote tourism?
A. Bhutan B. Nepal
C. Sri Lanka D. Pakistan

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12. According to a recent SBI Research report, which state is at the top in the country with 13.2% active GST taxpayers?
A. Bihar B. Karnataka
C. Maharashtra D. Uttar Pradesh

13. Recently, the Indian Air Force has announced to retire the last MiG-21 jet after 62 years of service by when?
A. August, 2025
B. September, 2025
C. October, 2025
D. November, 2025

14. Recently, Saral Utsav, 2025 was celebrated as a monsoon festival in which state?
A. Kerala B. Karnataka
C. Odisha D. Tamil Nadu

Current Affairs / Static GK

16. Which is the longest river in India?
A) Ganga B) Yamuna
C) Godavari D) Brahmaputra

16. Where is the 'Gateway of India' located?
A) Delhi B) Mumbai
C) Chennai D) Kolkata

17. Who was the first President of independent India?
A) Dr. B.R. Ambedkar
B) Mahatma Gandhi
C) Dr. Rajendra Prasad
D) Jawaharlal Nehru

18. In which year did India become a Republic?
A) 1947 B) 1949
C) 1950 D) 1952

19. Which city is known as the "Pink City" of India?
A) Jaipur B) Udaipur
C) Jodhpur D) Bikaner

20. Who wrote the national anthem of India, 'Jana Gana Mana'?
A) Bankim Chandra Chatterjee
B) Rabindranath Tagore
C) Subhash Chandra Bose
D) Sarojini Naidu

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