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## SECTION - A : PHYSICS

This section contains 15 Multiple Choice Questions. Each question has four choices (1), (2), (3) and (4) out of which ONLY ONE is correct.

1. The distance between three consecutive troughs in a wave produced in a string is 4 cm . If 2.5 wave cycles pass through any point in a second, the wave in the string has velocity
(1) $10 \mathrm{~cm} / \mathrm{s}$
(2) $0.16 \mathrm{~cm} / \mathrm{s}$
(3) $0.8 \mathrm{~cm} / \mathrm{s}$
(4) $5 \mathrm{~cm} / \mathrm{s}$
2. The splitting of white light into different colours on passing through a prism is called
(1) reflection
(2) refraction
(3) dispersion
(4) deviation
3. The velocity of a body moving with a uniform retardation of $5 \mathrm{~m} / \mathrm{s}^{2}$ is $100 \mathrm{~m} / \mathrm{s}$ at an instant. Its velocity after 7 second is
(1) $135 \mathrm{~m} / \mathrm{s}$
(2) $100 \mathrm{~m} / \mathrm{s}$
(3) $65 \mathrm{~m} / \mathrm{s}$
(4) Zero
4. A passenger in an aeroplane
(1) shall never see a rainbow
(2) may see a primary and a secondary rainbow as concentric circles
(3) may see a primary and a secondary as concentric arcs
(4) shall never see a secondary rainbow
5. A child is stuck on a frictionless horizontal surface and cannot exert any horizontal force by pushing against the surface. How can he get off?
(1) By running
(2) By rolling
(3) By jumping
(4) By spitting or coughing
6. A man runs towards a mirror at a speed $15 \mathrm{~m} / \mathrm{s}$. The speed of the image relative to the man is
(1) $15 \mathrm{~ms}^{-1}$
(2) $30 \mathrm{~ms}^{-1}$
(3) $35 \mathrm{~ms}^{-1}$
(4) $20 \mathrm{~ms}^{-1}$
7. A plane mirror makes an angle of $30^{\circ}$ with horizontal. If a vertical ray strikes the mirror, find the angle between mirror and reflected ray
(1) $30^{\circ}$
(2) $45^{\circ}$
(3) $60^{\circ}$
(4) $90^{\circ}$
8. Refractive index of glass is $\frac{3}{2}$ and refractive index of water is $\frac{4}{3}$. If the speed of light in glass is $2.00 \times 10^{8} \mathrm{~m} / \mathrm{s}$, the speed in water will be
(1) $2.67 \times 10^{8} \mathrm{~m} / \mathrm{s}$
(2) $2.25 \times 10^{8} \mathrm{~m} / \mathrm{s}$
(3) $1.78 \times 10^{8} \mathrm{~m} / \mathrm{s}$
(4) $1.50 \times 10^{8} \mathrm{~m} / \mathrm{s}$
9. Eddie hits a golf ball from the tee into the cup. At point A , the ball is stationary on the tee. At point B, the ball is at its highest point in the air. At point $C$, the ball is rolling on the ground. At point $D$, the ball is stopped in the cup. The diagram below shows the path the ball traveled from the tee to the cup.

## Flight of a Golf Ball



Choose the correct option

At $A$
(1) Only PE
(2) Only KE
(3) Only PE
(4) Only KE

From A to B
Both KE +PE
Both KE + PE
Only PE
Only PE

From B to C
Both KE + PE
Both KE + PE
Only KE
Only KE

At D
Only PE
Only PE
Only KE
Only PE
10. A ray of light follows the path as shown in figure as it travels though different media. Choose the correct relation regarding refractive indices from the given alternatives.

