



SAMVAAD ENTRANCE EXAMINATION

Class – IX

Subject : Reasoning

Q1. In a certain code “MAD” is written as “9”. Then how can “GLAD” be written in that code?

- A) 14
- B) 12
- C) 27
- D) 16

Q2. Choose the figure which is different from the rest?



(A)



(B)



(C)



(D)

- A) Figure A
- B) Figure B
- C) Figure C
- D) Figure D

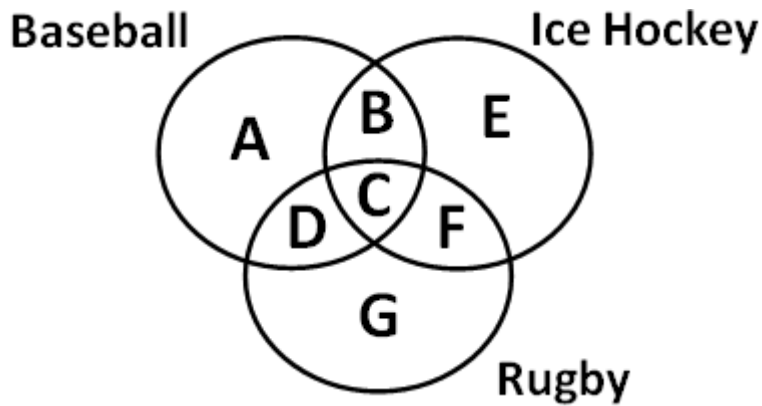
Q3. A is brother of B. M is the mother of A. D and S are brothers. K and B are sisters and K is mother of S. What is the relationship between S and A?

- A) Sister And Brother
- B) Grandson And Grandmother
- C) Nephew And Uncle
- D) Daughter and Mother

Q4. HCl : Red litmus :: NaOH : ?

- A) Blue Litmus
- B) White Litmus
- C) Red Litmus
- D) Brown Litmus

Q5. Which of the region in the following figure represents people who play either Baseball or Ice Hockey but not Rugby?



- A) $A + D + G$
- B) $A + G - D$
- C) $A + E - B$
- D) $B + C$

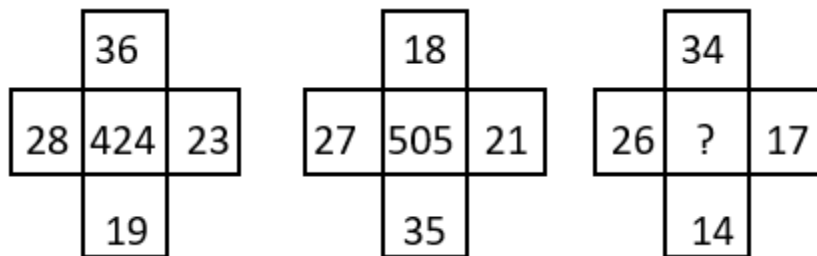
Q6. Identify the wrong number in the series. 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 45?

- A) 8
- B) 45
- C) 20
- D) 34

Q7. A cage had 15 birds. All but seven manages to escape. How many birds remain?

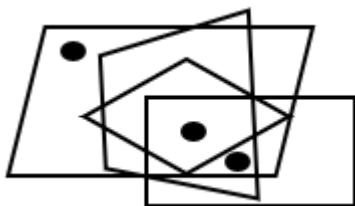
- A) 7
- B) 3
- C) 8
- D) 9

Q8. Find the correct alternative which will replace the question mark?

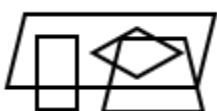


- A) 465
- B) 469
- C) 455
- D) 432

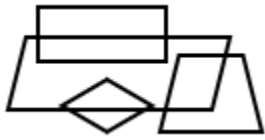
Q9. Identify the figure which satisfies the same condition of placement of dots as in given figure.



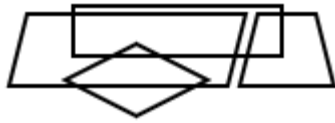
A)



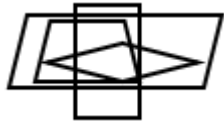
B)



C)



D)



Q10. Find the odd one out.

A) D – P

B) H – N

C) E – M

D) R – X

Subject : Mathematics

Q11. Which of the following statements is not true?

