WISDOM WORLD SCHOOL, KURUKSHETRA

Wisdom Aptitude Test (WAT)

for

Admission to Grade 8 (Aadhar Batch)

PATTERN OF WAT

Multiple choice questions with single correct option type.
Each question carry 2 marks and there is no negative marking.

Syllabus for WAT (Grade 8)

|	
Science	Nutrition in Plants, Nutrition in Animals, Acids, Bases and Salts, Respiration in Organisms, Transportation of Substances, Reproduction in Plants, Time and Motion, Electric Current and its Effect, Light
Mathematics	Integers, Algebraic Expressions, Simple Linear Equations, Comparing Quantities, Lines and Angles, Properties of Triangles, Congruence of Triangles
Reasoning	**Verbal :** Number and Alphabet Series, Alphabet Test, Coding-Decoding, Direction Sense Test, Seating Arrangement. **Non-Verbal :** VENN Diagram, Counting of Figure, Water & Mirror Images.

Marking Scheme

Subjects	No. of Questions	Total Marks
Science	20	40
Mathematics	25	50
Reasoning	15	30
Total	**60**	**120**
Time Allowed : 2 hours		

Sample Questions for WAT (Grade 8)
SCIENCE

1. The complete site of digestion of food is:

    (a) Stomach   (b) Small intestine   (c) Large intestine   (d) Esophagus

2. Which of the following statements is/are true about complete parasitic plants?

    (i) They completely depend on the host plant for their survival.

    (ii) They have chlorophyll and can prepare their own food.

    (iii) They have special root like structure called haustoria.

    (iv) They draw nutrition from tissues of host plant.

    (a) Both (i) and (ii)   (b) (i), (iii) & (iv)   (c) Both (i) & (iii)   (d) Both (i) & (iv)

3. What is the pH range of tomato?

    (a) 5.5-7.5   (b) 5.5-8.5   (c) 4.5-5.5   (d) 6.0-7.5

4. Identify the type of respiration from below given equation:

    $C_6H_{12}O_6 \rightarrow 2C_3H_6O_3 +$ Energy

    (a) Aerobic respiration   (b) Fermentation

    (c) Anaerobic respiration   (d) Respiration during lack of O_2

5. What is another name of platelets?

    (a) Erythrocytes   (b) Leucocytes   (c) Thrombocytes   (d) Lymphocyte

6. Kanak and Sagar were given one mirror each by their teacher. Kanak found his image to be erect and of the same size whereas Sagar found her image erect and smaller in size. This means that the mirrors of Kanak and Sagar are, respectively

    (a) plane mirror and concave mirror   (b) concave mirror and convex mirror

    (c) plane mirror and convex mirror   (d) convex mirror and plane mirror

7. If an object is placed at a distance of 0.5 m in front of a plane mirror, the distance between the object and the image formed by the mirror will be

    (a) 2 m   (b) 1 m   (c) 0.5 m   (d) 0.25 m

8. Observe the figure given below:
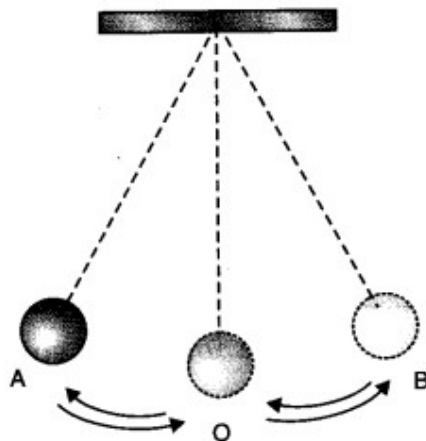
The time period of a simple pendulum is the time taken by it to travel from
(a) A to B and back to A
(b) O to A, A to B and B to A. Observe the figure given below:

9. The absorption of nutrients and exchange of respiratory gases between blood and tissues takes place in:
    (a) veins   (b) arteries   (c) heart   (d) capillaries

10. Which mark is necessary on electric appliances?
    (a) AGMARK   (b) ISI   (c) FICCI   (d) KSK

MATHEMATICS

11. An elevator descends into a mine shaft at the rate of 6m/min. What will be its position after one hour? If it begins to descend from 20m above the ground.
    (a) 360m above the ground   (b) 340m under the ground
    (c) 380m under the ground   (d) none of these.