(1) $\mu_{1}>\mu_{2}<\mu_{3}=\mu_{4}>\mu_{5}$
(2) $\mu_{1}=\mu_{2}<\mu_{3}=\mu_{4}>\mu_{5}$
(3) $\mu_{1}>\mu_{2}<\mu_{3}>\mu_{4}<\mu_{5}$
(4) $\mu_{1}<\mu_{2}<\mu_{3}=\mu_{4}>\mu 5$
11. An iron sphere of mass 20 kg has same diameter as an aluminium sphere of mass 12 kg . Both spheres are dropped from towers of same height. When they are 10 meter above the ground, they have the same (neglect air resistance)
(1) acceleration
(2) velocity
(3) kinetic energy
(4) both (1) and (2)
12. A force of 980 N acts on a body for 0.1 seconds. Calculate the change in momentum of the body.
(1) 98 N s
(2) 9.8 N s
(3) 0.98 N s
(4) 980 N s
13. The weight of a rock on the moon is 200.6 N . What is its mass on the earth ?
(Take $g$ of earth $=9.8 \mathrm{~ms}^{-2}, \mathrm{~g}$ of $\mathrm{moon}=1.7 \mathrm{~ms}^{-2}$ )
(1) 20 kg
(2) 118 kg
(3) 200 kg
(4) 1180 kg
14. Two metal spheres of equal radius $r$ and equal densities are touching each other. The force of attraction $F$ between them is
(1) $F \propto r^{4}$
(2) $F \propto r^{6}$
(3) $F \propto r^{2}$
(4) $\mathrm{F} \propto \frac{1}{\mathrm{r}^{2}}$
15. Two men with their weights in the ratio $5: 3$ run up a staircase in times in the ratio $11: 9$. Then the ratio of power of first to that of second is-
(1) $\frac{15}{11}$
(2) $\frac{11}{15}$
(3) $\frac{11}{9}$
(4) $\frac{9}{11}$

## SECTION-B : CHEMISTRY

This section contains 15 Multiple Choice Questions. Each question has four choices (1), (2), (3) and (4) out of which ONLY ONE is correct
16. Match the following :

| Column-I |  | Column-II |  |
| :---: | :---: | :---: | :---: |
| A | Sodium | p | Yellow in colour |
| B | Helium | q | Diatomic |
| C | Sulphur | r | Soft metal |
| D | Hydrogen gas | s | Noble gas |

(1) A-p, B-q, C-r, D-s
(2) A-q, B-r, C-p, D-s
(3) A-r, B-s, C-p, D-q
(4) A-q, B-p, C-r, D-s
17. The given table shows the number of electrons, neutrons and protons in some atoms or ions of elements

| Atom or ion | Electron | Neutron | Proton |
| :---: | :---: | :---: | :---: |
| A | 10 | 12 | 12 |
| B | 17 | 20 | 17 |
| C | 18 | 18 | 17 |
| D | 5 | 6 | 5 |
| E | 12 | 12 | 12 |

Which of the following statements is incorrect?
(1) A is a cation while C is anion.
(2) B and C are atoms of different elements.
(3) E has a nucleon number 24 and it is a metal.
(4) None of these
18. What are the total number of moles of atoms in 4.32 g of $\mathrm{Sc}\left(\mathrm{NO}_{3}\right)_{3}$ ?
(Atomic weights: $\mathrm{Sc}=45.0, \mathrm{O}=16.00, \mathrm{~N}=14.01$.)
(1) 0.0132
(2) 0.324
(3) 0.0187
(4) 0.243
19. Read the given process carefully. What are $A, B$ and $C$ respectively?