A) Rational number between -2 and 2 is 5.

B) Rational number between -5 and 0 is -1.

C) Rational number between 2 and 4 is 3.

D) Rational number between -3 and 2 is 0.

Q12. What is the additive inverse of $-\frac{3}{8}$?

A) $-\frac{3}{8}$

B) $\frac{3}{8}$

C) $-\frac{8}{3}$

D) $\frac{8}{3}$

Q13. Solve the equation: $\frac{5x - 5}{2x + 1} = 1$

A) $x = -2$

B) $x = 2$

C) $x = \frac{4}{3}$

D) $x = \frac{1}{2}$

Q14. Which of the following is not a linear equation in one variable?

A) $2x = 4.5$

B) $x + 2x = 3$

C) $x - 5y = 1$

D) $\frac{x}{4} + 2x = 2$

Q15. Which of the following quadrilateral has both pair of opposite sides equal?

A) Rectangle

B) Square

- C) Rhombus
- D) All of the above

Q16. Which of the following statements is true about a square?

- A) Opposite sides are equal but not parallel.
- B) Opposite sides are parallel but not equal.
- C) Opposite sides are equal and parallel.
- D) All sides are not equal.

Q17. In a rhombus ABCD, if $\angle B = 40^\circ$, then $\angle D$ is equal to:

- A) 80°
- B) 40°
- C) 140°
- D) 20°

Q18. Which of the following is a not type of data?

- A) Picture
- B) Graphic
- C) Integers
- D) Neither A nor B

Q19. The graphical representation of data in a circle is called.....

- A) Histogram
- B) Parabola
- C) Bar graph
- D) Pie chart

Q20. Probability of getting an odd number, when a die is thrown is-

- A) 0.5
- B) 1
- C) 0
- D) All of the above

Q21. Simplify: $\sqrt{a^2 + 49}$

- A) $a + 7$
- B) $a - 7$
- C) $a^2 + 7$
- D) None of the above

Q22. Which of the following is a not real number?

- A) $\sqrt{100}$
- B) $\sqrt{-1}$
- C) $\sqrt[3]{-1}$
- D) $\sqrt[3]{-8}$

Q23. Simplify: $\sqrt[3]{512x^3}$

- A) $8x$
- B) $6x$

- C) $8\sqrt{x}$
- D) $256x$

Q24. A vessel can hold 5,00 liters of water. If 200 liters of water are already in the cylinder, what percentage of the tank is empty?

- A) 90%
- B) 40%
- C) 60%
- D) 45%

Q25. 9% of 9 is

- A) 0.81
- B) 90
- C) 9.1
- D) 900

Q26. If a table is marked at Rs. 300 and a discount of 30% is given, what is the sale price of the table?

- A) Rs. 210
- B) Rs. 390
- C) Rs. 300
- D) Rs. 270

Q27. What are the value of 'a' in the equation: $a^2 + a - 12 = 0$?

- A) $a = 3$, $a = -4$
- B) $a = 3$, $a = 4$
- C) $a = -4$, $a = -3$
- D) $a = -3$, $a = 4$

Q28. Factorize the expression: $a^2 - 6a + 9$

- A) $(a + 3)(a - 3)$
- B) $(a - 3)(a - 3)$
- C) $(a + 3)(a + 3)$
- D) $(a + 1)(a + 3)$

Q29 Simplify the expression: $(m^2 - 6m + 9) / (m^2 - 9)$

- A) $(m - 3) / (m + 3)$
- B) $(m - 1) / (m^2 - 9)$
- C) $(3m + 3) / (m - 3)$
- D) $(3m - 1) / (m^2 - 9)$

Q30. Factorize the expression: $x^2 + y - xy - x$

- A) $(x - 1)(x - y)$
- B) $x(x - 1)(x + y)$
- C) $(x + 1)(x + y)$
- D) $(x + 1)(x - y)$

Q31. Simplify the expression: $(x^2 - 0.4x + 0.04) / (x - 0.2)^2$

- A) 1

- B) $x - 0.2$
- C) $x + 0.2$
- D) $x^2 - 4x + 4$

Q32. A solid cone has a diameter of 10 cm and a slant height of 13 cm. What is the height of the cone?