12. If $9^{x+5} = 27^x$, then find x.
    (a) 5   (b) -5 (c) 10   (d) -10

13. Which is the suitable equation for the given solution $x = -3$
    (a) $15x = -5$ (b) $\frac{4x}{5} = -4$ (c) $17x = -51$ (d) none of these

14. Find the value of y: $\frac{y}{5} + \frac{y}{15} = y - 11$
    (a) 15   (b) -15 (c) -25 (d) 25

15. $30\% \ of \ (x - 50) = 150$, then find x:
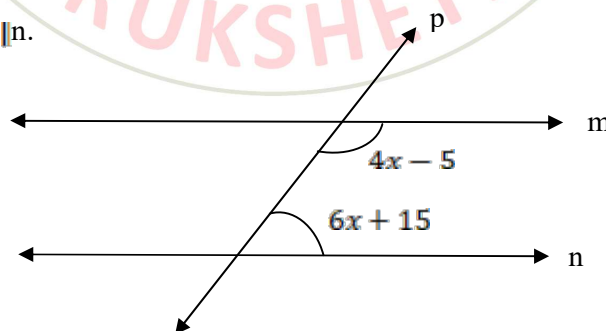   (a) 250   (b) 550   (c) 750   (d) 450

16. Find the value of x if m‖n.

    (a) 19
    (b) 18
    (c) 17
    (d) 12

17. A 17 m long ladder exactly reaches a window 15 m high from the ground when placed against a wall. Find the distance between the foot of the ladder and the wall.
   (a) 25m   (b) 8m   (c) 7m   (d) 16m

18. The exterior angle of a triangle is 110° and one of the interior opposite angles is 30°. The measure of the other interior opposite angle is _____.
    (a) 30°   (b) 40°   (c) 80°   (d) 60°

19. Two figures are congruent if they have the
    (a) same shape   (b) same size
    (c) different shapes   (d) same shape and same size

20. In the given figure, PQ = RS and PQ ‖ RS. △POQ and △SOR are congruent by
   (a) RHS   (b) AAS   (c) SSS   (d) SAS
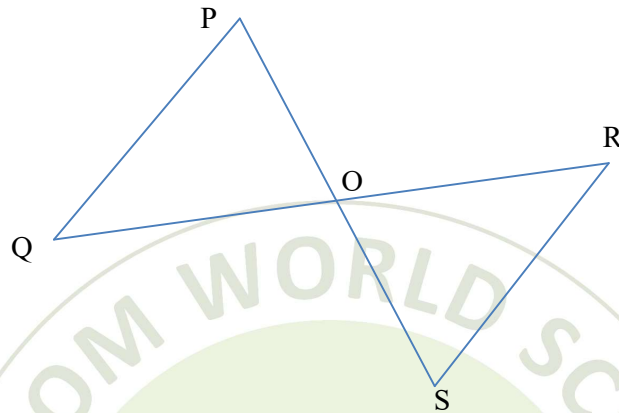
(REASONING)

21. You are required to choose the correct alternative which resembles the water-image of the given word/number/figure.
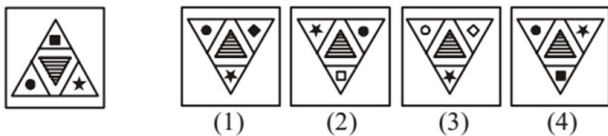

22. How many such pair(s) of letters are there in the word 'POCKETBOOK' which have as many letters between them as in the alphabetical series?
    (a) One   (b) Two   (c) Three   (d) Four

23. Arrange the following words according to the dictionary.
    1. Critical   2. Criterion   3. Crisis   4. Crisp
    (a) 3,4,2,1   (b) 1,3,4,2   (c) 3,4,1,2   (d) 4,3,1,2

24. Pointing to a man on the stage , Rita said " He is the brother of daughter of the wife of my husband". How is the man of stage related to Rita?
    (a) Son   (b) Husband   (c) Cousin   (d) Nephew

25. What is the next letter in the series CNL, BLI, AJF, ZHC, _____ ?
    (a) XDY   (b) YFZ   (c) YFA   (d) XFY

26. Complete the series : *m _ nm _ n _ an _ a _ ma _*
    (a) aamnan   (b) ammanm   (c) aammnn   (d) amammn

27. Vijayan started walking towards South. After walking 15 m, he turned to the left and walked 15 m. He again turned to his left and walked 15 m. How far is he from his original position and in which direction?