(1) Gypsum, Lime, Plaster of paris
(2) Calcium sulphate, Gypsum, Plaster of paris
(3) Lime, Plaster of paris, Gypsum
(4) None of these
20. Choose the incorrect statements:
(1) The number of atoms in 5.2 moles of He is $31.3 \times 10^{23}$
(2) The number of atoms in 52 amu of He is 13
(3) The number of atoms in 5.2 gm of He is $78.26 \times 10^{22}$
(4) The number of atoms in 52 gm of He is $52.26 \times 10^{23}$
21. Aluminium and copper are extracted from their oxide and sulphide ores respectively. Which of the following is correct?
(I) Copper is extracted by the auto reduction of copper oxide by copper sulphide.
(II) Aluminium cannot be obtained by chemical reduction due to its strong affinity for oxygen.
(III) Smelting process (reduction with carbon) is also used for Aluminium.
(IV) Sulphide ores of copper are difficult to be reduced than the oxide ores.
(1) I, II and IV
(2) I and III
(3) II and III
(4) II and IV
22. A car battery was accidentally knocked over and the sulfuric acid was spilt onto a marble floor. It was observed that the acid began to fizz, indicating a gas was produced. Which gas is most likely to be produced?
(1) Carbon dioxide
(2) Hydrogen
(3) Oxygen
(4) Sulphur dioxide
23. Among the following statements, the incorrect one is
(1) Calamine and siderite are carbonates.
(2) Argentite and cuprite are oxides.
(3) Zinc blende and pyrites are sulphides.
(4) Malachite and Azurite are ores of copper.
24. The diagram below shows a model of an atom that was developed following Rutherford's experiment


Which component of the atom is not represented in Rutherford's atomic model?
(1) The neutrons
(2) The nucleus
(3) The electrons
(4) The protons
25. Which of the following pairs are isotopes?
(1) Oxygen and ozone
(2) Ice and steam
(3) Nitric oxide and nitrogen dioxide
(4) Hydrogen and deuterium
26. Gold and platinum group metals are found in nature in metallic form because
(1) they are solids at room temperature.
(2) they are highly reactive.
(3) they are soluble in water.
(4) they are relatively inert
27. Which metal can prevent the corrosion of iron ?
(1) Zn
(2) Cu
(3) Pb
(4) Ag
28. A silver article turns black when kept open in air for few days. The article when rubbed with toothpaste again starts shining because
(1) hydrogen peroxide present in the toothpaste reacts to give silver sulphate.
(2) hydrated silica present in the toothpaste reacts to give silver oxide.
(3) aluminium hydroxide present in the toothpaste reacts to give silver hydroxide.
(4) calcium carbonate present in the toothpaste reacts to give silver carbonate.
29. Consider the following statement :
(i) $\mathrm{Pb}(\mathrm{OH}) \mathrm{Cl}$ is an acid salt.
(ii) A solution contain $\mathrm{pH}=0$ is neutral in nature.
(iii) If the concentration of $\left(\mathrm{OH}^{-}\right)$is $10^{-2}$ then the pH of solution is 12 .
(iv) Blood is slightly basic in nature.
(1) All statement are correct
(2) Only (iii) and (iv) is correct
(3) Only (i), (ii) and (iv) is correct
(4) Only (iii) is correct
30. Match the following -

## Column A

Types of chemical reaction
(a) Combination reaction
(b) Thermal decomposition reaction
(c) Displacement reaction
(d) Electric decomposition reaction
(1) $\mathrm{a}(\mathrm{ii}), \mathrm{b}(\mathrm{i}), \mathrm{c}(\mathrm{iv}), \mathrm{d}(\mathrm{iii})$
(3) $\mathrm{a}(\mathrm{iii}), \mathrm{b}(\mathrm{i}), \mathrm{c}(\mathrm{iv}), \mathrm{d}(\mathrm{ii})$

## Column B

Chemical equations
(i) $\mathrm{CaCO}_{3} \xrightarrow{\Delta} \mathrm{CaO}+\mathrm{CO}_{2}$
(ii) $2 \mathrm{H}_{2} \mathrm{O} \xrightarrow{\text { Electricity }} 2 \mathrm{H}_{2}+\mathrm{O}_{2}$
(iii) $\mathrm{CaO}+\mathrm{CO}_{2} \longrightarrow \mathrm{CaCO}_{3}$
(iv) Fe (s) $+\mathrm{CuSO}_{4}$ (aq.) $\longrightarrow \mathrm{FeSO}_{4}(\mathrm{aq})+\mathrm{Cu}(\mathrm{s})$
(2) $\mathrm{a}(\mathrm{i}), \mathrm{b}(\mathrm{ii}), \mathrm{c}(\mathrm{iii}), \mathrm{d}(\mathrm{iv})$
(4) a(iii), b(i), c(ii), d(iv)

