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TALLENTEX 2022

ALLEN'S Talent Encouragement Exam

Students of Class V to X

SAMPLE TEST PAPER
FOR STAGE - I

CLASS VIII

ALLEN
CAREER INSTITUTE
KOTA (RAJASTHAN)

path to success

TALLENTEX 2022
ALLEN'S Talent Encouragement Exam

PART - I
PHYSICS
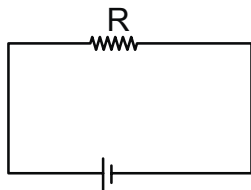## (OBJECTIVE)

1. Three rods of same dimensions out made up of different materials are as shown in the following figure.

On each rod at point C, a drop of wax is put and all the rods are then heated from point A. Wax on which of the rod will melt first?

(1) Wooden rod

(2) Plastic rod

(3) Aluminium rod

(4) Wax on all three rods melt at the same time

2. 1 dyne is equal to:

(1) 10^4 N   (2) 10^5N   (3) 10^{-5}N   (4) 10^{-4} N

3. The pitch of a sound depends upon its

(1) Wavelength   (2) Frequency   (3) Quality   (4) Amplitude

4. Which of the following statement(s) is/are incorrect?

(i) Retina is the screen of eye on which image is formed.

(ii) Ciliary muscles decide colour of light.

(iii) Iris is the opening through which light enters the eye.

(iv) Focal length of eye lens can be adjusted.

(1) (i) and (iv) only   (2) (ii) and (iii) only

(3) (ii) only   (4) (ii), (iii) and (iv) only

5. On Saturday night, Prachi spent 18 minutes on social science homework, 35 minutes on mathematics homework and 22 minutes on English homework. How much time did she spend on her homework?

(1) 1 h 75 min   (2) 2 h 15 min   (3) 2 h 75 min   (4) 1 h 15 min

6. In the given circuit 1.5 A current flows for 2 minutes. Find amount of charge transferred.
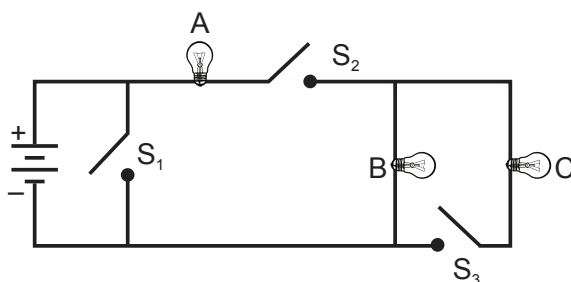

(1) 3 coulomb (2) 30 coulomb (3) 180 coulomb (4) 18 coulomb

7. Light beam coming out from headlight of car is
(1) parallel (2) divergent (3) convergent (4) irregular

8. An iron ball at 50ºC is dropped in a mug contaning water at 50ºC. Then :
(1) Net heat will flow from water to iron ball
(2) Temperature of both iron ball and water increases
(3) No net heat flow takes place
(4) Net heat will flow from iron ball to water

9. A cube of mass 'm' and side 'x' rests on the floor. An another cube of mass '2m' and side '3x' is placed on the same floor near the first cube. The ratio of the pressures exerted by the first cube and second cube on the floor is -
(1) 1 : 9 (2) 9 : 2 (3) 2 : 3 (4) 3 : 4

10. In 5 seconds, 25 wavelengths of a wave pass a certain point. What is the wave's frequency?
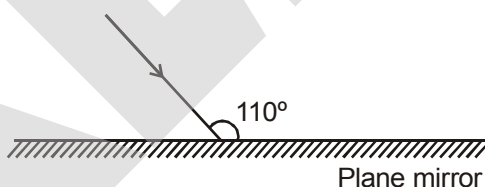(1) 125 Hz (2) 0.2 Hz (3) 5 Hz (4) 10 Hz

(INTEGER)

11. An athlete completes two and half round of a circular track of radius 'R' in time 't'. The average speed of athlete is given by $\dfrac{P\pi R}{t}$. What will be the value of P?

12. When 12C charge flows through a cross section area of a conducting wire in 3 seconds then calculate the current flowing through the conductor (in ampere).

13. The distance between the object and its image in the plane mirror is '15+z' metre. If object is moved towards mirror by 2 metre, the new distance between the object and its image is 14 metre. The value of 'z' is _____.

14. How many switches should be closed mandatorily to glow all the bulbs in the electric circuit given below ?

15. A truck covers first 100 km distance with the speed of 25 km/h, next 100 km distance with the speed of 50 km/h and the last 100 km distance with the speed of 20 km/h. The total time taken (in hours) by the truck to cover total distance of 300 km is given by 1331/Y. Find Y.

16. Radha is doing an experiment and finds that the temperature of a liquid on Celsius scale is equal to temperature on Fahrenheit scale.This temperature is $(-x \times 10°C)$. What is the value of x?

17. Om and Krish pulls a biscuit packet towards them. Krish apply a force of 125 N and Om apply a force of 'x' N. If net force acting on packet is 50 N and finally Krish gets this packet, then x = ___.