(a) 15 m, North   (b) 30m, East   (c) 15 m, West   (d) None of these

28. In a certain code language, 639 means 'wood is hard', 657 means 'fur is soft', 135 means 'hard or soft'. Find the code for 'or'.

(a) 4   (b) 1   (c) 6   (d) 3

29. Which two of the following numbers comes in the next in the following sequence.

61, 57, 50, 61, 43, 36, 61, ………

(a) 29, 61   (b) 29, 20   (c) 29, 22   (d) 31, 61

30. Here we have a figure named X. The task is to find X in the other four images. Find out the correct answer.
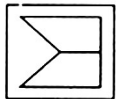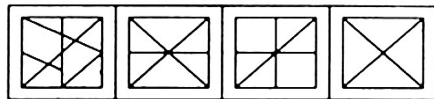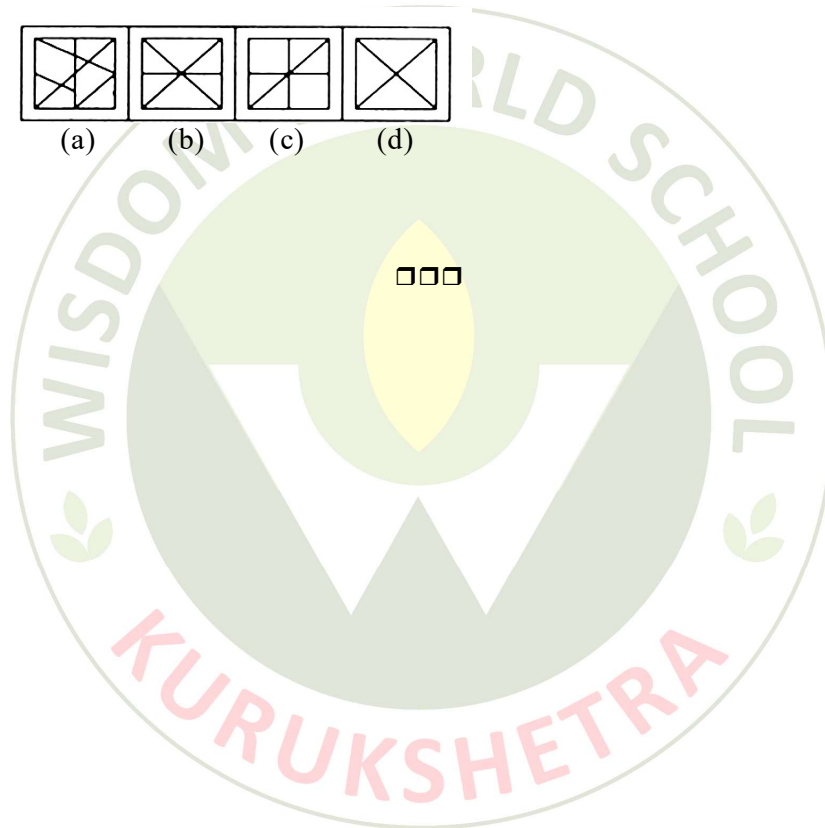

(x)   (a)   (b)   (c)   (d)

WISDOM WORLD SCHOOL, KURUKSHETRA

Wisdom Aptitude Test (WAT)

for

Admission to Grade 9 (Aadhar Batch)

PATTERN OF WAT

Multiple choice questions with single correct option type.
Each question carry 2 marks and there is no negative marking.
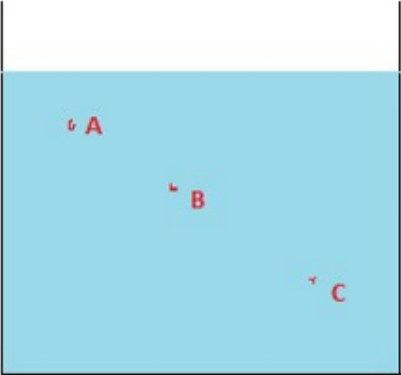
Syllabus for WAT (Grade 9)