## SECTION-C : BIOLOGY

This section contains $\mathbf{1 5}$ Multiple Choice Questions. Each question has four choices (1), (2), (3) and (4) out of which ONLY ONE is correct.
31. $\qquad$ is responsible for the recovery of water and sodium chloride from the urine
(1) Bowman's capsule
(2) Ureter
(3) Loop of Henle
(4) None of the above
32. One of the following diseases spreads by animal bite.
(1) Pneumonia
(2) Tuberculosis
(3) Cholera
(4) Rabies
33. In which of the following maximum reabsorption of glomerular filtrate occurs ?
(1) Proximal convoluted tubule
(2) Distal convoluted tubule
(3) Henle's loop
(4) Collecting duct
34. In which of the following plants, there will be no transpiration?
(1) Completely submerged aquatic plants
(2) Plants growing in deserts
(3) Plants in tropical rainforest
(4) Plants growing in hilly regions
35. Urea is formed in $\qquad$ -
(1) Liver
(2) Kidney
(3) Lung
(4) Heart
36. Acid rain has high levels of $\qquad$ .
(1) Nitric and Sulphuric acids
(2) Nitric and Phosphoric acids
(3) Phosphoric and Carbonic acids
(4) Sulphuric and Phosphoric acids
37. A plant bears seeds but not fruits, though it has vascular tissues and shows secondary growth. Assign the plant group to which it belongs.
(1) Thallophyta
(2) Angiosperm
(3) Pteridophyta
(4) Gymnosperm
38. $\mathrm{CO}_{2}$ is carried by haemoglobin as
(1) Carboxyhaemoglobin
(2) Carbaminohaemoglobin
(3) Oxyhaemoglobin
(4) Both (1) and (2)
39. Given diagram shows a blood capillary in close contact with structure Y. The relative concentration (in units) of carbon dioxide $\left(\mathrm{CO}_{2}\right)$ and oxygen $\left(\mathrm{O}_{2}\right)$ are given at three different sites.
Which of the following statement is correct?

(1) Y is an alveolus and blood flow is from X to Z .
(2) Y is an alveolus and blood flow is from Z to X .
(3) Y is a muscle and blood flow is from X to Z .
(4) Y is a muscle and blood flow is from Z to X .
40. Cholera and typhoid are the diseases that have one thing in common that is
(1) Both of them can be caused by bacteria.
(2) Both of them are transmitted by contaminated food and water.
(3) Both of them are cured by antibiotics.
(4) All of the above
41. Refer the given figure of a nephron with some parts labelled as D, E F, G, H and I. Match the labelled parts with the functions given below and select the correct option.

(i) 70-80 percent of electrolytes and water are reabsorbed.
(ii) Water is reabsorbed under the influence of vasopressin.
(iii) Site of ultrafiltration.

|  | (i) | (ii) | (iii) |
| :---: | :---: | :---: | :---: |
| $(1)$ | F | G | E |
| $(2)$ | E | H and I | D |
| $(3)$ | D | F and G | I |
| $(4)$ | E | D | F |

42. Where is larynx positioned in the respiratory tract?
(1) Between pharynx and trachea
(2) Between bronchi and alveoli
(3) Between trachea and bronchi
(4) Between pharynx and nasal cavity
43. The given demonstration of an experiment is to prove that