18. An object makes 20 oscillations in 40 seconds. Calculate time period (in sec) of it.

19. A light ray incidents on a plane mirror as shown in the figure given below. Find the angle of reflection. (In degree)

Plane mirror

20. A cube of side 20 cm exerts a pressure of 100 Pa on the floor on which it is kept. The weight of the cube (in Newton) is _____. (Take $g = 10$ m/s^2)

CHEMISTRY
(OBJECTIVE)

21. The base which does not have a metal atom in its molecule is :
    (1) Sodium hydroxide
    (2) Magnesium hydroxide
    (3) Ammonium hydroxide
    (4) Ferrous hydroxide

22. Precipitation is a result of _____ in the atmosphere.
    (1) Evaporation
    (2) Condensation
    (3) Suspension
    (4) Transpiration

23. Which of the following statement is not correct for bases ?

(1) Bases turn red litmus solution to blue.   (2) Bases are oxides & hydroxides of metal

(3) Bases are soapy to touch.   (4) All bases are alkalis

24. Neutralisation is a process in which an acid reacts with a base to form a salt. A student has taken a solution P which turns blue litmus to red. Select any one of the following substances which will perform neutralization reaction with the solution P.

(1) Hydrochloric acid   (2) Sodium chloride

(3) Potassium hydroxide   (4) Copper sulphate

25. Nylon 66 is made from-

(1) Adipic acid and Hexamethylene diamine by addition polymerisation.

(2) Acetic acid and Glycol by condensation polymerisation.

(3) Adipic acid and Hexamethylene diamine by condensation polymerisation.

(4) Acetic acid and Glycol by addition polymerisation.

26. Which of the following pair of metals form an amphoteric oxide?

(1) Na & Ca   (2) Zn & Al   (3) Mg & Ca   (4) Fe & Al

27. Match the following metal/non-metal given under column-I with their uses given under column-II.

	Column-I		Column-II
a.	Carbon	i	Cracker
b.	Zinc	ii.	Thermometers
c.	Sulphur	iii.	Wrapping food
d.	Aluminium	iv.	Fuel
e.	Mercury	v.	Galvanization

(1) (a)-(iii), (b)-(v), (c)-(ii), (d)-(i), (e)-(iv)   (2) (a)-(iv), (b)-(v), (c)-(i), (d)-(iii), (e)-(ii)

(3) (a)-(i), (b)-(iv), (c)-(iii), (d)-(ii), (e)-(v)   (4) (a)-(v), (b)-(iii), (c)-(ii), (d)-(i), (e)-(iv)

28. Given below is a change that occurs in butter.

$$\boxed{\begin{array}{c}\text{Butter}\\\text{(Solid state)}\end{array}} \underset{Y}{\overset{X}{\rightleftarrows}} \boxed{\begin{array}{c}\text{Butter}\\\text{(Liquid state)}\end{array}}$$

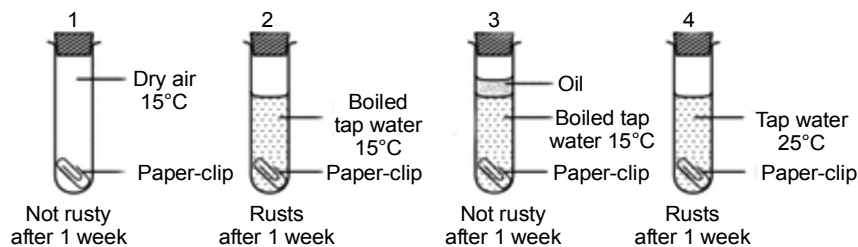Identify X and Y that cause change in the state of butter.

(1) X - Heat lost, Y - Heat gained

(2) X - Heat gained, Y - Heat lost

(3) X - Release of energy, Y - Absorption of energy

(4) X - Decrease in temperature, Y - Increase in temperature

29. Water suitable for drinking is called:

(1) Sea water   (2) Hard water   (3) Potable water   (4) Distilled water

30. Burning of magnesium in presence of oxygen is :

(1) chemical change   (2) physical change

(3) reversible change   (4) periodic change

(INTEGER)

31. The correct number of observations when sodium metal is reacted with water.

(i)   The solution becomes blue in colour.

(ii)   The solution became hot fastly.

(iii)   The solution turns red litmus blue.

(iv)   Green powder is formed at bottom

(v)   Pop sound is released when a burning matchstick is taken near to it.

(vi)   Bubbles start to evolve from solution when some aluminium granules are placed

32. How many statements are correct for neutralization?

(i)   To relieve indigestion we can use potassium hydroxide as an antacid.

(ii)   The effect of ant bites can be neutralised by using baking soda as ant releases base into the skin .

(iii)   The effect of ant bites can be neutralised by using baking soda as ant releases acid into the skin.

(iv)   Basic soil can be neutralized by adding quick lime.

(v)   Calamine solution can be used to neutralize the effect of ant bite.

(vi)   Acidic soil can be neutralized by adding slaked lime.

33. Identify the factors responsible for depletion of water table.

(i)   Industrial activities   (ii)   Increasing population

(iii)   Scanty rain fall   (iv)   Agricultural needs

(v)   Deforestation   (vi)   Drip - irrigation

(vii) Water - harvesting

34. Identify the number of correct matches from the following :

(i)   Nylon $\longrightarrow$ Highest tensile strength

(ii)   Acrylic $\longrightarrow$ Orlon

(iii)   Rayon $\longrightarrow$ Regenerated fibre

(iv)   PVC $\longrightarrow$ Condensation polymer.

(v)   Polyester $\longrightarrow$ Thermosetting

(vi)   PET $\longrightarrow$ Poly Ethylene Terylene

(vii) Spandex $\longrightarrow$ Natural fibres

(viii) Polycot $\longrightarrow$ Polymer + Cotton

35. Observe the given figures of test tubes 1, 2, 3 and 4 carefully.

1 — Dry air 15°C — Paper-clip — Not rusty after 1 week

2 — Boiled tap water 15°C — Paper-clip — Rusts after 1 week

3 — Oil — Boiled tap water 15°C — Paper-clip — Not rusty after 1 week

4 — Tap water 25°C — Paper-clip — Rusts after 1 week

How many test tubes can be used to show that air is needed for iron to rust?