Science	Microorganisms, Age of Adolescence, Force and Pressure, Sound, Light, Combustion and Flame, Chemical effects of Electric Current
Mathematics	Rational Numbers, Exponents, Squares and Square Roots, Cubes and Cube Roots, Algebraic Expressions, Factorisation, Linear Equations in one Variable, Comparing Quantities, Quadrilaterals & its Basics, Mensuration
Reasoning	**Verbal :** Number and Alphabet Series, Alphabet Test, Coding-Decoding, Mathematical Operators, Number Ranking **Non-Verbal :** Cubes and Dices, Counting figures, Paper Folding & Cutting, Water & Mirror Images

Marking Scheme

Subjects	No. of Questions	Total Marks
Physics	10	20
Chemistry	10	20
Biology	10	20
Mathematics	30	60
Reasoning	20	40
Total	**80**	**160**
Time Allowed : 2 hours 30 minutes		

Sample Questions for WAT (Grade 9)

PHYSICS

1. When the amplitude is small, the sound produced is:
   (a) Feeble
   (b) Loud
   (c) Low Pitched
   (d) None of these

2. Calculate the pressure exerted by an object having weight 2020 N on an area of dimension 5m by 2m.
   (a) 200 Pa
   (b) 1010 Pa
   (c) 202 Pa
   (d) 404 Pa

3. The below figure shows a container filled with water. Which of the following statements is correct about pressure of water?
   (a) Pressure at A > Pressure at B > Pressure at C
   (b) Pressure at A = Pressure at B = Pressure at C
   (c) Pressure at A < Pressure at B > Pressure at C
   (d) Pressure at A < Pressure at B < Pressure at C

4. In a periscope how are the reflecting mirrors arranged?
   (a) Perpendicular to each other
   (b) Parallel to each other
   (c) At an angle of 90 degree
   (d) At an angle of 60 degree

5. Myopia is corrected by:
   (a) Convex mirror
   (b) Concave lens
   (c) Concave mirror
   (d) Convex lens

CHEMISTRY

6. Which one of the following four metals would be displaced from the solution of its salt by the other three metals?
   (a) Zn
   (b) Ag
   (c) Cu
   (d) Mg

7. In electrolysis of water, which gas is liberated at anode?
   (a) Chlorine
   (b) Oxygen
   (c) Hydrogen
   (d) Nitrogen

8. Choose the metals in the increasing order of their reactivity.
   (a) Ag, Cu, Ca, K
   (b) Cu, Ag, K, Ca
   (c) K, Cu, Ag, Ca
   (d) Ca, K, Ag, Cu

9. Who proposed the laws of electrolysis?
   (a) Michael Faraday
   (b) J.J. Thomson
   (c) Proust
   (d) Lavoisier

10. Which non-metal is used for disinfection of water?
    (a) Bromine
    (b) Fluorine
    (c) Chlorine
    (d) Iodine

2

BIOLOGY

11. All viruses consist of:

    (a) Protein coat   (b) Nucleic Acid

    (c) Both (a) and (b) are correct   (d) None of the above

12. Which of the following glands produces more than one hormone?

    (a) Pancreas   (b) Liver   (c) Pituitary   (d) Thyroid

13. Chromosome carry _____ which transfers characters from parents to offspring

    (a) Ribosome   (b) Genes   (c) Plastid   (d) Mitochondri

14. Micro-organisms were first observed by

    (a) Robert Hooke   (b) Anton Van Leeuwenhoek

    (c) Charles Darwin   (d) Camillo Golgi

15. The smallest cell in the human body is

    (a) Bacteria   (b) PPLO   (c) RBC   (d) Platelets

MATHEMATICS

16. If $3^{(x-y)} = 27$ and $3^{(x+y)} = 243$, then x is equal to _____.

    (a) 0   (b) 2   (c) 4   (d) 6

17. If $1800 = 2^a \times 3^b \times 5^c$, then the value of a + b + c is _____.

    (a) 9   (b) 7   (c) 8   (d) 10

18. A watch worth Rs. 2424 is offered for sale at Rs. 2020. What percent discount is offered during the sale?

    (a) $\frac{49}{3}\%$ (b) $\frac{50}{3}\%$ (c) $\frac{25}{3}\%$ (d) $\frac{34}{3}\%$

