APEX INSTITUTE
...Where Success Reflects...
IIT-JEE | AIPMT | NTSE | OLYMPIAD
(A unit of Ghaziabad Apex Coaching Pvt.Ltd)

APEX TALENT REWARD EXAM

Class X going to XI

SCIENCE, MATHS & REASONING

Time: 2Hours **Maximum Marks: 320**

Instructions:

1. *Attempt ALL the questions.*
2. *Answers have to be marked on the OMR sheet.*
3. *The Question Paper contains blank spaces for your rough work. No additional sheets will be provided for rough work.*
4. *Blank papers, clip boards, log tables, slide rule, calculator, cellular phones, pagers and electronic devices, in any form, are not allowed.*
5. *Write your **Name** and **Registration No.** in the space provided at the bottom of this sheet.*

This Question Paper contains MCQs with 4 choices (Subjects: Mental ability: 20, Physics: 15, Chemistry: 15, Biology:15 & Maths: 15).

Marking Scheme: For each correct answer **4 marks** are awarded and for each wrong answer **–1 mark** is awarded. In case of no response zero mark will be awarded.

Name of the Candidate : ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Contact Number : ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

INSTRUCTIONS

Time duration: 2:30 hours. (The initial 30 minutes are given for filling Response Sheet and the test duration is 2 hours).

Maximum Marks: 320

This Question Paper contains 80 MCQs with 4 choices (Subjects: Physics: 15, Chemistry: 15, Biology: 15 & Maths: 15, Mental ability: 20).

Marking Scheme: For each correct answer **4 marks** are awarded and for each wrong answer **–1 mark** is awarded. In case of no response zero mark will be awarded.

This section contains **80 Multiple Choice Questions.** Each question has four choices (1), (2), (3) and (4) out of which ONLY ONE is correct.

1. Sound waves travel at 350 m/s through warm air and at 3500 m/s through brass. The wavelength of a 700 Hz sound wave as it enters brass from warm air

(1) decreases by a factor 10 (2) increases by a factor 20
(3) increases by a factor 10 (4) decreases by a factor 20

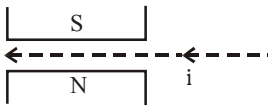
2. A balloon is rising vertically upwards at a velocity of 10 m/s. When it is at a height of 45 m from the ground, a parachutist bails out from it. After 3 seconds he opens his parachute and decelerates at a constant rate of 5 m/s^2. What was the height of the parachutist above the ground when he opened his parachute ? (Take g = 10 m/s^2)

(1) 15 m (2) 30 m (3) 45 m (4) 60 m

3. Two resistors r_1 & r_2 ($r_1 < r_2$) are joined in parallel. The equivalent resistance R is such that

(1) $R > r_1 + r_2$ (2) $r_2 < R < r_1 + r_2$ (3) $r_1 + R < r_2$ (4) $R < r_1$

4. Cathode rays are passed between the poles of magnet as shown in the figure. The effect of magnetic field is to

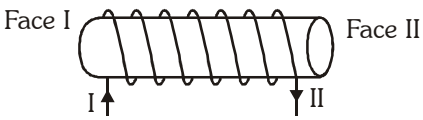


(1) increase velocity of rays
(2) deflect the rays towards S-pole
(3) deflect the rays towards N-pole
(4) deflect the rays perpendicular to the plane of paper, upwards

5. Twelve wires of equal resistance x/y are connected to form a cube. The effective resistance between two diagonal ends will be

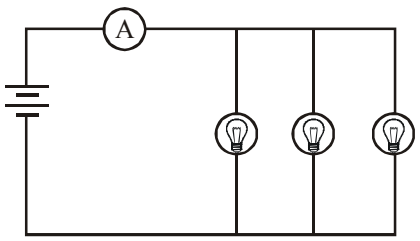
(1) $\frac{5}{6}\frac{x}{y}$ (2) $\frac{6}{5}\frac{x}{y}$ (3) $\frac{3x}{y}$ (4) $\frac{12x}{y}$

6. A current I is flown through a solenoid as shown in figure. Then



(1) both faces behaves as north pole.
(2) both faces behaves as south pole.
(3) face I behaves as north and face II behaves as south pole.
(4) face I behaves as south and face II behaves as north pole.

7. Three similar light bulbs are connected to a constant voltage dc supply as shown in the diagram. Each bulb operates at normal brightness and the ammeter (of negligible resistance) registers a steady current. The filament of one of the bulb breaks. What happens to the ammeter reading and to the brightness of the remaining bulbs ?