36. Match column-I with column-II.

Column-I		Column-II	
(a)	Terylene	(i)	Acrylic
(b)	Bakelite	(ii)	Thermosetting plastic
(c)	PVC	(iii)	Thermoplastic
(d)	Artificial silk	(iv)	Rayon
(e)	Peels of vegetables	(v)	Biodegradable
(f)	Reduse, Reuse, Recycle, Recover	(vi)	4R principle
(g)	Melamine	(vii)	Thermoplastic

How many of the above are matched correctly ?

37. How many acids given below are organic acids ?

(i)   Nitric acid
(ii) Lactic acid
(iii) Acetic acid
(iv) Malic acid
(v)   Phosphoric acid
(vi) Nitrous acid
(vii) Formic acid
(viii) Oxalic acid
(ix) Citric acid
(x)   Tartaric acid

38. Synthetic fibres possess unique properties which make then more popular. How many statement explains the advantages of synthetic fibres from the given below ?

(i)   Synthetic fibres are durable.
(ii)   These fibres are wrinkle resistant.
(iii) These fibres do not shrink on washing.
(iv)   They are easy to wash and dry up quickly.
(v)   They are available at affordable prices.
(vi)   Their tensile strength is high.
(vii) They are not biodegradable.

39. How many terms given below are related to water cycle ?

(i) Transpiration   (ii) Evaporation

(iii) Precipitation   (iv) Condensation

(v) Sublimation   (vi) Collection

40. How many non-metals are found in solid state at room temperature ?

Carbon, Bromine, Hydrogen, Sulphur, Phosphorus, Chlorine, Mercury, Iodine.

BIOLOGY
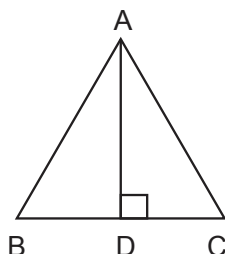## (OBJECTIVE)

41. Which of the following briefly describes the climate of Rajasthan?

(1) Hot and humid   (2) Dry and humid   (3) Hot and dry   (4) Hot and wet

42. The chemical substances rich in nutrients are called–

(1) Fertilisers   (2) Weedicides   (3) Pesticides   (4) Herbicides

43. Which statement is true about decomposers in an ecosystem-

(1) Do not breakdown organic compound

(2) Convert inorganic materials into organic compounds

(3) Convert organic materials into inorganic forms

(4) Convert inorganic materials to simpler forms

44. Plants release oxygen through–

(1) Transpiration   (2) Food chain   (3) Photosynthesis   (4) Respiration

45. Find the missing link.

Grass → Insect → Frog → ? → Eagle

(1) Snake   (2) Peacock   (3) Crow   (4) Lion

46. Following characteristic features indicate -

(I) Animal have strong sense of smell and thick layer of fat

(II) Day and night are equal in length throughout the year

(III) Beak is adapted to eat food

(1) I -Polar bear, II- Tropical rain forest, III - Toucan

(2) I -Polar bear, II- Polar region, III - Siberian crane

(3) I -Polar bear, II- Polar region, III - Toucan

(4) I -Polar bear, II- Tropical rain forest, III - Sloth

47. Read the following statements and select the correct statement–

(1) Mature RBC has several nuclei

(2) Bacteria are generally multicellular

(3) Robert Brown first observed cell

(4) First living cell was observed by A.V. Leeuwenhoek

48. Antibiotic is a chemical substance but it can not work against virus because :

(1) virus neutralizes these antibiotics.

(2) it can not be prepared by virus, so it does not work.

(3) virus does not have it's own cellular machinery.

(4) virus is non living so it can not be killed.

49. Crop rotation is done to –

(1) Increase the acidity of soil   (2) Decrease the fertility of soil

(3) Increase the fertility of soil   (4) Mature the crops before time

50. During grafting, the rooted plant in which grafting is performed, is called as-

(1) Stock   (2) Scion   (3) Layer   (4) Bud

(INTEGER)

51. How many of the following statement(s) is/are correct?

(i)   Weeds can be removed chemically and manually.

(ii)   Horticulture is culturing of flowers only.

(iii)   Zaid crops are summer crops.

(iv)   Fertilizers improves the texture of the soil.

(v)   Manures are nutrient specific.

(vi)   Vermicomposting adds humus to the soil.

52. Find the number of adaptations which are not found in animals living in the tropical rainforests-

(i) Living on the trees, development of strong tails, long and large beaks,

(ii) Thick blubber

(iii) Loud voice, diet of fruits, sensitive hearing

(iv) Sharp eyesight, thick skin, ability to camouflage in order to protect themselves from predators

(v) Presence of hump to store water

53. How many of the given part(s) is/are component(s) of the pistil?

(i) Sepals   (ii) Petals   (iii) Stamen

(iv) Ovary   (v) Ovule   (vi) Style

54. When viewed under a compound microscope, count the cell organelles/part in a temporary mount of onion peel which can be seen clearly?