(1) Sunlight is necessary for photosynthesis
(2) Chlorophyll is essential for photosynthesis
(3) $\mathrm{O}_{2}$ is evolved during photosynthesis
(4) $\mathrm{CO}_{2}$ is necessary for photosynthesis
44. Mark what is incorrect regarding to the phylum Arthropoda.
(1) Open type of circulatory system
(2) Bilaterally symmetrical, coelomate animals
(3) Diploblastic with head, thorax and abdomen
(4) The presence of Malpighian tubules and antennae
45. Which of following is an endoparasite?
(1) Cuscuta
(2) Plasmodium
(3) Mushroom
(4) Bread mould

## SECTION-D : MATHEMATICS

This section contains 15 Multiple Choice Questions. Each question has four choices (1), (2), (3) and (4) out of which ONLY ONE is correct.
46. From $87 x+53 y=15 ; 53 x+87 y=-155$, find the value of $x-y$ is $\qquad$
(1) 4
(2) 5
(3) 3
(4) can't be determined
47. On division by $6, \mathrm{a}^{2}$ cannot leave remainder
(1) 1
(2) 4
(3) 5
(4) 3
48. Find the largest positive number that will divide 396, 434 and 540 leaving the remainder 5, 9 and 13 respectively.
(1) 15
(2) 13
(3) 17
(4) 19
49. From the given figure, find $x, y, z$ if $G E \| A F$.

(1) $95^{\circ}, 58^{\circ}, 50^{\circ}$
(2) $85^{\circ}, 58^{\circ}, 50^{\circ}$
(3) $95^{\circ}, 85^{\circ}, 95^{\circ}$
(4) $95^{\circ}, 85^{\circ}, 50^{\circ}$
50. In the given figure, $\square \mathrm{ABCD}$ is a parallelogram, E is midpoint of AD .
$\frac{\operatorname{ar}(\triangle \mathrm{BED})}{\operatorname{ar}\left(\|^{\mathrm{gm}} \mathrm{ABCD}\right)}=$ $\qquad$

(1) $\frac{4}{3}$
(2) $\frac{1}{4}$
(3) $\frac{1}{2}$
(4) $\frac{3}{4}$
51. If $\alpha, \beta, \gamma$ are the zeroes of $x^{3}-7 x+2$; the value of $(\alpha+\beta)^{-1}+(\beta+\gamma)^{-1}+(\gamma+\alpha)^{-1}$ is
(1) 0
(2) $\frac{7}{2}$
(3) $-\frac{7}{2}$
(4) None of these
52. If $5 \cos \mathrm{~A}-12 \sin \mathrm{~A}=0$ then $\frac{\sec ^{2} \mathrm{~A}-1}{2 \tan \mathrm{~A}+\sec \mathrm{A}}$ is $\left(0 \leq \mathrm{A}<90^{\circ}\right)$
(1) $\frac{144}{169}$
(2) $\frac{55}{144}$
(3) $\frac{25}{276}$
(4) $\frac{169}{144}$
53. In the given figure, $A P$ and $B P$ are tangents drawn from an external point $P$. If angle between tangents is $60^{\circ}$, then find $\angle \mathrm{x}+\angle \mathrm{y}+\angle \mathrm{z}$.