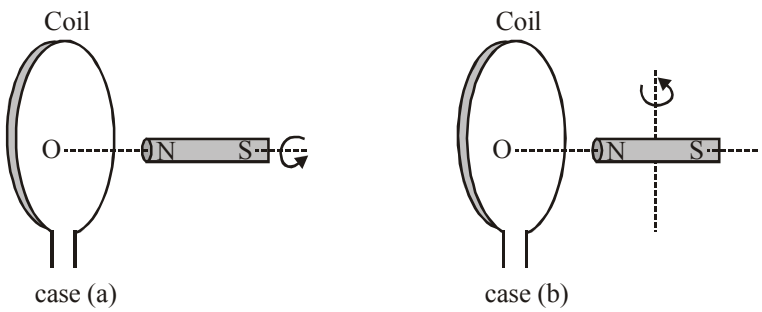


	Ammeter reading	**Bulb brightness**
(1)	Increases	Increases
(2)	Increases	Unchanged
(3)	Unchanged	Unchanged
(4)	Decreases	Unchanged

8. A 50 kg skater at rest on a frictionless rink throws a 2 kg ball, giving the ball a velocity of 10 m/s. Which statement describes the skater's subsequent motion?

(1) 0.4 m/s in the same direction as the ball's motion
(2) 0.4 m/s in the opposite direction of the ball's motion
(3) 2 m/s in the same direction as the ball's motion
(4) 2 m/s in the opposite direction of the ball's motion

9. A cylindrical bar magnet is kept along the axis of a circular coil and near it as shown in figure. The magnet is rotated in case (a) about its own axis and in case (b) about axis perpendicular to the length of magnet. In which case will there be an induced e.m.f. at the terminals of the coil ?



(1) case (a)
(2) case (b)
(3) both case (a) and case (b)
(4) Neither case (a) nor case (b)

10. A ball having initial velocity v is dropped from a height of 10 m. It loses 50% of its energy on striking the ground and rises to the same height after collision. The value of v is (take g = 9.8 m/s^2)

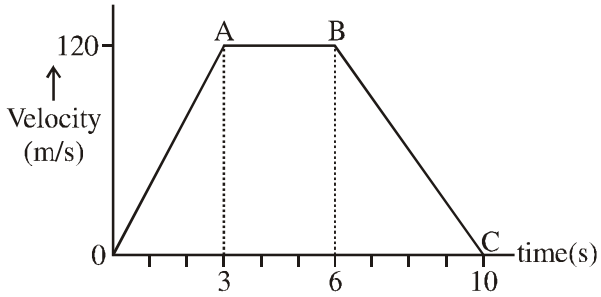
(1) 7 m/s
(2) 14 m/s
(3) 35 m/s
(4) event seems impossible

11. The table below lists the masses and distances of several asteroids that orbit the Sun. For which asteroid is the gravitational force between the Sun and asteroid strongest?

Mass and Distance Data for Asteroids			
Asteroid	**Asteroid mass (kg)**	**Sun mass (kg)**	**Mean asteroid distance from Sun (km)**
Psyche	2×10^{19}	2.0×10^{30}	4.37×10^{8}
Ida	4×10^{16}	2.0×10^{30}	4.28×10^{8}
Pallas	3.2×10^{20}	2.0×10^{30}	4.15×10^{8}
Ceres	8.8×10^{20}	2.0×10^{30}	4.14×10^{8}

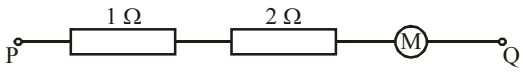
(1) Psyche (2) Ida (3) Pallas (4) Ceres

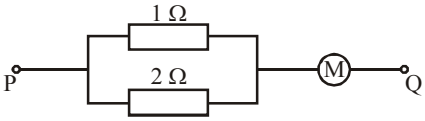
12. The velocity-time graph of an object of mass m = 50 g is shown in figure. Observe the graph carefully and calculate the force acting on the object in time intervals (i) 0-3 s and (ii) 6-10 s

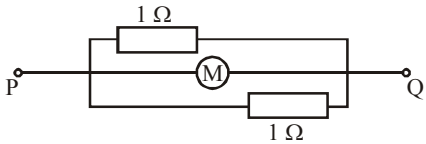


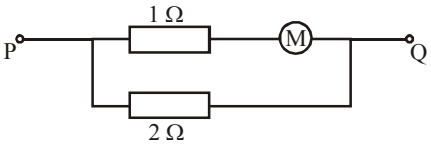
(1) (i) 40 N and (ii) 30 N (2) (i) 2 N and (ii) 1.5 N
(3) (i) 200 N and (ii) –1500 N (4) (i) 2 N and (ii) –1.5 N

13. In which of the following arrangement of resistors does the meter M, which has a resistance of 2 Ω, gives the largest reading when the same potential difference is applied between points P and Q ?

