



Pradeep Sahajwani Classes (BASE MAKER)

VIIIth – IXth – Xth CBSE (Maths / Science)

(IMO, NSO, NSTSE, OLYMPIAD & Deep Foundation for Competitive Exams)

S-20, Vivekanand Colony, Bhopal, Mob. : 9479365082

Scholastic Aptitude Test

- Q1.** A wire of resistance R is stretched to twice of its original length. Its new resistance will be :
(1) 4R (2) R/4 (3) 2R (4) R/2
- Q2.** Sound wave in air will be-
(1) Transverse wave (2) Longitudinal wave (3) Electro magnetic wave (4) Transverse and longitudinal wave
- Q3.** The blue colour of sky is due to-
(1) Refraction of light (2) Dispersion of light (3) Diffraction of light (4) Scattering of light
- Q4.** 1Å° is equal to-
(1) 10^{-10}m (2) 10^{-6}m (3) 10^{-4}m (4) 10^{-2}m
- Q5.** Focal length of plane mirror is-
(1) Zero (2) Infinite (3) Radius of curvature (4) All of the above
- Q6.** The power of a lens of spectacle is changed from -2D to -4D. The focal length of new lens in comparison to previous lens will be –
(1) Twice (2) Half (3) Remain same (4) Thrice
- Q7.** Ice is floating on water in a beaker when ice completely melts then level of water in beaker:
(1) Increases (2) Decreases (3) Remains the same (4) First increases then decreases
- Q8.** Which of the following may be isomer of aldehyde having general formula $\text{C}_n\text{H}_{2n}\text{O}$?
(1) Alcohol (2) Ether (3) Ester (4) Ketone
- Q9.** Solder is an alloy of –
(1) Cu+Zn (2) Pb+Sn (3) Pb+Sb (4) Cu+Sn
- Q10.** First organic compound synthesized in laboratory from its elements –
(1) Urea (2) Acetic acid (3) Methane (4) Carbon dioxide
- Q11.** In which of the following pair number of molecule is equal-
(1) 11g CO_2 and 7g N_2 (2) 44g CO_2 and 14g N_2 (3) 22g CO_2 and 28g N_2 (4) 71g Cl_2 and 24g N_2
- Q12.** Chinnabar is of which metal ?
(1) Hg (2) Cu (3) Zn (4) Pb
- Q13.** Aqueous solution of which of the following salt will turn blue litmus into red ?
(1) Ammonium Sulphate $(\text{NH}_4)_2\text{SO}_4$ (2) Sodium Sulphate Na_2SO_4
(3) Sodium Chloride NaCl (4) Potassium Carbonate K_2CO_3
- Q14.** The ratio of rate of diffusion of O_2 and H_2 is –
(1) 1:1 (2) 1:2 (3) 1:3 (4) 1:4
- Q15.** During lack of oxygen in tissues of our body, the pyruvate is converted into lactic acid in :
(1) Mitochondria (2) Nucleus (3) Cytoplasm (4) Ribosome
- Q16.** Kidneys do not perform the function of :
(1) Regulation of blood pressure (2) Filtration of blood
(3) Regulation of ions concentration (4) Secretion of anti bodies
- Q17.** Spinal cord originates from :
(1) Cerebrum (2) Cerebellum (3) Medulla (4) Pons
- Q18.** Photosynthesis is an important mode of autotrophic nutrition. The event which does not occur in photosynthesis is :
(1) Conversion of light energy to chemical energy (2) Reduction of carbon dioxide to carbohydrate
(3) Oxidation of carbon to carbon dioxide (4) Absorption of light energy by chlorophyll
- Q19.** Green house effect due to ;
(1) $\text{NO}_2, \text{CO}_2, \text{SO}_2, \text{CFS}$ (2) $\text{CO}_2, \text{CO}, \text{H}_2\text{O}$ (3) $\text{CO}_2, \text{H}_2, \text{CH}_4$ (4) Only CO_2 and CH_4
- Q20.** DNA is a polymer of :
(1) Nucleotide (2) Glucose (3) Amino acid (4) None
- Q21.** Nos. of Autosomes in common man sperm are-
(1) 23 (2) 22 (3) 23 pairs (4) 22 pairs
- Q22.** The moon is devoid of life because –
(1) It has no water (2) It has no nitrogen (3) It has no carbon (4) It has no silicates
- Q23.** Colloid roots are found in –
(1) Monocot plants (2) Dicot plants (3) Ferns (4) Cycas
- Q24.** Cold treatment with seeds is called –