(i) Cell wall   (ii) Cytoplasm   (iii) Nucleus

(iv) Vacuole   (v) Nucleolus   (vi) Lysosomes   (vii) Ribosomes

55. How many of the following statement(s) is/are false for sexual reproduction in flowering plants?

(i)   Gamete formation is a compulsory event

(ii)   Next generation are exact copy of parent plants

(iii)   Cross pollination is necessary

(iv)   Pollen grains are required

56. How many of the following are the examples of a Eukaryotic cell?

(i)   Paramecium   (ii)   Blue green algae   (iii)   Euglena

(iv)   Plasmodium   (v)   Bacteria

57. Select the number of crops which are rabi crops–

(i)   Wheat   (ii)   Pea   (iii)   Rice

(iv)   Bajra   (v)   Mustard   (vi)   Barley

58. Given below are the some characteristics of microorganisms. How many of the following belongs to an algae

(i)   Algae can be unicellular or multicellular

(ii)   Algae have a tough protective covering known as capsid

(iii)   They are heterotrophic in nature, some are parasitic and saprophytic also.

(iv)   They consumes large amount of carbon dioxide from the ecosystem

(v)   Algae may be red, green or brown.

(vi)   Agar-agar used in microbiology is obtained from algae.

59. Refer to the given food chain operating in an aquatic ecosystem.

Phytoplankton $\longrightarrow$ Daphnia $\longrightarrow$ Platy fish $\longrightarrow$ Cat fish $\longrightarrow$ Shark

When a new species X was introduced into this community, the population of platy fish get increased and population of cat fish fell over subsequent two weeks.

How many of the following statements can not be true for species X.

(i) It can be herbivore like platy fish

(ii) It can be a predator of Daphnia only

(iii) It can be a predator of cat fish only

(iv) It can be a predator of platy fish and prey of shark.

60. How many following statements are correct for polar bear?

(i)   Layer of fat found under the skin   (ii)   Long curved and sharp claws

(iii)   Thick layer of white fur   (iv)   They huddle together

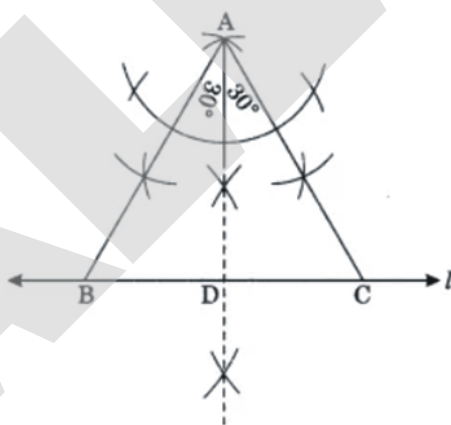(v)   They have streamlined body

MATHEMATICS

(OBJECTIVE)

61. In $\triangle ABC$, $AD \perp BC$ and AD bisects $\angle A$, then

A
B   D   C

(1) $\triangle ABD \cong \triangle ACD$ (2) AB = DC   (3) BD = AB   (4) $\angle BAD = \angle ACD$

62. In construction of an equilateral triangle whose altitude is 4.5 cm. The steps of construction is given in wrong order.

(A) $\triangle ABC$ is the required equilateral triangle.

(B) Draw any line l and take a point D on it.

(C) Draw the angle of 30° on both side of AD to meet the line l at B and C.

(D) Construct a perpendicular to l at D and cut AD = 4.5 cm.

The correct order is

(1) B, D, A, C   (2) B, C, D, A   (3) B, A, D, C   (4) B, D, C, A

63. The value of $x^{2x} + x \cdot (x^x)$ when $x = 2$ is

(1) 24   (2) 25   (3) 21   (4) 20

64. Find the number of tiles of size 12 cm × 15 cm needed to cover the path of 45 m × 20 m.
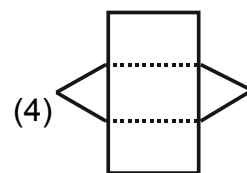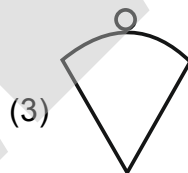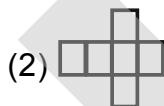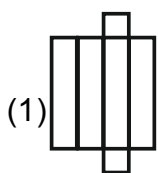
(1) 9000   (2) 50000   (3) 45000   (4) 35000

65. How many vertices are there in a cuboid?

(1) 6   (2) 7   (3) 8   (4) 9

66. The diagonals of a parallelogram ABCD intersect each other at the point O. If $\angle DAC = 32°$ $\angle AOB = 70°$, then $\angle DBC$ is:

(1) 24°   (2) 32°   (3) 38°   (4) 86°

67. Simplify : $19 + \dfrac{1}{5}\left[\left\{-20 \times \left(55 - \overline{13-3}\right)\right\} \div (-5)\right]$

(1) 50   (2) 55   (3) 60   (4) 65

68. The product $\left(2 - \dfrac{1}{3}\right)\left(2 - \dfrac{3}{5}\right)\left(2 - \dfrac{5}{7}\right)....\left(2 - \dfrac{97}{99}\right)$ is equal to :

(1) $\dfrac{5}{99}$ (2) $\dfrac{101}{99}$ (3) $\dfrac{101}{3}$ (4) $\dfrac{97}{99}$

69. Which following is net of a cube?

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

70. If $7^{x+2} = 2401$, then x is equal to

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

71. Rakesh divides a number by 1209 and gets a remainder 62. If Vikram divides the same number by 31, then what is the remainder?