(1) 

(2) 

(3) 

(4) 

14. Two bulbs of 500 W and 300 W are manufactured to operate on 220 V line. The ratio of resistance of 500 W bulb to that of 300 W bulb is

(1) 3 : 5 (2) 5 : 3 (3) 9 : 25 (4) 25 : 9

15. A body, having kinetic energy k, moving on a rough horizontal surface, is stopped in a distance x. The force of friction exerted on the body is

(1) $\frac{k}{x}$ (2) $\frac{\sqrt{k}}{x}$ (3) $\frac{k}{\sqrt{x}}$ (4) kx

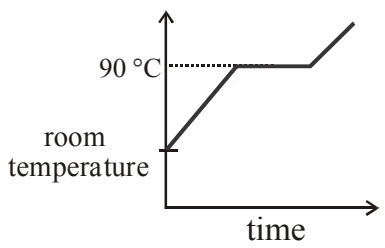
16. The number of molecules in 5.65 g of ammonia is approximately $x \times 10^{23}$. What is the value of x ?
(1) 3 (2) 2 (3) 4 (4) 1

17. In a sample of haemoglobin 0.33% iron is present. The molecular weight of haemoglobin is 67200 u. Calculate the approximate number of atoms of iron present in haemoglobin ? (Fe = 56 u)
(1) 6 (2) 1 (3) 4 (4) 2

18. How many total protons are found in one molecule of retinol ($C_{20}H_{30}O$) ?
(1) 51 (2) 151 (3) 600 (4) 158

19. What happens to the carbon dioxide in two opened cans of soda pop if can A is left on the counter and can B is left in the refrigerator?
(1) Both cans lose carbon dioxide gas, but the can in the refrigerator loses gas faster.
(2) Both cans lose carbon dioxide gas, but the can in the refrigerator loses gas slower.
(3) The two cans lose carbon dioxide gas at the same rate.
(4) Only the can on the counter loses carbon dioxide gas.

20. The graph shows the temperature change of solid 'A' ;



Which of the following set of statements is correct for solid 'A' at 90 °C?
(A) The solid 'A' is undergoing a change of state.
(B) Solid 'A' is an impure substance.
(C) Solid 'A' is a pure substance.
(D) Solid 'A' has a fixed melting point.
(1) A only (2) A & D (3) A, B & D (4) A, C & D

21. When the solution of a base is diluted what will be the change in pH of the solution?
(1) pH of the solution remains the same (2) pH of the solution will increase
(3) pH of the solution will decrease (4) pH of the solution climbs to 7

22. Acetic acid was added to a solid X kept in a test tube. A colourless and odourless gas Y was evolved. The gas was passed through lime water which turned milky. It was concluded that
(1) Solid X is sodium hydroxide and the gas Y is CO_2.
(2) Solid X is sodium carbonate and the gas Y is CO_2.
(3) Solid X is sodium acetate and the gas Y is CO_2.
(4) Solid X is sodium hydrogen carbonate and the gas Y is SO_2.

23. The compound which aqueous solution will have the lowest pH is
(1) $NaHCO_3$ (2) NH_4Cl
(3) Na_2CO_3 (4) NaCl

24. **Assertion :** Magnesium is extracted from its ore by electrolytic reduction.

Reason : All metals are extracted by electrolytic reduction.

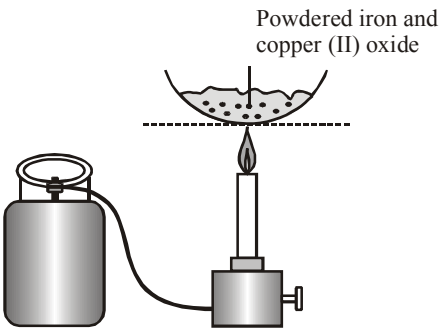
(1) Both assertion and reason are correct and reason is the correct explanation of the assertion

(2) Both assertion and reason are correct , but reason is not the correct explanation of the assertion.

(3) Assertion is correct, but reason is incorrect.

(4) Assertion is incorrect, but reason is correct.

25. Observe the mixture given below.



On heating the mixture strongly taken in a crucible,

(1) Formation of iron (II) oxide and copper takes place.

(2) Formation of copper (III) oxide and iron (II) oxide takes place.

(3) Formation of iron (III) oxide and copper (II) sulphate takes place.

(4) No reaction takes place.

26. The postulates of Bohr's atomic model are given below. Arrange them in the correct sequence.

(a) As long as the electron revolves in a particular orbit, the electron does not lose its energy. Therefore, these orbits are called stationary orbits and the electrons are said to be in stationary energy states.

(b) Electron revolve round the nucleus in specified circular path called orbits or shells.

(c) The energy associated with a certain energy level increase with the increase of its distance from the nucleus.

(d) An electron jumps from a lower energy level to a higher energy level by absorbing energy. But when it jumps from a higher to lower energy level, energy is emitted in the form of electromagnetic radiation.