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- (1) Vernalization (2) Startification (3) Scarification (4) Both (1) and (2)
- Q25** Kheda Movement(1917) was started for:
(1) Farmers (2) Labourers (3) Mill Owners (4) Soldiers
- Q26.** Gutenberg was associated with:
(1) Powerloom (2) Rail Engine (3) Computer (4) Printing process
- Q27.** What was "Dawes Plan" ?
(1) Nazi plan to suppress the jews
(2) American plan to control the Bolsevik
(3) Stalin plan of collectivization
(4) American plan to take out Germany from the financial crisis(great depression)
- Q28.** In contemporary world, which quality makes democracy superior to any other form of government;
(1) Efficiency (2) Responsiveness (3) Transparency (4) Legitemacy governance
- Q29.** Name the law which empowers the people to carry on democratic reforms:
(1) Company act (2) M.R.T.P. (3) Right to Information (4) Right to Vote
- Q30.** 'Renigaon' is famous for-
(1) Water conservation (2) Organic Agriculture (3) Environment Conservation (4) Chipko movement
- Q31.** When the word 'Acid Rain' was first used –
(1) 1953 year (2) 1983 year (3) 1973 year (4) 1872 year
- Q32.** What was the basis of the 'Two Nation' theory propounded by Jinnah ?
(1) Caste (2) Language (3) Regionalism (4) Communalism
- Q33.** Who is the custodian of Fundamental Rights?
(1) Parliament (2) Executive (3) Supreme court (4) Election commission
- Q34.** In India agriculture depends on-
(1) Monsoon (2) Technology (3) Government policy (4) All of these
- Q35.** Who started 'Bhoodan Movement' in India?
(1) Vinoba Bhawe (2) Jai Prakash Narayan (3) Mahatma Gandhi (4) Lal Bhadur Shastri
- Q36.** If $\sin X + \operatorname{Cosec} X = 2$, then $(\sin^{10} X + \operatorname{Cosec}^{10} X)$ is equal to :
(1) 3 (2) 0 (3) 1 (4) 2
- Q37.** A shopkeeper blends two varieties of tea costing Rs18 and Rs13 per 100gms in the ratio 7:3. He sells the blended variety at the rate of Rs18.15 per 100gm. His percentage gain in the transactions is:
(1) 8% (2) 12% (3) 15% (4) 10%
- Q38.** If $\frac{\tan\theta + \cot\theta}{\tan\theta - \cot\theta} = 2$, ($0^\circ \leq \theta \leq 90^\circ$), then the value of θ is:
(1) 60° (2) 30° (3) 90° (4) 45°
- Q39.** The marked price of a pen is Rs72. If it is sold for Rs54. The rate of discount will be:
(1) 20% (2) 15% (3) 10% (4) 25%
- Q40.** $\tan^4\theta + \tan^6\theta$ is equal to –
(1) $\tan^4\theta \cdot \sec^2\theta$ (2) $\tan^2\theta \cdot \sec^4\theta$ (3) $\tan^2\theta \sec^2\theta$ (4) $\tan^2\theta \sec^6\theta$
- Q41.** The value of $\frac{\log_9 27 - \log_{27} 9}{\log_2 8 - \log_8 2}$:
(1) $\frac{5}{14}$ (2) $\frac{5}{16}$ (3) $\frac{14}{5}$ (4) $\frac{16}{5}$
- Q42.** If product of abscissa and ordinate of a point is positive then the point lies in :
(1) 1st quadrant (2) 3rd quadrant (3) 4th quadrant (4) 1st or 3rd quadrant
- Q43.** If x and y are two sets. Such that x has 40 elements, $X \cup Y$ has 60 elements and $X \cap Y$ has 10 elements, then number of elements in set y will be :
(1) 40 (2) 30 (3) 25 (4) 35
- Q44.** Three coins are tossed once. The probability of getting at least two tails will be :
(1) $\frac{1}{3}$ (2) $\frac{1}{2}$ (3) $\frac{1}{4}$ (4) 1
- Q45.** The sum of the roots and the product of roots of quadratic equation $3x^2 - (2K+1)x - K - 5 = 0$ are equal. The value of K will be :
(1) $-\frac{1}{2}$ (2) -2 (3) $\frac{1}{2}$ (4) 5



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Mental Ability Test

Q1. In an examination it is required to get 40% of the aggregate marks to pass. A student gets 224 marks and is declared failed by 16 marks. What are the maximum aggregate marks a student can get?