- A) 12 cm
- B) 12.1 cm
- C) 12.2 cm
- D) 12.3 cm

Q33. A cube is of side 8cm. What will be the diagonal of this cube?

- A) $8\sqrt{3}$ cm
- B) 512 cm
- C) 2 cm
- D) 8.9 cm

Q34. What is the value of $(-2^3) / (3^{-2})$

- A) 72
- B) -72
- C) 24
- D) -24

Q35. Factorise $x^4 - 1$

- A) $(x^4 - 1)(x^4 + 1)$
- B) $(x^2 - 1)(x^2 + 1)$
- C) $(x - 1)(x^2 + 1)(x + 1)$
- D) $(x^4 - 1)(x^2 + 1)$

Q36. Coordinate of origin are

- A) (0,1)
- B) (0, 0)
- C) (-1, - 1)
- D) (0, 1)

Q37. A group of girls want to share some money equally. If they have Rs. 1500 and there are 12 girls, how much money will each friend get? If 3 more girls join the group, how much money will each girl get now?

- A) Rs. 150, Rs. 120
- B) Rs. 125, Rs. 100
- C) Rs. 120, Rs. 100
- D) Rs. 100, Rs. 80

Q38. Which of the following types of graphs is used to show the proportion of different categories in a whole?

- A) Bar graph
- B) Pie chart
- C) Line graph
- D) Scatter plot

Q39. What is the y-coordinate of the point where the line $2x - y = 5$ intersects the x-axis?

- A) 5
- B) 2
- C) 0
- D) 2.5

Q40. What is the equation of the line that passes through the points $(-1, 4)$?

- A) $y = x + 5$
- B) $y = 2x - 1$
- C) $y = x - 1$
- D) $2y = x + 1$

Subject: Science

Q41. _____ does not include Agricultural practices.

- (A) Irrigation
- (B) Marketing
- (C) Harvesting
- (D) Multiple Cropping

Q42. Calorific value of different fuels is given below.

Fuel	Calorific Value (kJ/kg)
(a) Cow dung cake	(i) 45000
(b) LPG	(ii) 8000
(c) Petrol	(iii) 40000
(d) Bio gas	(iv) 33000
(e) Coal	(v) 55000

What is the correct matching?

- (A) (a) – (ii); (b) – (i); (c) – (v); (d) – (iii); (e) – (iv)
- (B) (a) – (iv); (b) – (v); (c) – (i); (d) – (ii); (e) – (iii)
- (C) (a) – (ii); (b) – (iii); (c) – (iv); (d) – (i); (e) – (v)
- (D) (a) – (ii); (b) – (v); (c) – (i); (d) – (iii); (e) – (iv)

Q43. Which poisonous gas is formed as a result of incomplete combustion?

- (A) Carbon monoxide
- (B) Carbon dioxide
- (C) Sulphur dioxide
- (D) Nitrogen dioxide

Q44. What is the composition of coal gas?

- (A) Hydrogen, Sulphur and Nitrogen
- (B) Hydrogen, Methane and Nitrogen
- (C) Hydrogen, Methane and Carbon monoxide
- (D) Hydrogen, Sulphur and Carbon monoxide

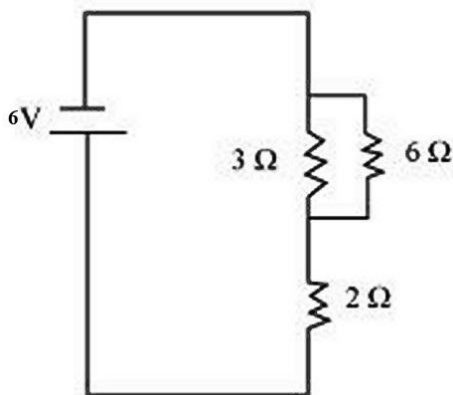
Q45. Which of the following is true about friction?

- (A) Friction is a force that only occurs on rough surfaces.
- (B) Friction is a force that occurs only between solids.
- (C) Friction can only slow things down.
- (D) Friction is a force that only occurs when an object moves.

Q46. Which of the following is not true for convex mirror?

- (A) It forms real and inverted image.
- (B) It forms virtual and erect image.
- (C) Its focal length is positive.
- (D) Image formed by it is always small in size.