(e) Each orbit or shell is associated with a definite amount of energy. Hence these are also called energy levels and are designated as K, L, M, N respectively.

(1) a c d e b

(2) b c e a d

(3) b e c a d

(4) b a d c e

27. Which among the following are isobars?

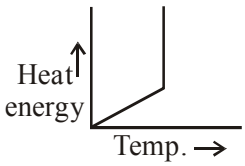
(1) ${}_{b}X^{a}$, ${}_{b}Y^{a+1}$

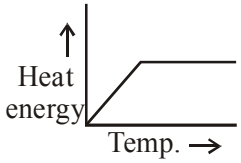
(2) ${}_{b}X^{a}$, ${}_{c}Y^{b}$

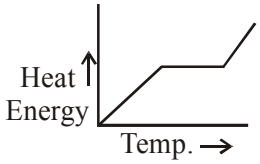
(3) ${}_{b}X^{a}$, ${}_{b+1}Y^{a}$

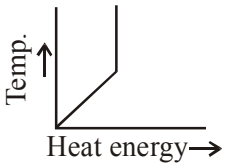
(4) ${}_{b}X^{a}$, ${}_{b-1}Y^{a-1}$

28. Which of the following is a correct graphical representation of latent heat of fusion of water with respect to temperature ?

(1) 

(2) 

(3) 

(4) 

29. In a proper equation, which are the only numbers that can be altered ?

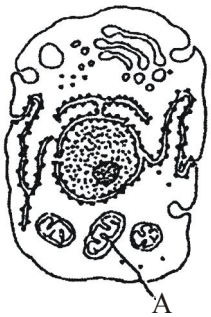
(1) Molar masses (2) Superscripts

(3) Coefficients (4) Subscripts

30. In general, nitrates are thermally unstable; when heated, the compounds break down. In which one of the following cases are the correct products given for the breakdown of the nitrate listed?

	Nitrate	**Products**
(1)	KNO_3	$KNO_2 + NO_2$
(2)	$Pb(NO_3)_2$	$PbO + NO + O_2$
(3)	HNO_3	$NO_2 + H_2O + O_2$
(4)	NH_4NO_3	$NH_3 + N_2O$

31. Select the alternative giving correct identification and function of the organelle 'A' in the diagram.



(1) Endoplasmic reticulum-synthesis of lipids

(2) Mitochondria-produce cellular energy in the form of ATP

(3) Golgi body - packaging of material

(4) Lysosomes - secrete hydrolytic enzymes

32. Given is a table describing the social organization of Honey bees. Which of the following is a correct match of the description of honeybees ?

	Types of Honey Bees	Description
I	 Drone	Female honey bees which prepare honey.
II	 Queen	Fertile female which lays eggs.
III	 Worker	Sterile males which look after the young ones, collect nectar and pollen.

(1) I and II are correct
(2) I and III are correct
(3) Only II is correct
(4) II and III are correct

33. Compare the movement of substances in xylem and phloem tissues.

Feature	Xylem	Phloem
Material transported	Water and minerals	I
Process of movement	II	Translocation
Name of relevant theory	III, IV	Mass flow theory

Replace I, II, III and IV with the appropriate words.

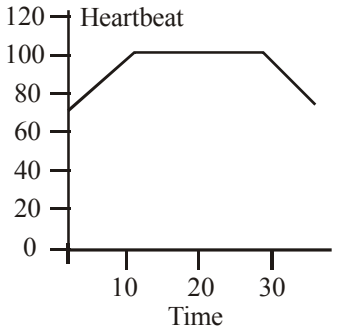
(1) I- sucrose , II - ascent of sap, III - root pressure theory, IV - guttation

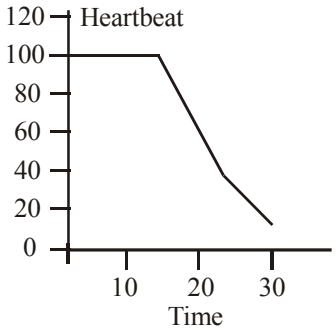
(2) I- starch , II - ascent of sap, III - guttation , IV - transpiration pull

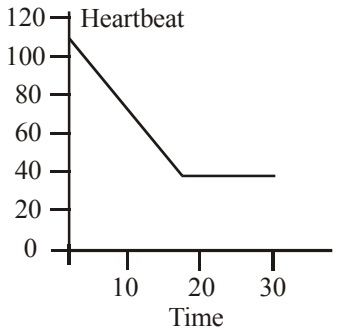
(3) I- sucrose , II - ascent of sap, III - root pressure theory, IV - transpiration pull

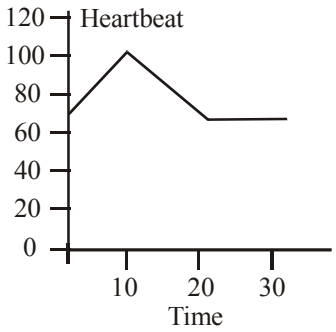
(4) I- glucose , II - pressure flow hypothesis, III - root pressure theory, IV - adhesion cohesion theory

34. Jaya jogged for 10 minutes before doing some cooling down exercises for another 10 minutes. Then she spent 10 minutes sitting on the bench and watching the sea waves lap at the shore. Which of the following graphs best depicts her heartbeat during those three activities ?