- (1) 800 (2) 860 (3) 600 (4) Cannot be determined (5) None

Q2. Mahesh started walking from a point 'P' towards North and walked 30 meter. He then turned to left and walked 40 m and reached 'Q'. At what minimum straight line distance is the point 'Q' from 'P' and in which direction?

- (1) 50m, N-E (2) 60m, N-W (3) 50m, N-W (4) 80m, N-W

Q3. If, 'water' is called 'black', 'black' is called 'tree', 'tree' is called 'blue', 'blue' is called 'rain', 'rain' is called 'pen', and 'pen' is called 'pencil'. Which of the following will give fruits ?

- (1) blue (2) rain (3) black (4) pen (5) pencil

Q4. Choose the one from the four diagrams, which illustrates the relationship among the three given classes. Bus, Scooter, Conveyance

Q5. For a group of 32 students food lasts for 45 days. For how much days will the same food last for 72 students?

- (1) 6 days (2) 12 days (3) 20 days (4) 18 days

Q6. The ratio of number of boys and girls in a school of 720 students is 7:5. How many girls should be admitted to make the ratio 1:1?

- (1) 220 (2) 180 (3) 120 (4) 140

Q7. If 8 men or 12 women can do a piece of work in 25 days, in how many days can the work be done by 6 men and 11 women working together ?

- (1) 5 (2) 15 (3) 25 (4) 20

Q8. OBDR, QACT, SZBV, ?, WXZZ

- (1) ASVD (2) WUWZ (3) YTVB (4) UYAX

Q9. 273:182::531:?

- (1) 453 (2) 345 (3) 354 (4) 534

Q10. 3, 6, 7, 14, 15, 30, 31, 62, 63, ?, ?

- (1) 128, 112 (2) 119, 131 (3) 127, 115 (4) 126, 127

Q11. _ _ J _ D _ JW _ P _ W

- (1) DPWPDJ (2) EPWJDP (3) CPWCJP (4) JCDPWD

Q12. Choose the correct order of signs from the four alternatives given below, so that the equations become correct.
 $36-9 \times 4=8$

- (1) $\times + =$ (2) $\times - =$ (3) $\div - =$ (4) $\div + =$

Q13. $\frac{D}{216} : \frac{F}{64} :: \frac{H}{1000} : ?$

- (1) $\frac{K}{512}$ (2) $\frac{J}{512}$ (3) $\frac{L}{512}$ (4) $\frac{I}{512}$

Q14. Dhaka: Bangladesh::Lira:?

- (1) South Korea (2) Nepal (3) Italy (4) North Korea

Q15. Sam ranked ninth from the top and 38th from bottom in a class. How many students are there in a class?

- (1) 47 (2) 46 (3) 45 (4) 40



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ANSWER KEY

SCHOLASTIC APTITUDE TEST

QUE ANS	Q1 (1)	Q2 (2)	Q3 (4)	Q4 (1)	Q5 (2)	Q6 (2)	Q7 (3)	Q8 (4)	Q9 (2)	Q10 (1)
QUE ANS	Q11 (2)	Q12 (1)	Q13 (4)	Q14 (4)	Q15 (3)	Q16 (4)	Q17 (3)	Q18 (3)	Q19 (4)	Q20 (1)
QUE ANS	Q21 (4)	Q22 (1)	Q23 (4)	Q24 (1)	Q25 (1)	Q26 (4)	Q27 (4)	Q28 (4)	Q29 (3)	Q30 (3)
QUE ANS	Q31 (4)	Q32 (4)	Q33 (3)	Q34 (1)	Q35 (1)	Q36 (4)	Q37 (4)	Q38 (1)	Q39 (4)	Q40 (1)
QUE ANS	Q41 (2)	Q42 (4)	Q43 (2)	Q44 (2)	Q45 (2)					