19. The solution of $\frac{x-5}{2} - \frac{x-3}{5} = \frac{1}{2}$ is _____.

    (a) x = 7   (b) x = 9   (c) x = 8   (d) x = 5

20. The value of $\frac{2^{2020} + 2^{2018}}{2^{2019} - 2^{2017}}$ is:

    (a) 2   (b) $\frac{10}{3}$ (c) $2^{2020} + 1$ (d) 10

21. Find the product of $(x^2 + x + 1)$ and $(x^2 - x + 1)$:

    (a) $x^4 - x^2 + 1$ (b) $x^4 + x^2 + 1$ (c) $x^4 + x^2 - 1$ (d) $x^4 - x^2 - 1$

22. Fifteen years from now Ravi's age will be four times the age 15 years ago from now. His present age is:

(a) 40 years   (b) 10 years   (c) 25 years   (d) 75 years

23. The length of the longest pole that can be put in a room of dimensions 10m × 10 m × 5 m is:

(a) 16 m   (b) 15 m   (c) 10 m   (d) 12 m

24. The diagonals of a rhombus are 24 cm and 10 cm. What is the perimeter of the rhombus?

(a) 13 cm   (b) 52 cm   (c) 25 cm   (d) 72 cm

25. A rectangular paper for length 30 cm and width 44 cm is rolled along its width and a cylinder is formed. Find the volume of the cylinder.

(a) 462000 cm^3 (b) 462 cm^3 (c) 46200 cm^3 (d) 4620 cm^3

26. Two cylinders of equal volume have their heights in ratio 2 : 1. What is the ratio of their radii?

(a) 4 : 1   (b) 1 : 4   (c) $\sqrt{2}:1$ (d) $1:\sqrt{2}$

27. What is the total length of edges of the cube of edge 2.5 cm?

(a) 30 cm   (b) 36 cm   (c) 48 cm   (d) None of these

28. The area of an isosceles triangle having base x cm and one side y cm is:

(a) $\dfrac{x}{2}\sqrt{y^2 + \dfrac{x^2}{4}} \text{ cm}^2$ (b) $\dfrac{x}{2}\sqrt{\dfrac{4y^2 - x^2}{4}} \text{ cm}^2$ (c) $\dfrac{x^2 - y^2}{4} \text{ cm}^2$ (d) None of these

29. Area of a Rhombus is 2020 m^2 and its altitude is 101 m, then the perimeter of the Rhombus is

(a) 100 m   (b) 200 m   (c) 120 m   (d) 80 m

30. Number of vertices of a tetrahedron is

(a) 4   (b) 6   (c) 8   (d) 12

REASONING

31. Find the next term in the given series: 2, 3, 10, 15, 26, …

(a) 34   (b) 35   (c) 36   (d) 37

32. If Q means add to, J means multiply by, T means subtract from and K means divide by then find out the value of:

30 K 2 Q 3 J 6 T 5

(a) 18   (b) 28   (c) 31   (d) 103

33. What will come in the blanks of the given series: _ _ aba _ _ ba _ ab

(a) abbba   (b) abbab   (c) baabb   (d) bbaba

34. In a certain code language CHILD is written as IMOQJ. How will BABE be written in the same language?

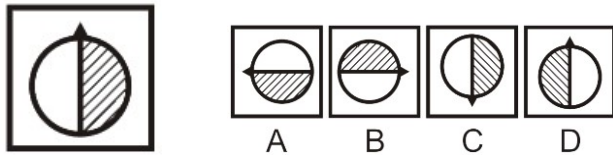(a) HFHJ   (b) FGFK   (c) FFGJ   (d) HFGJ

35. Among five children T, Q, H, J and F each having a different height. T is taller than only J and H is shorter than only F. Who among them is the third in order of height?