(1)


(2)


(3)


(4)


35. The anterior pituitary gland facilitates growth of an individual by release of the human growth hormone (HGH) which in turn is regulated by two hormones namely growth hormone releasing hormone (GHRH) and growth hormone inhibiting hormone (GHIH). Imbalance of these hormones could result in gigantism (an individual gains excessive height), dwarfism (a short statured individual) or acromegaly (thickening of limbs, fingers and toes). Interpret the data given below and select the appropriate statement :

Individual	Age group	Hormones
1	2-5 yrs.	Excessive GHRH
2	2-5 yrs.	Normal GHRH
3	30-35 yrs.	Excessive GHRH
4	30-35 yrs.	Excessive GHIH
5	2-5 yrs.	Excessive GHIH

(1) 1 and 3 will lead to gigantism while 4 and 5 will show dwarfism
(2) 3 will show gigantism, 1 will show acromegaly and 4 and 5 will show dwarfism
(3) 2,3 and 4 will show normal growth
(4) 1 will show gigantism, 3 will show acromegaly and 5 will show dwarfism

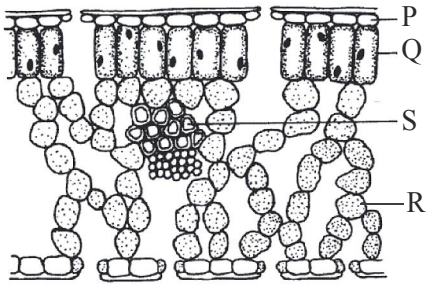
36. Part of the respiratory system where gaseous exchange takes place is
(1) The parts starting from external nostrils upto terminal bronchioles
(2) Alveoli and their ducts
(3) All bronchi and terminal bronchioles
(4) All bronchioles

37. Which one of the following organs is NOT associated with the alimentary canal?
(1) Liver (2) Gall bladder (3) Diaphragm (4) Colon

38. The principal nitrogenous excretory compound in humans is synthesized
(1) in liver but eliminated mostly through kidneys.
(2) in kidneys but eliminated mostly through liver.
(3) in kidneys as well as eliminated by kidneys.
(4) in liver and also eliminated by the same through bile.

39. Given below are certain features.
X. One produces spores, whereas the other produces seeds.
Y. One is photosynthetic, whereas the other is saprophytic.
Z. One contains xylem and phloem, whereas the other does not.
Find the pair of two divisions that can represent X, Y and Z respectively
(A) Monocot and dicot (B) Algae and fungi
(C) Ferns and mosses (D) Ferns and gymnosperms
(E) Gymnosperms and angiosperms
(1) X = A, Y = B and Z = D (2) X = D, Y = B and Z = C
(3) X = E, Y = D and Z = C (4) X = B, Y = E and Z = A

40. The diagram below is a vertical section through a leaf of a terrestrial flowering plant.



Which part is not correctly labelled?
(1) P = Epidermis (protective tissue) (2) Q = Sclerenchyma
(3) R = Spongy parenchyma (4) S = Permanent tissue

41. Respiration involves following steps
A. Diffusion of gases, O_2 and CO_2, across alveolar membrane
B. Transport of gases by blood
C. Utilization of O_2 by cell for catabolic reactions and resultant release of CO_2
D. Pulmonary ventilation by which atmospheric air is drawn in.
E. Diffusion of O_2 and CO_2 between blood and tissues.
The correct sequence of steps is
(1) A $\rightarrow$ B $\rightarrow$ C $\rightarrow$ D $\rightarrow$ E (2) E $\rightarrow$ D $\rightarrow$ C $\rightarrow$ B $\rightarrow$ A
(3) D $\rightarrow$ A $\rightarrow$ B $\rightarrow$ E $\rightarrow$ C (4) C $\rightarrow$ B $\rightarrow$ E $\rightarrow$ A $\rightarrow$ D

42. Which of the following is an effect of HIV on the human body?
(1) It reduces the number of erythrocytes in the blood
(2) It reduces the number of platelets in the blood
(3) It increases the amount of plasma in the blood
(4) It reduces the number of lymphocytes in the blood

43. Which one of the following statements is incorrect ?
(1) The medullary zone of kidney is divided into a few conical masses called medullary pyramids projecting into the calyces.
(2) Inside the kidney the cortical region extends in between the medullary pyramids as renal pelvis.
(3) Glomerulus alongwith Bowman's capsule is called the renal corpuscle.
(4) Renal corpuscles, proximal convoluted tubule (PCT) and distal convoluted tubule (DCT) of the nephron are situated in the cortical region of kidney.

