CLASS : VI MATHEMATICS

1. **Which of the following numbers has a value between "0" and "1"?**

(A) 1.001 (B) $\frac{11}{10}$ (C) $\frac{4}{3}$ (D) $\frac{8}{9}$

2. **In a party room, 20 workers will decorate 70 tables. Each table will be decorated with 10 silver balloons and 15 gold balloons. Which equation could be used to find x, the total number of silver and gold balloons needed to decorate all the tables?**

(A) $x = 70(10+15)$ (B) $x = 15(70+10)$

(C) $x = 70+(10\times15)$ (D) $x = 20(70+10+15)$

3. **Which pair of operations will make the equation below true when inserted into the blank spaces in the order shown?**

$$2\frac{3}{10} \_\_\_\_ 1.5 \_\_\_\_ 2 = 1.8$$

(A) – and + (B) × and + (C) + and – (D) × and –

4. **Anshu wants to find the distance her unicycle moves on the side walk when the tyre makes one 360⁰ rotation.**

Which of the following best describes the distance in one 360⁰ rotation?

(A) The area of the tyre

(B) The radius of the tyre

(C) The diameter of the tyre

(D) The circumference of the tyre

5. **What property is shown in the equation below?**

$$3 \times (4 \times 5) = (3 \times 4) \times 5$$

(A) Inverse property of multiplication

(B) Identity property of multiplication

(C) Associative property of multiplication

(D) Commutative property of multiplication

6. **A sixth-grade class completed a survey about favourite drinks. Of the students in the class, $\frac{2}{6}$ chose Coke, and $\frac{3}{8}$ chose Sprite. What fraction of the class chose either Coke or Sprite as their favourite drink?**

(A) $\frac{1}{24}$ (B) $\frac{6}{48}$ (C) $\frac{5}{14}$ (D) $\frac{17}{24}$

7. **Bobby is sorting some nails by their lengths. The lengths of the nails are $2\frac{1}{2}$ cm, $2\frac{3}{4}$ cm, $\frac{3}{4}$ cm, $3\frac{1}{2}$ cm and $2\frac{1}{4}$ cm. Which of the following statements is correct?**

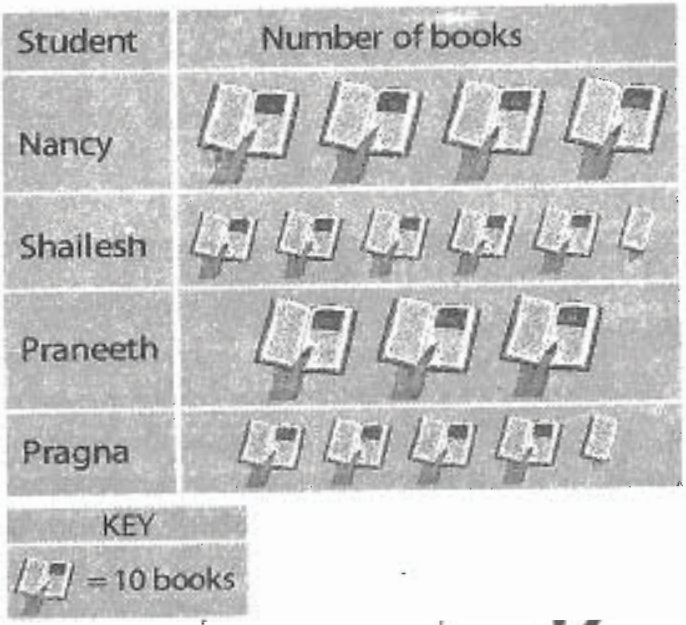
(A) $2\frac{1}{2} < 2\frac{1}{4} < \frac{3}{4} < 3\frac{1}{2} < 2\frac{3}{4}$

(B) $\frac{3}{4} < 2\frac{1}{4} < 2\frac{1}{2} < 2\frac{3}{4} < 3\frac{1}{2}$

(C) $\frac{3}{4} < 2\frac{1}{2} < 2\frac{1}{4} < 3\frac{1}{2} < 2\frac{3}{4}$

(D) $3\frac{1}{2} < 2\frac{3}{4} < 2\frac{1}{2} < 2\frac{1}{4} < \frac{3}{4}$

8. **The pictograph below shows the number of books read by four sixth-grade students?**



How many more books did Shailesh read than Praneeth?