(1) $60^{\circ}$
(2) $120^{\circ}$
(3) $100^{\circ}$
(4) $150^{\circ}$
54. On rolling of 2 dice, the probability of getting sum less than 7 is
(1) $\frac{5}{12}$
(2) $\frac{2}{3}$
(3) $\frac{1}{3}$
(4) $\frac{1}{2}$
55. A floral design of a floor is made up of 16 tiles which are triangular in shape. The side of the triangle being $9 \mathrm{~cm}, 28 \mathrm{~cm}$ and 35 cm . The cost of polishing the tiles at $50 \mathrm{paisa} / \mathrm{sq} \mathrm{cm}$ is $\qquad$ $(\sqrt{6}=2.45)$
(1) Rs. 289
(2) Rs. 288
(3) Rs. 705.6
(4) Rs. 500
56. The radius of two spheres is in the ratio $4: 5$ then, the ratio of their volumes is
(1) $4: 5$
(2) $64: 125$
(3) $16: 25$
(4) $5: 4$
57. Factorize the following polynomial $x+8 x y^{3}$.
(1) $x(1-2 y)\left(1-2 y+4 y^{2}\right)$
(2) $x(1+2 y)\left(1-2 y+4 y^{2}\right)$
(3) $x(1+2 y)\left(1+2 y+4 y^{2}\right)$
(4) $x(1-2 y)\left(1+2 y+4 y^{2}\right)$
58. If $T_{n}=\sin ^{n} \theta+\cos ^{n} \theta$, then $\frac{T_{3}-T_{5}}{T_{1}}$ is equal to
(1) $\frac{T_{5}-T_{7}}{T_{3}}$
(2) $\frac{T_{3}-T_{5}}{T_{7}}$
(3) $\frac{T_{9}-T_{6}}{T_{4}}$
(4) $\frac{T_{6}-T_{9}}{T_{4}}$
59. Mean weight of a group of 30 students is 62.5 kg . A student (weight 71.5 kg ) left the group and a new student (weight 53.5 kg ) joined the group. The new mean of the group will be
(1) 60 kg
(2) 63.5 kg
(3) 61.9 kg
(4) 59.5 kg
60. In the given figure, PB is tangent to the circle, $\angle \mathrm{AOB}=60^{\circ}$, $\mathrm{PB}=30 \sqrt{3} \mathrm{~cm}$. Find length of $A B$.

(1) 15 cm
(2) 20 cm
(3) 30 cm
(4) $30 \sqrt{3} \mathrm{~cm}$

## SECTION-E : MENTAL ABILITY

This section contains 20 Multiple Choice Questions. Each question has four choices (1), (2), (3) and (4) out of which ONLY ONE is correct.
61. In the following question, a series is given with next figure missing. Choose the correct alternative from the given ones that will complete the series.

(1)

(2)

(3)

(4)

62. At what time between 5 and 6 will the hands of the clock Coincide?
(1) $27 \frac{3}{11}$ min past 5
(2) $34 \frac{5}{11}$ min past 5
(3) $24 \frac{2}{11}$ min past 5
(4) $25 \frac{3}{11}$ min past 5
63. If we interchange $\div$ with + and 10 with 1000 , then what will be the answer for the equation given below?
$1000-100+100 \div 10$
(1) 1009
(2) 999
(3) 1000
(4) 1100
64. In a row of persons, position of $A$ from left side of the row is $9^{\text {th }} \&$ position of $M$ from right side of the row is $8^{\text {th }}$. If N is sitting just in middle of $\mathrm{A} \& \mathrm{M}$ and position of N from left side of the row is $15^{\text {th }}$. Find the total number of persons in the row?
(1) 27
(2) 29
(3) 28
(4) 30
65. The angle between the minute hand and the hour hand of a clock when the time is $8: 30$
(1) 80 Degrees
(2) 75 Degrees
(3) 60 Degrees
(4) 105 Degrees
66. Figures A and B are related in a particular manner. Establish the same relationship between figures C and D by choosing a figure from amongst the four alternatives, which would replace the question mark in fig. (D)

## Problem Figures



## Answer Figures


(1)
(2)
(3)
67. Count the number of cubes in the given figure and choose correct answer out of four alternative.

(1) 64
(2) 68
(3) 66
(4) 70
68. In the following question, statements are given followed by conclusions. You have to take the given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusion logically follows from the given statements disregarding commonly known facts.