44. Two test tubes are filled with a solution of bromothymol blue. A student exhales through a straw into each tube, and the bromothymol blue turns yellow. An aquatic green plant is placed in each tube, and the tubes are corked. One tube is placed in the dark, and the other tube is placed in direct sunlight. The yellow solution in the tube in sunlight turns blue, while the one in the dark remains yellow. Which statement best explains why the solution in the tube placed in sunlight returns to a blue colour?
(1) Oxygen was produced by photosynthesis.
(2) Oxygen was removed by respiration.
(3) Carbon dioxide was removed by photosynthesis.
(4) Carbon dioxide was produced by respiration.

45. Identify the correct names of hormones from the following hints.
I. "X" hormone induces fruit ripening.
II. "Y" hormone promotes root initiation and also play a role in callus differentiation
III. "Z" hormone increases the tolerance of plant to various stresses and play an important role in seed dormancy.
(1) Y = ABA; X = Auxin; Z = GA
(2) Z = GA; X = Auxin; Y = Ethylene
(3) Y = Auxin; X = Ethylene; Z = GA
(4) X = Ethylene; Y = Auxin; Z = ABA

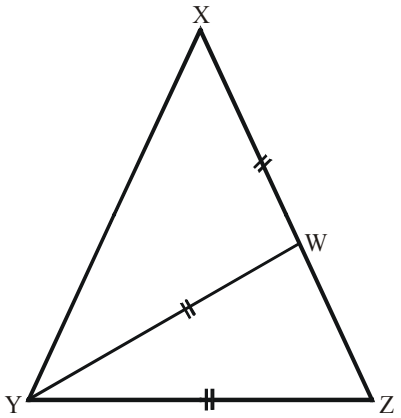
46. If n is a natural number, then 12^n will always end with an even digit except
(1) 4 (2) 6 (3) 8 (4) 0

47. Jack and Jill exercise along the same route. Jill jogs the first half of the route at 6 km/h, runs the remaining route at 12 km/h and takes a total time of x hours. Jack walks the first third of the route at 5 km/h, runs the remaining at 15 km/h and takes a total time of y hours. Which of the following is equal to $\frac{x}{y}$?
(1) $\frac{9}{8}$ (2) $\frac{7}{5}$ (3) $\frac{15}{16}$ (4) $\frac{9}{16}$

48. The points (0, –2), (3, 0) and (–3, –4) lie on a graph of a linear polynomial, then the zero of the polynomial is
(1) 0 (2) –2 (3) 3 (4) –3

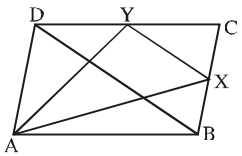
49. How many planes can be made to pass through three distinct points ?
(1) one plane
(2) two plane
(3) no plane
(4) infinite if they are collinear and only one if they are non collinear.

50. In the diagram, ΔXYZ is isosceles with XY = XZ. Also, point W is on XZ so that XW = WY = YZ. The measure of $\angle XYW$ is



(1) 18° (2) 36° (3) 45° (4) 30°

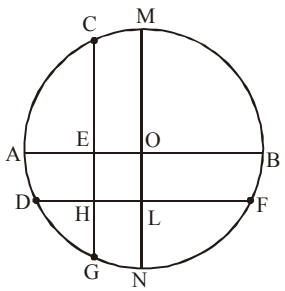
51. ABCD is a parallelogram X and Y are the mid-points of BC and CD respectively. Then the area of ΔAXY is equals to



(1) $\frac{1}{8}$ ar(parallelogram ABCD) (2) $\frac{2}{8}$ ar(parallelogram ABCD)

(3) $\frac{3}{8}$ ar(parallelogram ABCD) (4) $\frac{4}{8}$ ar(parallelogram ABCD)

52. In the following figure, the diameter of circle is 3 cm. AB and MN are two diameters such that MN is perpendicular to AB. In addition, CG is perpendicular to AB such that AE : EB = 1 : 2 and DF is perpendicular to MN such that NL : LM = 1 : 2. The length of DH in cm is



(1) $2\sqrt{2} - 1$ (2) $\frac{(2\sqrt{2}-1)}{2}$ (3) $\frac{(3\sqrt{2}-1)}{2}$ (4) $\frac{(2\sqrt{2}-1)}{3}$