(A) $2\frac{1}{2}$ (B) $8\frac{1}{2}$ (C) 25 (D) 85

9. **Which of the following has the greatest value?**

(A) $(2\times 100{,}000)+(6\times 100)$

(B) $(2\times 100{,}000)+(5\times 1{,}000)$

(C) $(3\times 10{,}000)+(6\times 100)+(7\times 10)$

(D) $(3\times 10{,}000)+(5\times 1{,}000)+(7\times 10)$

10. **The measure of an angle is 100^0. What kind of angle is this?**

(A) Right (B) Acute (C) Obtuse (D) Straight

11. **A comet passed by the Earth in the year 1835. It passes by the Earth every 60 years. Based on this information, in which of the following years can the comet be expected to pass by the Earth?**

(A) 2035 (B) 2060 (C) 2075 (D) 2080

12. **Which of the following could be the rule used to create the number pattern shown below?**

250, 130, 70, 40, 25

(A) Subtract 120

(B) Subtract 10; then divide the result by 2

(C) Divide by 2

(D) Divide by 2; then add 5 to the result

13. **The diagram shows two numbers.**

467, 285 **30, 792**

Find the product of the place value of digit 6 and the place value of digit 9.

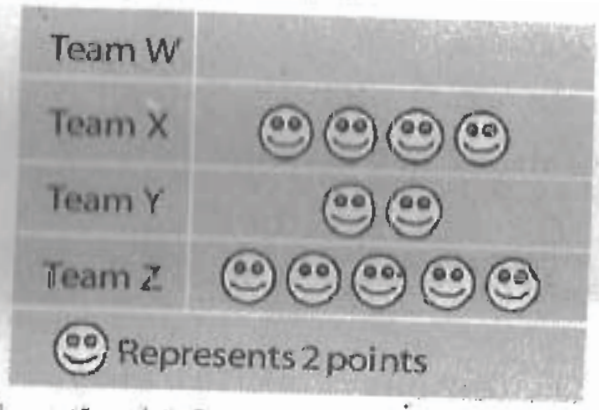
(A) 5,400,000 (B) 54,000 (C) 5,400 (D) 54

14. **$2.9 + P + Q = 9 - 1.8 - 1.32$**

Find the total value of P and Q.

(A) 2.18 (B) 2.98 (C) 3.42 (D) 3.62

15. **The incomplete pictograph shows the number of points obtained by four teams.**

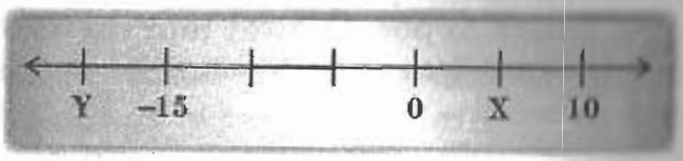


Team W has the highest score with 8 points more than the team with the second highest score. How many points does team W score?

(A) 4 (B) 12 (C) 16 (D) 18

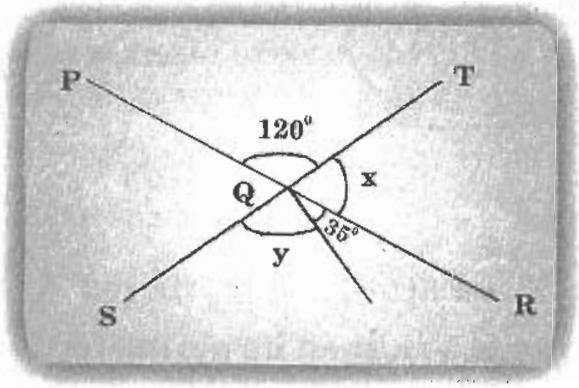
16. **1 million = ____ lakhs**

(A) 1 (B) 10 (C) 16 (D) 18

17. 