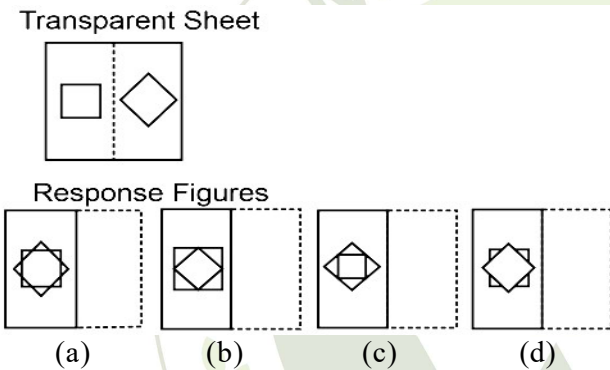(a) F   (b) Q   (c) H   (d) J

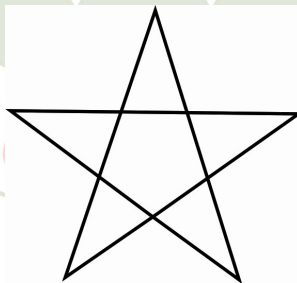36. Find the water image of the given image out of the given alternatives.
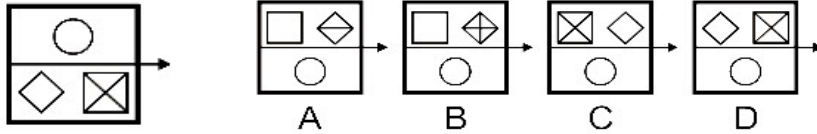
37. Find the mirror image of the given image out of the given alternatives.

38. Find out among the four alternatives (a), (b), (c), (d), how the pattern would appear when the transparent sheet (X) is folded at the dotted line.

39. Find the number of triangles in the given figure.

(a) 5   (b) 6   (c) 10   (d) 8

40. What will come next in the given alphabetical series: BYDW, FUHS, JQLO, NMPK,

(a) RITG   (b) RJGH   (c) IRGT   (d) HPIN

❏❏❏

WISDOM WORLD SCHOOL, KURUKSHETRA

Wisdom Aptitude Test (WAT)

for

Admission to Grade 10 (Aadhar Batch)

PATTERN OF WAT

Multiple choice with single correct option type questions.
Each question carries 2 marks and there is no negative marking.

Syllabus for WAT (Grade 10)

Science	Work and Energy, Atoms and Molecules, Structure of the Atom, Tissues, Improvement in Food Resources
Mathematics	Number Systems, Polynomials, Coordinate Geometry, Linear Equations in Two Variables, Lines and Angles, Quadrilaterals, Circles, Surface Areas and Volumes
Reasoning	**Verbal** - Number Series, Alphabet Test, Coding-Decoding, Blood Relation, Number Ranking, Reasoning Puzzle. **Non-Verbal** - Counting figures, Missing and Inserting Character, Cubes and Dices.

Marking Scheme

| Subjects	No. of Questions	Total Marks
Physics	10	20
Chemistry	10	20
Biology	10	20
Mathematics	30	60
Reasoning	20	40
Total	**80**	**160**
Time Allowed : 2 hours 30 minutes		

PHYSICS

1. The inertia of a moving object depends on:

    (a) mass of the object
    (b) momentum of the object
    (c) speed of the object
    (d) shape of the object

2. Aman wearing a bullet-proof vest stands on roller skates. The total mass is 80 kg. A bullet of mass 20 g is fired at 400 m/s. It is stopped by the vest and falls to the ground. What is then the velocity of the man?

    (a) 1m/s
    (b) 0.1 m/s
    (c) 0.01m/s
    (d) 0 m/s

3. Newton's third law of motion explains the two forces namely 'action' and 'reaction' coming into action when the two bodies are in contact with each other. These two forces:
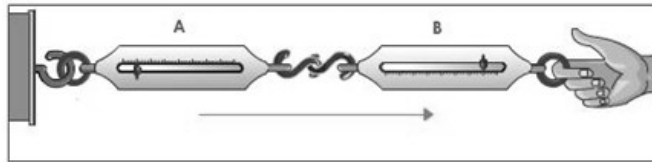
    (a) Always act on the same body
    (b) Always act on the different bodies in opposite directions
    (c)   Have same magnitude and direction
    (d) Acts on either body at normal to each other

4. Velocity versus time graph of a ball of mass 50 g rolling on a concrete floor is shown in the figure below. What will be the frictional force of the floor on the ball?