Statements : $\quad$ Some roads are city.
All city are table.
Conclusions :

1. Some roads are table.
2. Some city are roads.
(1) Only 1 follows
(2) Only 2 follows
(3) Neither 1 nor 2 follows
(4) Both 1 and 2 follows
3. Read the following information carefully to answer the question that follows.
' $\mathrm{P}-\mathrm{Q}$ ' means ' Q is father of P '
' P Q' means ' Q is brother of P '
' $\mathrm{P}+\mathrm{Q}$ ' means ' Q is wife of P '
' $\mathrm{P} \div \mathrm{Q}$ ' means ' Q is sister of P '
Which of the following means M is the grandfather of T ?
(1) $\mathrm{T}-\mathrm{C} \div \mathrm{L}+\mathrm{N} * \mathrm{M}$
(2) $\mathrm{T}-\mathrm{R} \div \mathrm{Z}+\mathrm{L} * \mathrm{M}$
(3) $\mathrm{T} \div \mathrm{Z} * \mathrm{~L}+\mathrm{F}-\mathrm{M}$
(4) None of these
4. Find the number of triangles from the given figure.

(1) 11
(2) 12
(3) 7
(4) 9
5. When Sanju saw Mahesh, he recalled, "He is the son of the father of my daughter." How is Mahesh related to Sanju ?
(1) Son
(2) Brother
(3) Uncle
(4) Father
6. How many leap years are there from 1701 to 1900 (both are included) :
(1) 50
(2) 49
(3) 48
(4) None of these
7. Eight players are standing to play 'Standing Kho-Kho'. Geeta is at the third place to the right of Mahesh. Amar is at the first place to the right of Geeta. Asha is to the fourth place to the left of Geeta. Radha is at central place between Parag and Asha. Meena is at the central place between Geeta and Hemant. Then

Who is at the fifth place to the left of Geeta?
(1) Mahesh
(2) Asha
(3) Parag
(4) Radha
74. Which of the given net from the answer options when folded will results in the given cube?

(1)

(2)

(3)

(4)

75. Jetplanes $P, Q, R$ and $S$ started flight towards east. After flying 125 kms planes $P$ and $S$ flew towards right while planes Q and R flew towards left. After 115 km , planes Q and R flew towards their left while Planes $P$ and $S$ also turned towards their left. In which directions are the jetplanes $P, Q, S, R$ respectively flying now ?
(1) North, South, East, West
(2) East, West, West, East
(3) East, West, East, West
(4) South, North, North, South
76. Which number replace the question mark in the figure given below?

(1) 236
(2) 426
(3) 266
(4) 256
77. If $\mathrm{C}=24$ and $\mathrm{X}-\mathrm{RAY}=40$, then $\mathrm{WHAT}=$ ?
(1) 56
(2) 57
(3) 58
(4) 55
78. Study the following information and answer the questions given below.
$\mathrm{J}, \mathrm{K}, \mathrm{L}, \mathrm{M}, \mathrm{N}, \mathrm{O}$ and P are seven kids playing in the garden. They are wearing clothes of black, blue, white, green, pink, yellow and brown colours, out of these seven three are girls. No girl is wearing either black, yellow or brown, M's sister L is wearing pink, while he is wearing brown. J is wearing blue, while his sister K is not wearing green, N is wearing yellow, while his best friend P is a boy.
What colour are sister of J and M wearing?
(1) Pink and Green
(2) Pink and Yellow
(3) White and Green
(4) White and Pink
79. In the questions below, a problem figure is given. The problem figure is hidden in one of the figures given as alternatives. Find the figure in which the problem figure is hidden.

(1)

(2)

(3)

(4)

80. There are two/three statements followed by four conclusions numbered $1,2,3$ and 4 . You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the two given statements, disregarding commonly known facts.

| Statements : | Some cars are trains |
| :--- | :--- |
| Conclusions: | Some trains are cats. |
|  | 1. No car is cat. |
|  | 2. Some cats are trains. |
|  | 3. Some cars are cats. |
|  | 4. All trains are cars. |

(1) Either 1 or 2 and 3 follows
(2) Either 1 or 2 and 4 follows
(3) Either 1 or 3 follows and 2 follows
(4) None of these

Sample Test Paper : CLASS-X

## ANSWER KEY

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