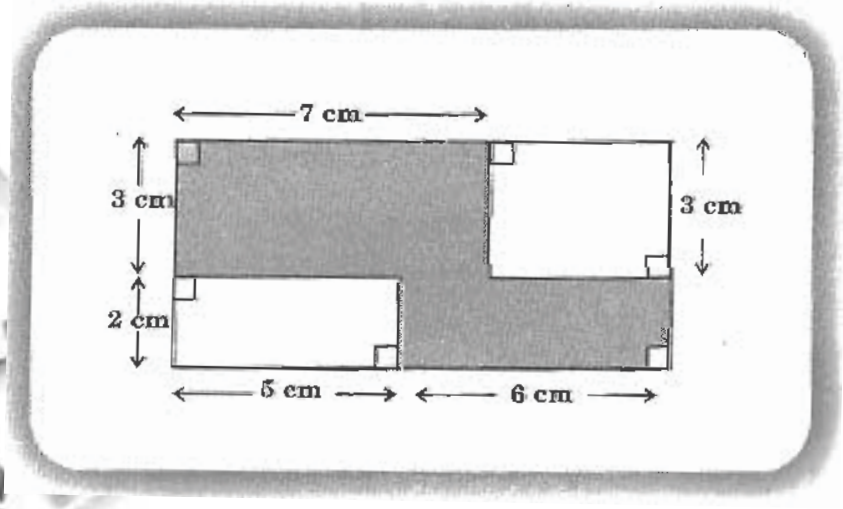
The diagram above shows a number line. The value of X – Y is:

(A) –15 (B) –10 (C) 15 (D) 25

18. 

In the figure above, PQR and SQT are straight lines. The value of x + y is:

(A) 120° (B) 145° (C) 150° (D) 160°

19. 

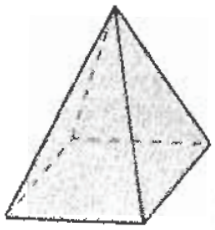
For the figure shown above, find the area, in cm^2, of the shaded portion.

(A) 33 (B) 44 (C) 48 (D) None of these

20. **Mr. Srinivas works on the 36th floor of an office complex. He goes down 33 floors to post a letter and then goes up 42 floors to a restaurant to take his lunch. On which floor is the restaurant?**

(A) 27 (B) 39 (C) 45 (D) 72

21. **How many edges does the following figure has?**



(A) 12 (B) 8 (C) 6 (D) 4

22. **$-101 \times$ __?__ $= 101$**

(A) 1 (B) 0 (C) –1 (D) 100

23. **If the side of a square is 5 m, then its perimeter is:**

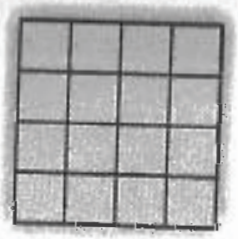
(A) 20 cm (B) 25 m (C) 5 m (D) 20 m

24. **What is the value of "n" that makes the equation below true?**

$$\frac{n}{3} = 12$$

(A) 36 (B) 12 (C) 9 (D) 3

25. **How many squares are there in the following figure?**



(A) 16 (B) 17 (C) 25 (D) 30

CLASS : VI PHYSICS

26. Which of the following measurements has NOT been expressed in correct SI unit?

(A) 5 metres of cloth

(B) 20 seconds

(C) 2 kg petrol

(D) A surface area of 25 m^2

27. If the plane of orbit of earth and moon would be a straight line, what would happen?

(A) No eclipse will take place ever

(B) Only solar eclipse will take place on every new moon day

(C) Only lunar eclipse will take place on every full moon day

(D) Both solar and lunar eclipse will take place on every new moon and full moon day