    (a) 0.5 N
    (b) 50 N
    (c) 5 N
    (d) 0.05 N
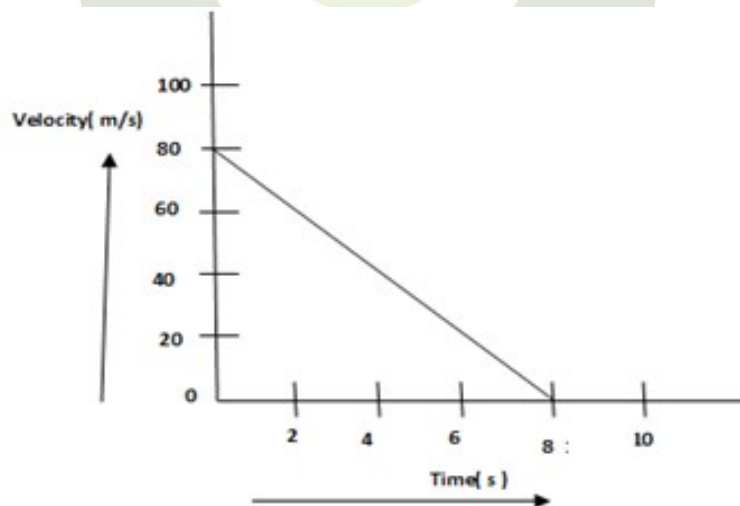
5. The gravitational force between two objects is F. If masses of both the objects are halved without altering the distance between them, then the gravitational force would become

    (a) f/4
    (b) f/2
    (c) f
    (d) 2f

CHEMISTRY

6. How many particles are represented by 0.25 mole of an element?

    (a) 1.05×10^{24} (b) 7.023×10 (c) 1.505×10^{23} (d) 6.022×10^{23}

7. How many electrons and protons are present in Mg^{+2}?

    (a) 10, 12   (b) 12,12   (c) 12,10   (d) 10,10

8. What is the atomicity of Ar?

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

9. The formula of phosphate of a metal M is MPO_4, then what will the formula of the chloride of metal M?

    (a) MCl_2 (b) MCl_4 (c) M_2Cl_3 (d) MCl_3

10. What is the molar mass of $CuSO_4.5H_2O$? (Atomic mass of Cu = 63.5)

    (a) 159.5g   (b) 249.5u   (c) 249.5 g   (d) 159.5 u

BIOLOGY

11. Which of the following statement is not correct for a chronic disease?

    (a) It is a long lasting disease   (b) It lasts for a short period

    (c) It may damage an organ of the body   (d) Weight loss may occur

12. Toxins will accumulate into the body if this organ stops working:

    (a) Kidneys   (b) Heart   (c) Intestine   (d) Oesophagus

13. Which cell organelle synthesizes enzymes of lysosomes?

    (a) RER   (b) SER   (c) Golgi bodies   (d) Ribosomes

14. The process in which cell engulfs food and other materials from its external environment is known as

    (a) Diffusion   (b) Endocytosis   (c) Osmosis   (d) Plasmolysis

15. What percentage of blood is constituted by plasma?

    (a) 70%   (b) 80%   (c) 55%   (d) 30%

MATHEMATICS

16. What will the remainder if $p(x) = x^{45}$ is divided by $g(x) = x^2 - 1$?

    (a) 2x   (b) 0   (c) –x   (d) x

17. The value of $\dfrac{(a+b)^2}{(b-c)(c-a)} + \dfrac{(b+c)^2}{(a-b)(c-a)} + \dfrac{(c+a)^2}{(a-b)(b-c)}$ will be

    (a) –1   (b) 1   (c) 0   (d) 2

18. How many pair of x and y satisfy the equation $2x + 4y = 8$ and $6x + 12y = 24$?

    (a) 0   (b) Infinite   (c) 1   (d) None of these

19. If $(a + b, a - b)$ is the solution of the equations $3x + 2y = 15$ and $4x + 5y = 13$, then the value of b is…

    (a) 8   (b) –4   (c) –2   (d) 5

20. If we add 1 to the numerator and subtract 1 from the denominator a fraction becomes 1. It also becomes $\frac{1}{2}$ if we add 1 to the denominator. Then the sum of numerator and denominator of fraction is…

    (a) 7   (b) 2   (c) 8   (d) 11

21. If the mean of 10 observations is 25 and the mean of another 10 observations is 35, then the mean of 20 observations is….

    (a) 10   (b) 20   (c) 30   (d) 50

22. The sum of mode and mean of certain observations is 120 and the median of the observation is 63. The value of mean is…..

    (a) 55   (b) 60   (c) 65   (d) 69

23. If the mode of the observations 5, 4, 4, 3, 5, x, 3, 4, 3, 5, 4, 3 and 5 is 3, then the median of the observation will be

    (a) 3   (b) 5   (c) 4   (d) 3.5

24. The bisectors of two adjacent angles in a parallelogram meet at a point P inside the parallelogram. The angle made by these bisectors at point P is…….