53. The sides of a triangle are in the ratio 12 : 17 : 25 and its perimeter 540 cm. What is its area ?

(1) 1.4 m^2 (2) 0.9 m^2

(3) 0.7 m^2 (4) 1.2 m^2

54. If a cube of maximum possible volume is cut off from a solid sphere of diameter d, then the volume of the remaining (waste) material of the sphere would be equal to

(1) $\frac{d^3}{3}\left(\pi - \frac{d}{2}\right)$ (2) $\frac{d^3}{3}\left(\frac{\pi}{2} - \frac{1}{\sqrt{3}}\right)$ (3) $\frac{d^2}{4}\left(\sqrt{2} - \pi\right)$ (4) None of these

55. Two different numbers are selected from the set {–3, –1, 0, 2, 4} and then multiplied together. What is the probability that the product of the two numbers chosen is 0 ?

(1) $\frac{1}{10}$ (2) $\frac{1}{5}$ (3) $\frac{3}{10}$ (4) $\frac{2}{5}$

56. $2(\sin^6\theta + \cos^6\theta) - 3(\sin^4\theta + \cos^4\theta)$ is equal to

(1) 0 (2) 1 (3) –1 (4) 2

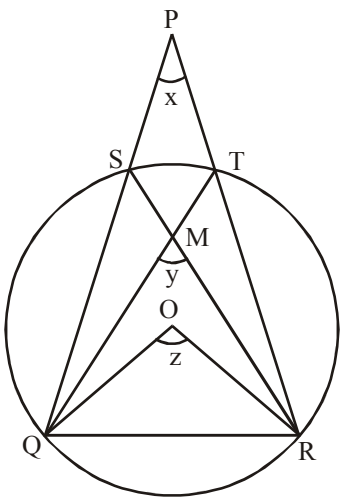
57. AB is vertical tower. The point A is on the ground and C is the middle point of AB. The part CB subtend an angle α at a point P on the ground. If AP = nAB, then $\tan\alpha$ =

(1) $n(n^2 + 1)$ (2) $\frac{n}{2n^2 - 1}$ (3) $\frac{n^2}{2n^2 + 1}$ (4) $\frac{n}{2n^2 + 1}$

58. If the mean of the squares of first n natural numbers is 105, then find the median of the first n natural numbers.

(1) 8 (2) 9 (3) 10 (4) 11

59. In the given figure, O is the centre of the circle. Then $\angle x + \angle y$ is equal to



(1) $2\angle z$ (2) $\frac{\angle z}{2}$ (3) $\angle z$ (4) None of these

60. If (x – 1) is a factor of $Ax^3 + Bx^2 - 36x + 22$ and $2^B = 64^A$, find A and B.

(1) A = 4, B = 16 (2) A = 6, B = 24
(3) A = 2, B = 12 (4) A = 8, B = 16

61. If '+' means '×', '–' means '÷', '÷' means '+' and '×' means '–', then what will be the value of 16 ÷ 64 – 4 × 4 + 3 = ?

(1) 20 (2) 15.12 (3) 52 (4) None of these

62. How many odd numbers are there in the following number series, which are immediately followed by an odd number?

7 3 2 9 5 7 4 1 3 6 4 9 5 4 6 5 2 7 2 4 1 6 7 2 1 3

(1) 4 (2) 6 (3) more than 6 (4) 3

63. The minute hand of a clock overtakes the hour hand at intervals of 65 min. How much in a day does the clock gain or lose?

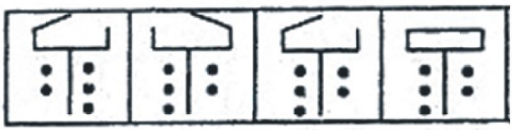
(1) Gains $56\frac{8}{77}$ min (2) Loses $32\frac{8}{11}$ min (3) Loses $10\frac{10}{143}$ min (4) Gains $10\frac{10}{143}$ min

64. Which figure will continue the following pattern of question figure from the answer figure?

Question Figure

A B C D E

Answer Figure



(1) (2) (3) (4)

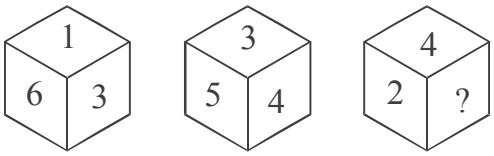
65. Imagine a clock where the hour hand makes only one revolution in 1 day (i.e., 24 hr) whereas the minute hand completes one revolution in one hour. What is the angle between the two hands at 14:50 hr as per this clock?

(1) 90° (2) 120° (3) 77.5° (4) 162.5°

66. Six students A, B, C, D, E and F are sitting in the field. A and B are from Delhi while the rest are from Bangalore. D and F are tall while others are short. A, C and D are girls while others are boys. Who is the tall girl from Bangalore ?