28. The bulb in a circuit glows when electric current:

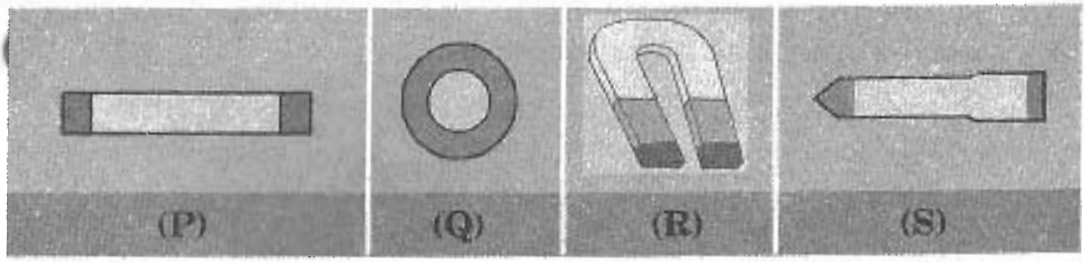
(A) flows through its filament

(B) flows through the glass covering

(C) stops flowing to the bulb

(D) flows into the air through the bulb

29. Which of the following shape in magnet is NOT possible?



(A) P (B) Q (C) R (D) S

30. With regards to types of motion, which of the following statements is NOT true?

(A) The swinging of arm while walking is oscillatory

(B) The beating of our heart and expansion/contraction of lungs are periodic

(C) The blades of a food processor exhibits rotational motion

(D) A freely falling body undergoes rectilinear motion

31. Which of the following statements is NOT true?

(A) During a solar eclipse, the dark side of the moon faces the earth

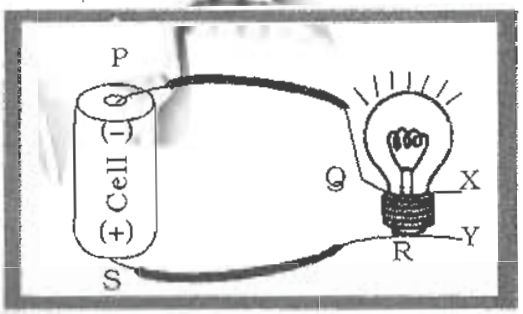
(B) A lunar eclipse occurs on a new moon day

(C) A total solar eclipse cannot be seen if the umbra doesn't fall on earth's surface

(D) Both solar and lunar eclipse take place only once in a calendar year

32. Look at the given figure.

It consists of a cell, a bulb with the two terminals X and Y and wires with ends P & Q and S &R. The direction of current will be:



(A) PQRS (B) SRQP

(C) PRQS (D) SQRP

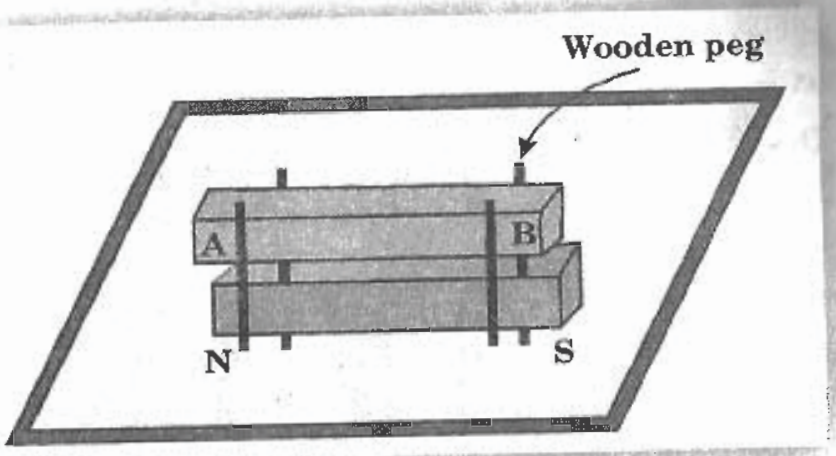
33. Using the most convenient units express the areas of various sizes as given below.