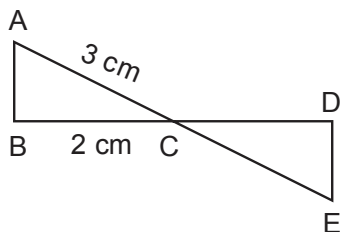(1) 3   (2) 7   (3) 0   (4) 4

72. The product of the following fractions

$$\dfrac{\dfrac{1}{2} - \dfrac{1}{3}}{\dfrac{1}{3} - \dfrac{1}{4}} \times \dfrac{\dfrac{1}{4} - \dfrac{1}{5}}{\dfrac{1}{5} - \dfrac{1}{6}} \times \dfrac{\dfrac{1}{6} - \dfrac{1}{7}}{\dfrac{1}{7} - \dfrac{1}{8}} \times .... \times \dfrac{\dfrac{1}{98} - \dfrac{1}{99}}{\dfrac{1}{99} - \dfrac{1}{100}}, \text{ is :}$$

(1) 2   (2) 50   (3) 100   (4) $\dfrac{1}{100}$

73. Arrangement of $\dfrac{4}{5}, \dfrac{2}{3}, \dfrac{5}{4}$ in ascending order is

(1) $\dfrac{4}{5}, \dfrac{5}{4}, \dfrac{2}{3}$
(2) $\dfrac{5}{4}, \dfrac{4}{5}, \dfrac{2}{3}$
(3) $\dfrac{2}{3}, \dfrac{4}{5}, \dfrac{5}{4}$
(4) $\dfrac{5}{4}, \dfrac{2}{3}, \dfrac{4}{5}$

74. In given figure, AC = 3 cm, BC = 2 cm and $\triangle ABC \cong \triangle EDC$, then
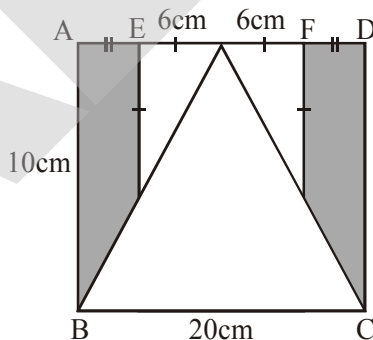

(1) CD = 3 cm
(2) DE = 3 cm
(3) CE = 3 cm
(4) DE = 2 cm

75. Choose the option in which a triangle CANNOT be constructed with the given lengths of sides.

(1) 8 cm, 17 cm, 15 cm
(2) 2 cm, 2 cm, 2 cm
(3) 9 cm, 6 cm, 2 cm
(4) 13 cm, 12 cm, 5 cm

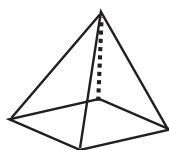**76.** If $5^{x-y} = 125$ and $5^{x+y} = 625$, then x is equal to

(1) $\dfrac{7}{2}$
(2) $\dfrac{3}{2}$
(3) $\dfrac{5}{2}$
(4) $\dfrac{9}{2}$

77. Find the area of the shaded regions.

(1) 67 cm^2
(2) 64 cm^2
(3) 65 cm^2
(4) 66 cm^2

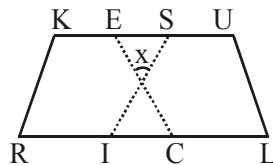**78.** How many edges does the following figure have.

(1) 7
(2) 8
(3) 9
(4) 10

79. How many non overlapping triangles can we make in a n-gon (polygon having n sides) by joining the vertices.

    (1) n – 2   (2) n – 3   (3) n – 4   (4) n – 1

80. Find square of 0.017.

    (1) 0.289   (2) 0.0289   (3) 0.00289   (4) 0.000289

81. If 1 is subtracted from LHS of an equation and 1 is added to RHS of the equation then which of the following is true ?

    (1) LHS will increased by 2 than RHS   (2) LHS will increase by 1 than RHS
    (3) RHS will increase by 2 than LHS   (4) RHS will increase by 1 than LHS

82. Commutative property of rational number is satisfied in the case of _____

    (1) addition   (2) subtraction   (3) division   (4) simplification

83. What is the unit digit of a number whose cube ends with digit 8.

    (1) 2   (2) 8   (3) either 2 or 4   (4) either 2 or 4 or 8

84. The values of y for which the equation $x^{3y+10} + 2x = 3$ is a linear equation in variable x is

    (1) $-3 \text{ or } \dfrac{-10}{3}$ (2) $3 \text{ or } \dfrac{10}{3}$ (3) 0 or 1   (4) only 3

85. If one of the diagonal and the area of a rectangle are 25 m and 168 m^2, what is the length of the rectangle?

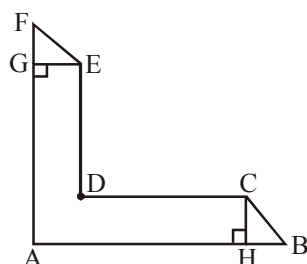   (1) 17 m   (2) 31 m   (3) 12 m   (4) 24 m

(INTEGER)

86. What is the smallest number n greater than 1 such that $\sqrt{1+2+3+.....+n}$ is a positive integer?

87. _____ is the least perfect square number.

88. A transport company's vans each carry a maximum load of 12 tonnes. 24 sealed boxes (can't be opened) each weighing 5 tonnes have to be transported to a factory. The number of vans needed to load this is _____.

89. In the given figure, RISK and CLUE are parallelograms and $\angle R = 70°$ and $\angle L$ is half of $\angle ESI$. Find the measure of x (in degrees).

90. If two positive integers differ by 72 and the quotient obtained on dividing one by the other is 5. Find the sum of the integers.

91. If $\left(\dfrac{1}{2} + \dfrac{1}{6} + \dfrac{1}{12} + \dfrac{1}{20} + \dfrac{1}{30} + \dfrac{1}{42} + \dfrac{1}{56} + \dfrac{1}{72} + \dfrac{1}{90} \right) = \left| \dfrac{p}{q} \right|$ and HCF of (p, q) = 1 then find p × q = ?