Q47. What is the total resistance of the given circuit?



- (A) 6 Ω
- (B) 4 Ω
- (C) 5 Ω
- (D) 2 Ω

Q48. Which of the following statements are incorrect regarding a test tube baby?

- (i) It is developed wholly in a test tube.
- (ii) It is developed through tissue culture method.
- (iii) The ovum is fertilised externally and thereafter implanted in the uterus.
- (iv) It develops from an unfertilised egg.

- (A) (i) and (iv) only
- (B) (ii) and (iv) only
- (C) (i) and (iii) only
- (D) (i), (ii) and (iv) only

Q49. Which of the following organisms undergo metamorphosis?

- | | | | | |
|---------------|------------|------------------|------------|---------------|
| (i) Silk moth | (ii) Snake | (iii) Frog | (iv) Hen | (v) Butterfly |
| (vi) Human | (vii) Cat | (viii) Cockroach | (ix) Whale | (x) Dog |

- (A) (i), (ii), (iii), (v) and (viii) only
- (B) (i), (iii), (v) and (viii) only
- (C) (ii), (iii), (iv) and (v) only
- (D) (iv), (v), (viii) and (ix) only

Q50. A 20 Pa pressure is applied on the head of a nail placed perpendicular to the surface of a wall. If the area of cross-section of the tip of the nail is $\frac{1}{8}$ times the area of cross-section of the head, the pressure exerted at the wall is

- (A) 16 Pa
- (B) 20 Pa
- (C) 160 Pa
- (D) 120 Pa

Q51. Select the incorrect match.

- (A) Irrigation – Dhekli
- (B) Weeding – Harrow
- (C) Tilling – Plough

(D) Harvesting – Trowel

Q52. Read the following statements carefully and identify X, Y and Z.

X : Hard as stone, used to cook food and produce electricity in thermal power plants.

Y : A petroleum product, used for metalling the roads.

Z : A pure form of carbon, used in the manufacturing of steel and in the extraction of many metals.

X

Y

Z

- | | | |
|--------------|--------------|----------|
| (A) Coal | Bitumen | Coke |
| (B) Coal tar | Paraffin wax | Coal |
| (C) Coal tar | Diesel | Coke |
| (D) Coke | Bitumen | Coal tar |

Q53. A species which is at the risk of becoming extinct in the future is known as _____ species.

- (A) Endemic
- (B) Extinct
- (C) Endangered
- (D) Vulnerable

Q54. A body when floats in water, $\frac{1}{3}^{\text{rd}}$ of its volume remains outside water. When it floats in another liquid, $\frac{3}{4}^{\text{th}}$ of its volume remains outside the liquid. Then the density of the liquid is

- (A) $\frac{9}{4} \text{ g/cc}$
- (B) $\frac{8}{3} \text{ g/cc}$
- (C) $\frac{3}{8} \text{ g/cc}$
- (D) $\frac{4}{9} \text{ g/cc}$

Q55. A boy standing in front of a large wall, bangs two objects against each other at an interval of 1.2 s regularly. The echo of the first bang coincides with the fifth bang. If the speed of sound in air is 340 m/s, the distance between the boy and the wall is _____.

- (A) 408 m
- (B) 1632 m
- (C) 816 m
- (D) 204 m

Q56. When current is passed through molten sodium chloride, it decomposes to give X (metal) and Y (gas). Which of the following is true for the given decomposition?

- (A) X is deposited at the positive electrode and Y is formed at the negative electrode.
- (B) X is evaporated and Y ions are formed at the negative electrode.
- (C) X is deposited at the positive electrode and Y is evaporated.
- (D) X is deposited at the negative electrode and Y is formed at the positive electrode.

Q57. In a simple electroscope, the aluminium foil strips repel each other when a charged refill is touched with the end of the paper clip because

- (A) One strip is carrying positive charge and one negative.
- (B) One strip is carrying negative charge and one is uncharged.
- (C) One strip is carrying positive charge and one is uncharged.
- (D) Both strips are carrying similar charge, either positive or negative depending on the charge on refill.

Q58. Consider the list of terms given below:

- (i) Tsunami
- (ii) Landslide

- (iii) Floods
- (iv) Lightning

Which of the above terms can occur as a result of an earthquake?