I	II
a. Hectare	1. 50 paise coin
b. m^2	2. Area of a cricket field
c. km^2	3. Area of a city
d. cm^2	4. Area of a state

(A) a - 1, b - 2, c - 3, d - 4 (B) a - 4, b - 2, c - 3, d - 1

(C) a - 2, b - 3, c - 1, d - 4 (D) a - 2, b - 1, c - 3, d - 4

4. **Ganeshan set up an experiment using two bar magnets as shown in the figure. He noticed that the upper magnet is NOT touching the lower magnet. It is suspended in air. Identify the North and South pole of the upper magnet?**



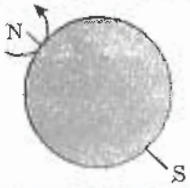
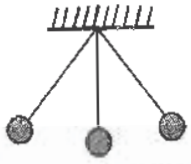
(A) A is North pole, B is South pole

(B) A is South pole, B is North pole

(C) Both A and B are North poles

(D) Both A and B are South poles

35. **What is common among the motions exhibited in the figures shown below?**

			
A boy in a swing	*Rotation of the Earth*	*Plucking of the wire of a Guitar*	*A simple pendulum*

(A) All motions are periodic (B) All motions are oscillatory

(C) All motions are uniform (D) All motions are rotational

36. Increasing the size of hole in a pin hole camera will result in:

(A) increase in size of the image

(B) decrease in size of the image

(C) no change in size of the image

(D) image becomes blurred

37. What is the source of electricity used by the satellites?

(A) Dry cell (B) Dynamos (C) Solar cells (D) Accumulators

38. Which of the following objects doesn't make use of a magnet?

			
A refrigerator (1)	*A telephone (2)*	*A television (3)*	*A dry cell (4)*

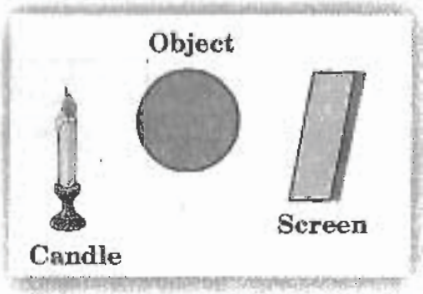
(A) 1 (B) 2 (C) 3 (D) 4

39. Light year is the unit of:

(A) time (B) light

(C) distance (D) days

40. An object, very big compared to the source of light is placed next to it. The shadow which will form on the screen is likely to have one of the following characteristics.



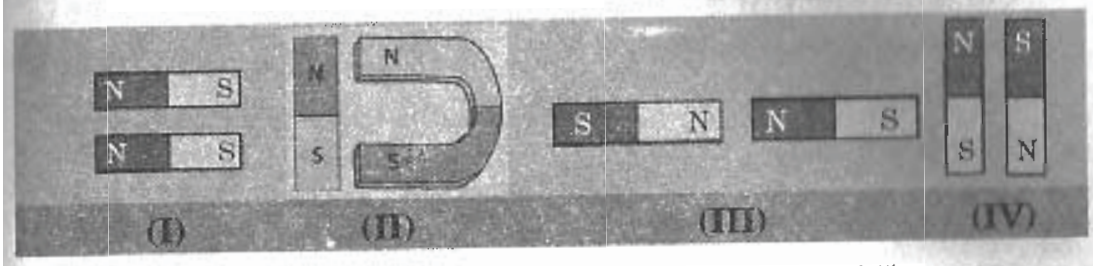
(A) The shadow will consist of umbra only

(B) The shadow will consist of penumbra only

(C) The shadow will consist of both umbra and penumbra, but umbra will be faint as compared to penumbra

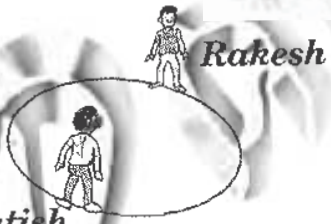
(D) No shadow will be formed

41. Two magnets are placed close to each other. Which one of the sets shown below will attract each other?



(A) I (B) II (C) III (D) IV

42. Rakesh and Satish are standing at two opposite ends of the diameter of a circular path as shown in the figure. Both of them start running towards their right along the path with the same speed. Then by looking at each other:



(A) Rakesh feels that Satish is running faster

(B) Satish feels that Rakesh is running faster

(C) each feels that the other is moving faster

(D) each feels that the other is not moving

43. Table given below shows the properties of four objects.

Object	Property
P	Floats on water
Q	Elastic
R	Conducts heat
S	Absorbs water

Which of the following objects is made of a metal?