92. The value of $\sqrt[3]{5} \times \sqrt[3]{50} \times \sqrt[3]{500}$ is_____.

93. If four-fifth of a number is 196, then two-seventh of the same number will be _____.

94. How many cubes of surface area 96 square centimeters each can be made by melting a cube of surface area 384 square centimeters?

95. In a class of 40 students, $\dfrac{3}{5}$ of the total number of students are girls. How many students of the class are boys ?

96. If $7 \times 7^{\frac{1}{2}} \times 7^2 \times 7^{\frac{5}{2}} = 7^{3+a}$, then the value of a is _____.

97. _____ is the sum of first 10 perfect squares.

98. Additive inverse of 5 is _____.

99. How many parallel lines can be drawn passing through a point not on the given line?

100. $(x+20)°$ and $(2x +10)°$ are the adjacent angle of a parallelogram, then find x (in degrees).

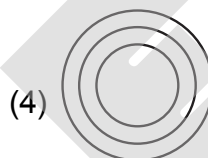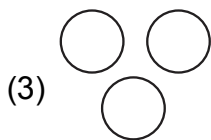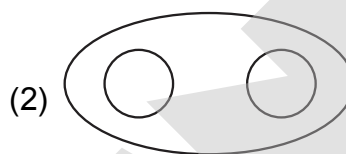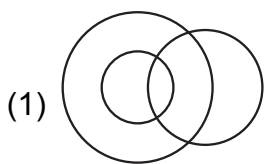**101.** The value of $\dfrac{7^{n+2} - 7^n}{7^{n+1} - 7^n}$ is_____.

102. Rohit was asked to find the value of $\dfrac{3}{8}$ of a sum of money. Instead of multiplying the sum by $\dfrac{3}{8}$ he divided it by $\dfrac{3}{8}$ and then his answer exceeded by Rs. 55. Find the correct value of $\dfrac{3}{8}$ sum of money (in Rupees) ?

103. The cube of number x is 25 times of x, then find x, where $x \neq 0$ and $x \neq -5$.

104. If $\dfrac{x+5}{3} - \dfrac{5x-7}{6} = \dfrac{x-2}{3}$, then value of x in decimal form will be_____.

105. If the number of tiles (10 cm × 10 cm) each will be required to pave a footpath 1 m wide carried round the outside of a plot 18 m × 8 m is x. Then find $\dfrac{x}{14}$?

106. Rohit has 6 wooden sticks of equal length. He wants to join all of them in such a way that they make a regular polygon, at what internal angle (in degrees) he has to join wooden stick with each other ?

107. A boy gets 3 marks for each correct sum and loses 2 marks for each incorrect sum. He does 24 sums and obtains 37 marks. What was the number of correct sums?

108. Find the difference of the unit digits of cubes of the numbers for which the digits in the units places are 2, 8.

109. The age of the father is equal to the sum of the ages of his two sons. 20 years ago the age of father is twice the sum of the ages of his two sons. Find the present age of father (in years).

110. Find area of AHBCDEFGA (in cm^2), where AB || CD, AF || DE and AF = AB = 10 cm, DC = DE = 6 cm, GE = CH = 2 cm.

PART-II
IQ
(OBJECTIVE)

111. A is the son of B, C. B's sister has a son D and a daughter E. F is the maternal uncle of D. How many Nephews does F have?
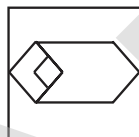
(1) 0   (2) 1   (3) 2   (4) 3

112. Which of the following diagrams indicates the best relation between Women, Mothers and Engineers?

(1)   (2)

(3)   (4)
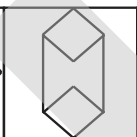
113. Find out the alternative figure which contains figure (X) as its part.

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

114. In the following question a number series is given with one term missing. Choose the correct alternate that will continue the same pattern and replace the question mark in the given series.

1, 2, 3, 6, 9, 18, ?, 54

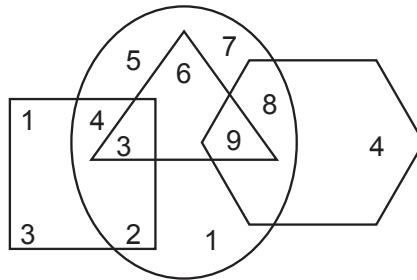(1) 18   (2) 27   (3) 36   (4) 81

115. In a row of 20 students when 'A' was shifted by four places towards the right he became thirteenth from the left end his earlier position from the right end of row is

(1) 11   (2) 9   (3) 12   (4) 10

116. Select correct combination of mathematical sign to replace '*' sign to balance the equation :

9 * 4 * 22 * 14

(1) x = –   (2) × – =   (3) = – ×   (4) – × =

117. Study the figure given below carefully and answer the question that follow :

What is the product of the numbers which belong to two figures only ?

(1) 64   (2) 192   (3) 384   (4) 483

118. Arun said, "This lady is the wife of the grandson of my mother." Who is Arun to the lady?

(1) Father   (2) Grandfather   (3) Husband   (4) Father-in-law

119. In the following question one term in the number series is wrong. Find out the wrong term.
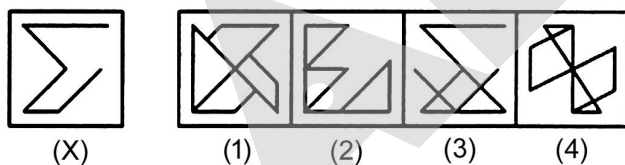
445, 221, 109, 46, 25, 11, 4

(1) 25   (2) 46   (3) 109   (4) 221

120. Choose the alternative which is closely resembles the mirror image of the given combination.

ANS43Q12

(1) 21Q34SNA   (2) ANS43Q12

(3) 12Q43ANS   (4) SNA34Q21

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

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

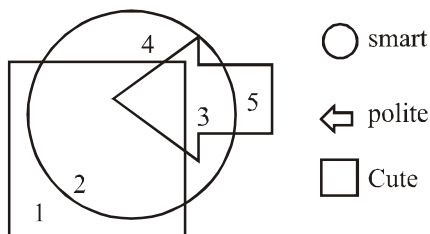**122.** Series : 5 1 4 7 3 9 8 5 7 2 6 3 1 5 8 6 3 8 5 2 2 4 3 4 9 6

How many even numbers are there in the sequence which are immediately preceded by an odd number but immediately followed by an even number ?