- (A) (i), (ii) and (iii) only
- (B) (ii) and (iv) only
- (C) (ii), (iii) and (iv) only
- (D) (iii) and (iv) only

Q59. When a tuning fork was struck and brought near a bucket of water, a wave is formed on its surface. If the fork is struck much harder and brought near the surface, which of the following physical quantities will increase?

- (A) Frequency
- (B) Velocity
- (C) Amplitude
- (D) Time period

Q60. What will be the direction of flow of electrons when the end of a metal wire (conductor) are not connected to a battery?

- (A) Electrons move from positive electrode to negative electrode.
- (B) Electrons move in random directions.
- (C) Electrons move from negative electrode to positive electrode.
- (D) Direction of electrons cannot be predicted.

Q61. Which of the following causes a thunder?

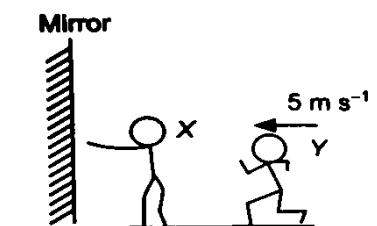
- (A) The air heats up and expands all of sudden.
- (B) A lot of charge goes in lightning.
- (C) Clouds bang against each other.
- (D) Busting of clouds.

Q62. The circular bright spots of light occur in the shadow under a tree because

- (A) Leaves refract the light.
- (B) The light bends around the leaves to form circular spots.
- (C) The gaps between the leaves act as the pinholes.
- (D) The leaves reflect light.

Q63. A boy is standing in front of a plane mirror while another boy Y is running towards him at a speed of 5 m/s from behind. How fast does Y appear to be running towards X in the mirror?

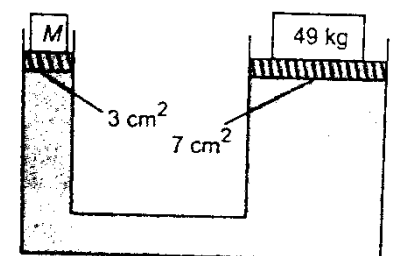
- (A) 2.5 m/s
- (B) 5 m/s
- (C) 10 m/s
- (D) 12.5 m/s



Q64. The diagram shows a hydraulic system in equilibrium. The cross-sectional areas of the smaller piston and the larger piston are 3 cm^2 and 7 cm^2 respectively.

The mass M required to balance the load of 49 kg is

- (A) 5 kg
- (B) 10 kg
- (C) 15 kg

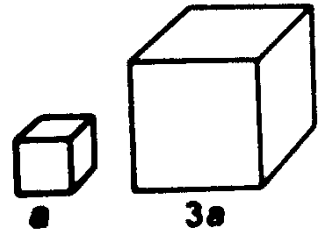


(D) 21 kg

Q65. A cube of side 'a' rest on the floor as shown in the given figure. Given that the pressure exerted by this cube on the floor is 'P', what is the pressure exerted by another cube of the same material of the side '3a'?

(Take $g = 10 \text{ N kg}^{-1}$)

- (A) $\frac{P}{3}$
- (B) 2P
- (C) 3P
- (D) 9P



Subject: Social Science

Q66. In 1837, James Princep deciphered an Inscription in Brahmi script referring to a king called 'Devanamapiya Piyadassi'. The celebrated monarch known by this epithet was

- (A) Kanishka
- (B) Chandragupta Vikramaditya
- (C) Akbar
- (D) Ashoka

Q67. Name the important women personality who wrote and published a book Stripurushtulna, criticising the social differences between men and women.

- (A) Mumtaz Ali
- (B) Tarabai Shinde
- (C) Rama Bai Ranade
- (D) Sarojini Naidu

Q68. In countries like India, British used this term to mark the difference between the local languages and everyday use and English. This term is generally used to refer to a local language or dialect as distinct from what is seen as the standard language.

- (A) Jargon
- (B) Vernacular
- (C) Slang
- (D) Colloquial

Q69. Name the Governor General who declared that Awadh was being misgoverned and British rule was needed to ensure proper administration.