(A) P (B) Q (C) R (D) S

44. A pin hole camera produces an image of an object kept at a distance of 100 m from the pin hole. If the screen is 10 cm from the pin hole and the image is 5 cm high, what is the height of the object?

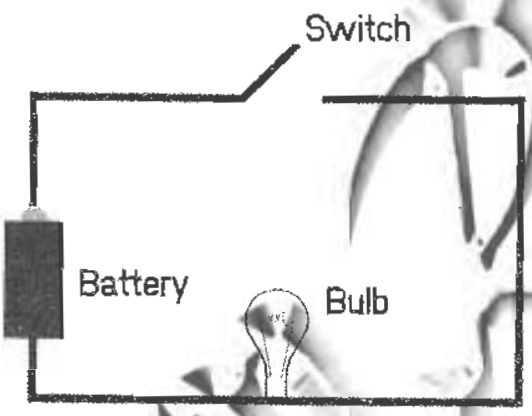
(A) 25 m (B) 50 m (C) 30 m (D) 60 m

45. Which objects given below are magnetic?

(A) A nickle coin (B) A Brass screw

(C) An iron nail (D) Both A and C

46. Observe the figure given below.



What would you observe when the switch is closed?

(A) The bulb will light up

(B) Electrical energy is converted into sound energy

(C) The bulb will not glow

(D) None of these

47. Tube lights are preferred as compared to bulbs because:

(A) tube lights give more light (B) tube lights are cheaper

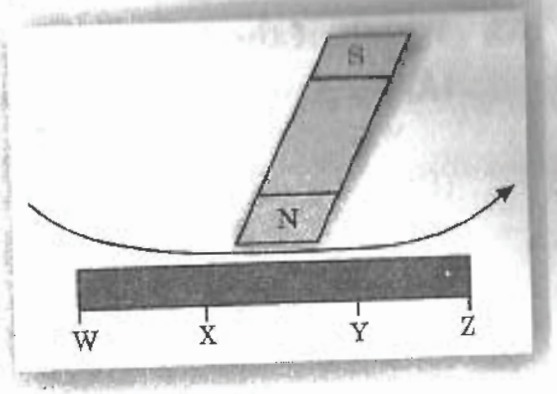
(C) bulbs get fused easily/frequently (D) bulbs produce shadows

48. Which of the following device produces multiple images by using plane mirrors?

(A) Periscope (B) Telescope

(C) Microscope (D) Kaleidoscope

49. Satish magnetised a piece of iron using the stroking method as shown in the figure. Which part of the iron rod will become the North seeking pole?



(A) W (B) X
(C) Y (D) Z

50. We can't see the shadow of a bird or an aeroplane flying high up in the air, because:

(A) the umbra doesn't fall on the Earth

(B) the penumbra doesn't fall on the Earth

(C) the umbra is very faint

(D) no shadows are formed for flying objects

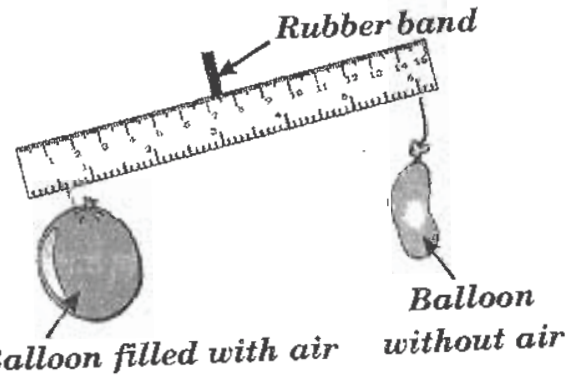
CLASS : VI CHEMISTRY

51. Which of the following properties cannot be used to distinguish between a solid and a liquid?

(A) Solubility (B) Compressibility
(C) Change of state (D) Conductivity

52. In an experiment shown by the class teacher, the side of the ruler which holds the inflated balloon dips as compared to the balloon without air.