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

123 Sam ranked 9th from the top and 38th from the botton in a class. How many students are there in the class?

(1) 45   (2) 47   (3) 46   (4) 48

124. Five people are numbered and have some characteristics. Study the diagram to answer correctly
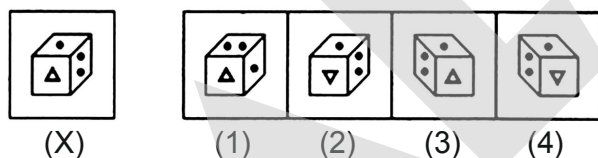

Which number person is smart but neither polite nor cute?

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

125. Choose the correct water image of the given figure (X) from amongst the four alternatives.

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

126. Choose the correct mirror image of the given figure (X) from amongst the four alternatives :

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

127. If + means –, × means /, – means + and / means × then find out the value of the given expression:
3 – (45 × 5/3) – 15

(1) 32   (2) 42   (3) 45   (4) 51

128. Read the following information carefully to answer the question.

Mr. and Mrs Oberoi has three children Sakshi, Rashmi and Vishesh. Vishesh has married to Shikha who is daughter of Mr Sharma who is married to Rashi. Neha and Sidhi are daughters of Vishesh and Shikha.

What is the relation of Sakshi to Neha ?

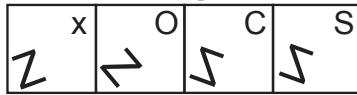(1) Sister   (2) Niece   (3) Aunt   (4) Daughter

129. Select a figure from amogst the Answer Figures which will continue the same series as established by the

Problem Figures:

S	N	L	⅄	Z
↑	ς	И	Γ	Y
(A)	(B)	(C)	(D)	(E)

Answer Figures:

x	O	C	S
Z	↯	ς	ς
(1)	(2)	(3)	(4)

130. Pointing to a lady in the garden, Priyansh said," She is the only daughter of my grandfather's only son". How is priyansh related to that lady ?

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

131. Thirty-five vehicals are parked in a parking in a single row. After the first car, there is a one bike, after the second car, there are two bike, after the third car, there are three bike and so on ....

Work out the number of bike in the row

(1) 26   (2) 29   (3) 24   (4) 28
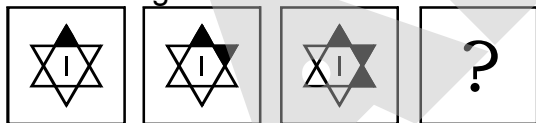
132. What will come in place of (?)

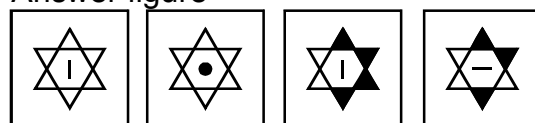J, F, M, A, M, ?

(1) M   (2) J   (3) D   (4) S

133. In the following question which one of the answer figure would occupy the next position in the problem figure. If they continue in the same order.

Problem figure

Answer figure

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

134. If $a \div b = 2(a+b)$ and $a \times b = \dfrac{ab}{2}$. Then what is the value of

$(5 \div 7) + (6 \times 4)$

(1) 32   (2) 40   (3) 36   (4) 57
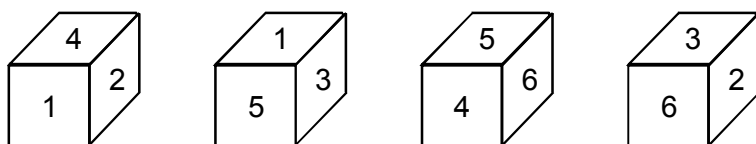
135. Complete the given series 77, 49, 36, 18, ?

(1) 9   (2) 8   (3) 6   (4) 4

(INTEGER)

136. If CALM is written as 29 then YEAR is written as what ?
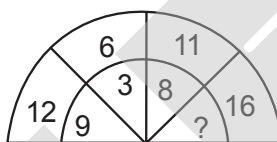
137. A child crawls 20 feet towards North, turns right and crawls 30 feet, turns right again and crawls 35 feet. He turns left again and crawls 15 feet. He turns left again and crawls 15 feet. Finally he turns to his left to crawl another 15 feet. How far (in feet) is he from his starting point.

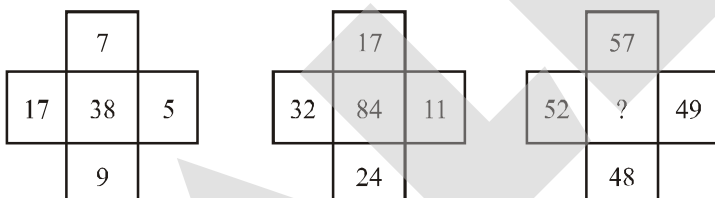**138.** A dice is thrown, four different positions are given below.