(1) C (2) D (3) E (4) F

67. Three positions of the same dice are given below. Observe the figures carefully and tell which number will come in place of (?).



(i) (ii) (iii)

(1) 1 (2) 6

(3) 3 (4) 5

68. There are two pairs of figures. In the first pair, one figure is related to the other in a certain manner. If the same relation have to exist in the second pair, which answer choice should come in place of "?"

(1)  (2)  (3)  (4) 

69. A cube of 5 cm has been painted on its surfaces in such a way that two opposite surfaces have been painted blue and two adjacent surfaces have been painted red. Two remaining surfaces have been left unpainted. Now the cube is cut into smaller cubes of side 1 cm each. Then how many cubes will have only two side painted ?

(1) 16 (2) 18 (3) 19 (4) 24

70. Two Statements are given followed by four conclusions. Assume these statements to be true and then check which of the conclusions are true and select the correct alternative :

Statements:

I. Yaks are heavier than cows but lighter than horses.

II. Birds are heavier than donkeys but lighter than cows.

Conclusions :

I. Donkeys are lighter than cows.

II. Cows are lighter than horses.

III. Birds are lighter than yaks.

IV. Donkeys are the lightest.

(1) Only I, II and III follow

(2) Only II, III and IV follow

(3) Only I and IV follow

(4) All follow

71. I. There are six students (A, B, C, D, E and F) in a group. Each student can opt for only three choices out of the six which are music, reading, painting, badminton, cricket and tennis.

II. A, C and F like reading.

III. D does not like badminton, but like music.

IV. Both B and E like painting and music.

V. A and D don't like painting, but they like cricket.

VI. All student except one like badminton.

VII. Two students like tennis.

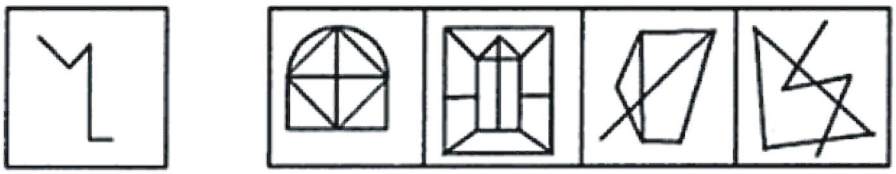
VIII. F does not like cricket, music and tennis.

Which pair of students has the same combination of choices?

(1) A and C (2) C and D

(3) B and E (4) D and F

72. Find out the alternative figure which contains figure (X) as its part.



X (1) (2) (3) (4)

73. Three statements are given followed by three conclusions numbered I, II and III. You have to take the given statements to be true even if they seem to be at variance from the commonly known facts and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Statements :

All tigers are jungles.

No jungles are birds.

Some birds are rains.

Conclusions :

I. No rain is jungle. II. Some rains are jungles. III. No birds is tiger.

(1) Only I and II follow (2) Only III follows

(3) Only either I or II, and III follow (4) Only II follows

74. Sandip's mother is the only daughter of Rekha's father. How is Rekha's husband related to Sandip ?

(1) Uncle (2) Brother (3) Grandfather (4) Father

75. How many triangles are in the given figure ?

(1) 20

(2) 21

(3) 26

(4) None of these

76. Pointing at the girl in the park, Rajesh said, 'She is the daughter of my paternal grandfather's only son'. How is Rajesh related to that girl?

(1) Cousin (2) Relative (3) Uncle (4) Brother

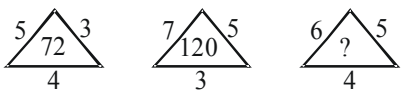
77. If it was Saturday on 17th November, 1962, then what will be the day on 22nd November, 1964?

(1) Monday (2) Tuesday (3) Wednesday (4) Sunday

78. Mitali walked towards North from a point. She took a turn to the right after a while. Then she turned to left and after sometime again to her left. Then after a while she took a turn to her right and after sometime again took a turn to the right. Give the direction in which she was walking at the last point of time ?

(1) East (2) West (3) South (4) North

79. Find the missing character (?).



(1) 112 (2) 145 (3) 135 (4) 102

80. In a certain code language SUN is written as 27 then how is MOON coded in that language ?

(1) 45 (2) 51 (3) 55 (4) 58

ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	3	2	4	4	1	4	4	2	2	2	4	4	3	1	1
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	2	3	4	2	4	3	2	2	3	1	3	3	1	3	3
Que.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	2	3	3	4	4	2	3	1	2	2	3	4	2	3	4
Que.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	4	1	3	4	2	3	2	2	2	4	3	4	2	3	3
Que.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ans.	1	2	4	3	3	2	1	3	3	4	3	2	3	4	4
Que.	76	77	78	79	80										
Ans.	4	4	1	3	2										