WISDOM WORLD SCHOOL, KURUKSHETRA

Wisdom Aptitude Test (WAT)

for

Admission to Grade X (Aadhar Batch)

Date : 15 January 2023 | Time : 10:30 am to 1:00 pm

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 X)

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, Calendar, Reasoning Puzzle **Non-Verbal** - Counting figures, Missing and Inserting Character, Cubes and Dices

Marking Scheme

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

Sample Questions for WAT (Grade X)

PHYSICS

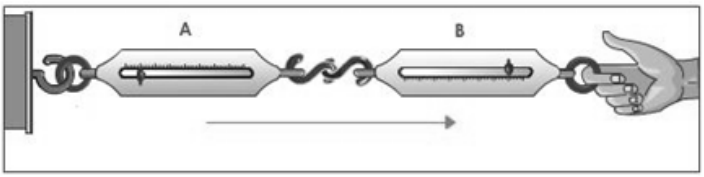
1. The inertia of a moving object depends on:

   (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?

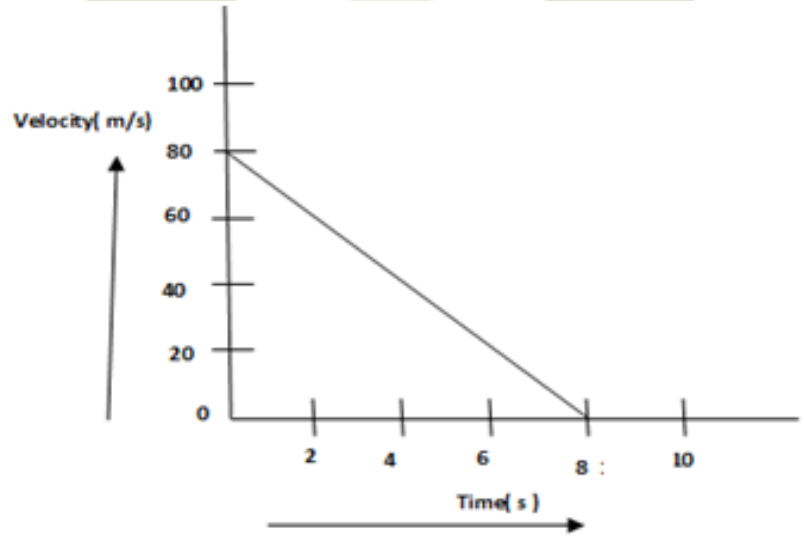
   (a) 1m/s (b) 0.1 m/s (c) 0.01m/s (d) 0 m/s

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 $\frac{(a+b)^2}{(b-c)(c-a)} + \frac{(b+c)^2}{(a-b)(c-a)} + \frac{(c+a)^2}{(a-b)(b-c)}$ 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) $\sqrt{8}-\sqrt{3}$

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

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