Which number is opposite to 3?

139. What will come in place of (?)

140. What will come in place of (?)

141. In the following question, find the number of straight lines in the given figure.

142. Pappu walks from A in the east 10 feet then he turns towards right and walks 3 feet. Again he turns towards right and walks 14 feet. How far is she from A now?

143. In a row of boys facing the North, A is sixteenth form the left end and C is sixteenth form the right end. B, who is fourth to the right of A, is fifth to the left of C in the row. How many boys are there in the row?

144. Find the next number in the given series.

16, 32, 24, 48, 40, 80, 72,?

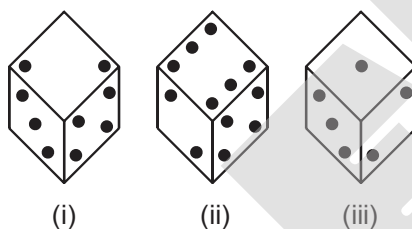**145.** A cuboid shaped wooden block has 6 cm length, 4 cm breadth and 1 cm height. Two faces measuring 4 cm × 1 cm are coloured in black. Two faces measuring 6 cm × 1 cm are coloured in red. Two faces measuring 6 cm × 4 cm are coloured in green. The block is divided into 6 equal cubes of side 1 cm (from 6 cm side), 4 equal cubes of side 1 cm (from 4 cm side).

How many cubes will have four colour surface painted ?

146. Given below are three different position of a dice. Find the number of dots on the face opposite to the face appearing 3 dots.

(i)   (ii)   (iii)

147. In a certain code language, CHOCOLATES is coded as 100. How will SENSITIVE be coded in the same language ?

148. Anil walks 15 m from point A towards the east to reach point B. Then he takes right turn and walks for 20 m to reach point C. Now he takes a left turn and walks for 15 m to reach point D. Then he takes a left turn and walks for 10 m to reach point E. Then he takes a left turn and walks for 20 m to reach point F. Now he takes a right turn and walks for 5 m to reach point G. Then he takes a left turn and walks for 10m to reach point H.

What is the distance (in m) between point H and Point A ?

149. Find the value of x.

78	
12	13

98	
14	14

108	
12	x

150. How many squares are there in the following figure ?

151. Complete the series: 13, 24, 46, 90, 178, ...

152. Read the following information carefully and answer the questions given below :

A man walks from Point A to Point B. He walks from point A walks 8 m south, then takes left walks 5 m again takes left walks 4 m. Then takes right walks 3 m and then take left walks 4 m to reach point B.

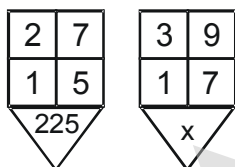What is the shortest distance from Point A to Point B in meters?

153. A tourist drives 10 km towards East and turns to the right hand and drives 3 km. Then, he drives towards West (turning to his right) 3 km. He, then turns to his left and drives 2 km. Finally he turns to his right and travels 7 km. How many km away is he from his starting point?

154. All the faces of cube is coloured with yellow colour. The cube is cut into 125 small cubes. How many small cubes having no faces coloured?

155. If 'XYZ' is written as '6' and 'RWY' is written as '72', then 'BVZ' is written as.

156. Complete the given series 4, 9, 13, 22, 35, ?

157. Find the value of x.

2	7
1	5

225

3	9
1	7

x

158. Count the number of parallelogram in the given figure.

159. Four basic standard dice are thrown on the ground. The total of numbers on the top faces of these four dice is 13 as the top faces showed 4, 3, 1 and 5 respectively. What is the total of the faces touching the ground ?

160. In a certain code language, if CABINET = 70 and BEAUTY = 60, then PRODUCTION = ?

ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10
Ans.	3	3	2	2	4	3	3	3	2	3
Que.	11	12	13	14	15	16	17	18	19	20
Ans.	5	4	3	2	121	4	75	2	20	4
Que.	21	22	23	24	25	26	27	28	29	30
Ans.	3	2	4	3	3	2	2	2	3	1
Que.	31	32	33	34	35	36	37	38	39	40
Ans.	4	3	5	3	1	5	7	6	5	4
Que.	41	42	43	44	45	46	47	48	49	50
Ans.	3	1	3	3	1	1	4	3	3	1
Que.	51	52	53	54	55	56	57	58	59	60
Ans.	3	2	3	4	2	3	4	4	3	4
Que.	61	62	63	64	65	66	67	68	69	70
Ans.	1	4	1	2	3	3	2	3	2	3
Que.	71	72	73	74	75	76	77	78	79	80
Ans.	3	2	3	3	3	1	2	2	1	4
Que.	81	82	83	84	85	86	87	88	89	90
Ans.	3	1	1	1	4	8	1	10	75	108
Que.	91	92	93	94	95	96	97	98	99	100
Ans.	90	50	70	8	16	3	385	-5	1	50
Que.	101	102	103	104	105	106	107	108	109	110
Ans.	8	9	5	4.2	400	120	17	6	60	32
Que.	111	112	113	114	115	116	117	118	119	120
Ans.	3	1	2	2	3	2	3	4	2	2
Que.	121	122	123	124	125	126	127	128	129	130
Ans.	3	1	3	4	4	3	3	3	3	1
Que.	131	132	133	134	135	136	137	138	139	140
Ans.	4	2	3	3	2	49	30	4	13	206
Que.	141	142	143	144	145	146	147	148	149	150
Ans.	14	5	40	144	4	6	81	5	18	7
Que.	151	152	153	154	155	156	157	158	159	160
Ans.	354	8	5	27	125	57	400	60	15	100