What inferences can you draw from this experiment?



(A) Balloon with air has more force of gravity

(B) Air has mass

(C) Mass of the balloons are different

(D) Balloon has more matter than air

53. Which of the following statements is NOT true?

(A) No more salt can be dissolved in a saturated solution of salt water without heating

(B) Water dissolves different amount of soluble substances in it

(C) A mixture of milk and water can be separated by filtration

(D) Salt is separated from sea water by evaporation

54. Which of the following is an endothermic reaction?

(A) Formation of curd from milk

(B) Production of gas when quicklime is added to water

(C) Opening of a soda bottle with production of gas

(D) Evaporation of water

55. The water cycle in nature involves the following processes sequentially:

(A) evaporation, precipitation, condensation

(B) precipitation, condensation, evaporation

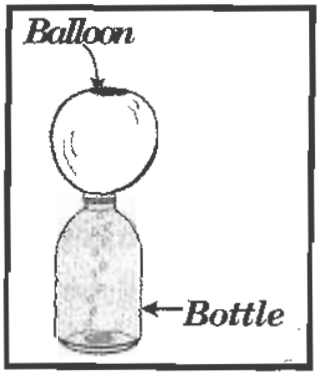
(C) evaporation, condensation, precipitation

(D) condensation, evaporation, precipitation

56. Which of the following is NOT a pure substance?

(A) Hydrogen (B) Oxygen (C) Water (D) Air

57. In an experiment the class teacher added vinegar into a bottle having a table spoon of baking soda in it. Then he put a balloon on its mouth which was inflated due to production of carbon dioxide gas in the bottle. This is an example of:



(A) physical and reversible change

(B) physical but irreversible change

(C) chemical and reversible change

(D) chemical but irreversible change

58. Match table 'A' (mixtures) with table 'B' (process for separation of constituents).

Table 'A'	Table 'B'
a. Pebbles and stones with sand	i. threshing
b. Oil and water	ii. sieving
c. Wheat grains from stalks	iii. decantation
d. Salt in sea water	iv. evaporation

(A) a-i, b-ii, c-iii, d-iv (B) a-ii, b-iii, c-i, d-iv

(C) a-iii, b-iv, c-i, d-ii (D) a-iv, b-i, c-ii, d-iii

59. Most of the well water and spring-water are replenished by:

(A) rain water (B) flood

(C) ground water (D) all of the above

60. The flow diagram shows the process involving the change in different states of water. However the flow diagram is NOT correct.

$$\text{Ice} \underset{\text{Heat}}{\overset{\text{Cool}}{\rightleftharpoons}} \text{water} \underset{\text{Cool}}{\overset{\text{Heat}}{\rightleftharpoons}} \text{steam}$$

Can you identify which of the following flow diagram is correct?

(A) $\text{Ice} \underset{\text{Cool}}{\overset{\text{Heat}}{\rightleftharpoons}} \text{water} \underset{\text{Heat}}{\overset{\text{Cool}}{\rightleftharpoons}} \text{steam}$

(B) $\text{Ice} \underset{\text{Heat}}{\overset{\text{Heat}}{\rightleftharpoons}} \text{water} \underset{\text{Cool}}{\overset{\text{Cool}}{\rightleftharpoons}} \text{steam}$

(C) $\text{Ice} \underset{\text{Cool}}{\overset{\text{Heat}}{\rightleftharpoons}} \text{water} \underset{\text{Heat}}{\overset{\text{Cool}}{\rightleftharpoons}} \text{steam}$

(D) $\text{Ice} \underset{\text{Cool}}{\overset{\text{Heat}}{\rightleftharpoons}} \text{water} \underset{\text{Cool}}{\overset{\text{Heat}}{\rightleftharpoons}} \text{steam}$