- (A) Lord Dalhousie
- (B) William Bentick
- (C) Lord Mountbatten
- (D) Lord Ripon

Q70. Gandhiji visited Champaran

- (A) To see the plight of Indigo planters in Champaran
- (B) To see the progress of Indigo plantation
- (C) To see the managing system of company
- (D) None of the above

Q71. The highest density of the population in the world is in

- (A) Europe
- (B) South America

- (C) South central Asia
- (D) None of these

Q72. Change of raw materials into products of more value to people is called _____

- (A) Manufacturing
- (B) Resources
- (C) Population
- (D) None of these

Q73. What is cultivation of grapes called'?

- (A) Sericulture
- (B) Viticulture
- (C) Floriculture
- (D) Horticulture

Q74. Heavy rains cause _____ in mountainous regions every year.

- (A) Accident
- (B) Landslide
- (C) Tsunami
- (D) Earthquake

Q75. Resources are distributed unequally over the earth because of

- (A) The different natural conditions
- (B) Level of development
- (C) Technological levels
- (D) All of these

Q76. The Indian Constitution was drafted by _____.

- (A) Constituent Assembly
- (B) Judicial Assembly
- (C) Hindu Mahasbha
- (D) Congress

Q77. Who is the Chairman of Rajya Sabha?

- (A) Prime Minister of India
- (B) President of India
- (C) Vice-President of India
- (D) None of these

78. Which is the highest judicial authority in a state?

- (A) High court
- (B) Lok Adalat
- (C) Supreme Court
- (D) None of these

Q79. When did the Supreme Court ban the practice of manual scavenging?

- (A) 2001
- (B) 2002
- (C) 2013
- (D) 1993

Q80. Under which article the Right to Life is provided to people?

- (A) 22

- (B) 24
- (C) 21
- (D) 25

Subject: English

Q81. Choose the correct sentence:

- A) I were writing a letter.
- B) I was writing a letter
- C) I have writing a letter
- D) I was write a letter

Q82. Identify the figure of speech: "The trees danced in the wind ".

- A) Personification
- B) Simile
- C) Hyperbole
- D) Onomatopoeia

Q83. What is the past tense of "Take"?

- A) Taken
- B) Took
- C) Taking
- D) Takes

Q84. Identify the meaning of the idiom "Palmy days"

- A) Prosperous days
- B) Gloomy days
- C) Hatred days
- D) Odd days

Q85. Who is the writer of the chapter "The Lost child"?

- A) Mulkraj Anand
- B) Vikram Seth
- C) Rahul Seth
- D) John Keats

Q86. Choose the correct sentence:

- A) We does not jump.
- B) We do not jumping.
- C) We do not jump.
- D) We do not jumped.

Q87. What is the correct question form of the statement? "You have finished your homework".

- A) You finish your homework?
- B) You have finished your homework?
- C) Have you finished your homework?
- D) Finished you your homework?

Q88. How many types of letters are there?

- A) Two
- B) Five
- C) Seven
- D) Three

Q89. Gerund is a Verbal?

- A) Noun
- B) Adjective
- C) Pronoun
- D) Adverb

Q90. Imperative sentence commonly begins with:

- A) Question mark
- B) Root form of the verb
- C) Helping verb
- D) Question words

Q91. How many types of sentences are there on the basis of its structures?

- A) Five
- B) Four
- C) Two
- D) Three

Q92. The word which qualifies a noun is called?

- A) Verb
- B) Adjective
- C) Adverb
- D) Pronoun

Q93. Find out the conjunction word:

- A) Slow
- B) But
- C) Of
- D) On

Q94. Who wrote the poem wind?

- A) Shakespeare
- B) Milton
- C) John Keats
- D) Subramania Bharti

Q95. Application is a source of:

- A) Written Communication
- B) Vocal Communication
- C) Listening Communication
- D) Demonstrative Communication

Q96. Formal letter is sent to?

- A) Relatives
- B) Friends
- C) Family
- D) Officials

Q97 Write the root form of the verb “stolen”.

- A) stole
- B) steal
- C) stealing
- D) stealed

Q98. What is the superlative degree of “little”?

- A) less
- B) least
- C) lost
- D) list

Q99. Choose the correct use of the verb:

- A) He is coming.
- B) He are coming.
- C) He were coming.
- D) He am coming.

Q100. Choose the noun form of the verb "Arrive".

- A) Arriving
- B) Arrival
- C) Arriven
- D) Arove