    (a) 180°   (b) 90°   (c) 45°   (d) None of these

25. PQRS is a cyclic Quadrilateral in which PS=PQ, RS=RQ, and $\angle PSQ = 2\angle QSR$, then $\angle QSR =$

    (a) 20°   (b) 40°   (c) 30°   (d) 50°

26. Which of the following is equal to $10 + \sqrt{24} + \sqrt{60} + \sqrt{40}$.

    (a) $\left(\sqrt{2} + \sqrt{3} + \sqrt{5}\right)^2$ (b) $\left(\sqrt{2} + 3 + \sqrt{5}\right)^2$ (c) $\left(2 + \sqrt{3} + \sqrt{5}\right)^2$ (d) $\left(\sqrt{2} + \sqrt{3} + 5\right)^2$

27. if $x = \frac{11}{4 - \sqrt{5}}$ then $x^2 - 8x + 11 = ?$

    (a) 0   (b) $\sqrt{5}$ (c) 11   (d) None of these

28. The smallest among $\sqrt{10} - \sqrt{5}, \sqrt{19} - \sqrt{14}, \sqrt{22} - \sqrt{17}$ and $\sqrt{8} - \sqrt{3}$ is

    (a) $\sqrt{10} - \sqrt{5}$ (b) $\sqrt{22} - \sqrt{17}$ (c) $\sqrt{19} - \sqrt{14}$ (d) $\sqrt{8} - \sqrt{3}$

4

29. If $x^n + 1$ is divisible by $x+1$, then 'n' must be

   (a) any natural number   (b) even natural number

   (c) odd natural number   (d) None of these

30. Which of the following is factor of $P(x) = 2x^3 - 5x^2 + x + 2$?

   (a) $x + 1$ (b) $2x + 1$ (c) $x + 2$ (d) $2x - 1$

REASONING

31. Maya who is the sister-in-law of Ashok, is the daughter in law of Kritika. Neeraj is the father of Amit who is the only brother of Ashok. How Kritika is related to Ashok.

   (a) Mother   (b) Aunt   (c) Wife   (d) sister

32. If the words INTIMATION, INFORMATION, INTEREST, INTERROGATION and INSTIGATION are arranged according to the dictionary which will be the fourth letter (from the right) of the last word?

   (a) O   (b) A   (c) R   (d) T

33. Numbers of letters skipped in between adjacent letters in the series decrease by two. Which of the following series observes this rule.

   (a) EPVAF   (b) GPWBE   (c) UCJOP   (d) XFMQU

34. What will come at the place of question mark: **3, 10, 29, 66, 127, ?**

   (a) 164   (b) 187   (c) 216   (d) 218

35. In a row of 21 girls, when Monika was shifted by four places towards the right, she became 12th from the left end. What was her earlier position from the right end of the row.

   (a) 9th   (b) 10th   (c) 11th   (d) 14th

36. In a certain code language "si po re" means "book is thick" , "ti na re" means "bag is heavy" , "ka si" means "interesting book" and "de ti" means "that bag". What should stand for "that is interesting" in that code language?

   (a) ka re na   (b) de si re   (c) de re ka   (d) tip o ka

37. In a particular way of coding, the word CENTRAL is coded as ABCDEFG and PLANETARIUM as HGFCBDFEIJK, with the same coding, how can we express the word LANTERN?

   (a) GFCDFEG   (b) GFCDEFG   (c) GFCDBEC   (d) GFCDBEB

38. Find out the WRONG TERM in the given series : **G4T, J10R, M20P, P43N, S90L**

   (a) G4T   (b) J10R   (c) M20P   (d) S90L

39. If "P×Q" means "P is the daughter of Q" ; "P+Q" means "P is the father of Q"; "P/Q" means "P is the mother of Q" and "P-Q" means "P is the brother of Q" then in the expression A / B + C - E x F , how is A related to F ?

(a) Mother-in-law   (b) Aunt   (c) Daughter in law   (d) Mother

40. Which of the following meanings of the arithmetical signs will make the value "**zero**" for the expression given below?

200 × 100 + 300 × 200 - 10 ÷ 2 + 40

(a)   + means -, - means x, x means ÷, ÷ means +

(b)   + means -, - means ÷, x means +, ÷ means x

(c)   + means x, - means x, x means ÷, ÷ means +

(d)   + means ÷, - means +, x means -, ÷ means x

□□□