61. **As shown in the figure kicking a football involves energy. What type of reaction or change is this?**

(A) Exothermic

(B) Endothermic

(C) Physical

(D) Chemical

62. **If two substances interact to produce a change, they will do so:**

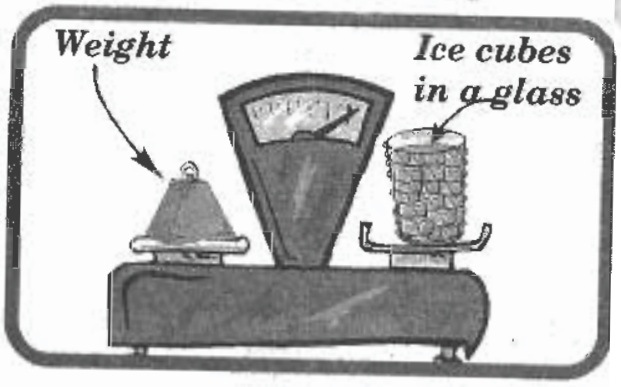
(A) under any condition

(B) only if they are in close contact with each other

(C) no matter what kind of interaction there is

(D) only if the interaction is of the right kind and under right conditions

63. **In an experiment ice cubes in a glass were weighed in a table balance. The glass with ice cube was left for some time on the balance. What will happen?**



(A) Nothing will happen

(B) The glass with ice cube will weigh more

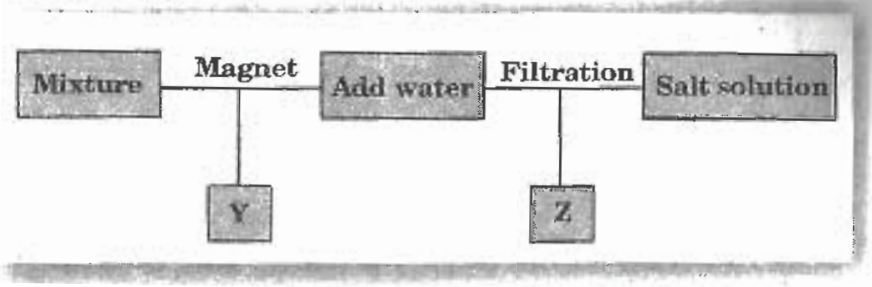
(C) The glass cube with ice will weigh less because of evaporation

(D) cannot say

64. **Which of the following is a dry cleaning agent?**

(A) Lime (B) Detergent (C) Petrol (D) Soap

65. The class teacher conducted an experiment in the class to separate the constituents of a mixture. The flow chart of the process is shown here. What are Y and Z respectively?



(A) Iron nails and sugar (B) Sugar and salt

(C) Iron nails and sand (D) Sand and salt

66. Dew forms on leaves due to:

(A) evaporation (B) condensation

(C) vaporization (D) all of the above

67. We cannot feel the pressure of atmosphere because:

(A) pressure increases with decrease in altitude

(B) pressure decreases with increase in altitude

(C) pressure acts in all directions equally

(D) pressure is negligible

68. A solid is said to be amorphous when:

(A) it has definite geometrical shape (B) it has no geometrical shape

(C) it has definite colour (D) it has no definite colour

69. Overhead cables need not be insulated because:

(A) air is a bad conductor of electricity

(B) air is a good conductor of electricity

(C) bare wires conduct electricity better

(D) none of these

70. Which of these is NOT a physical change?

(A) Dissolution of sulphur in carbon disulphide

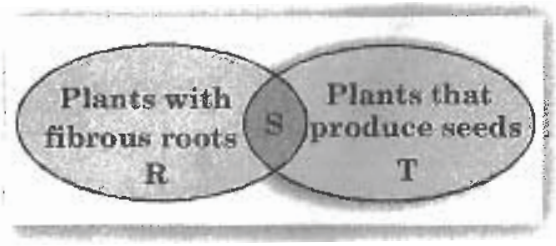
(B) Dissolution of resin in alcohol

(C) Fermentation of cane juice

(D) Glowing of an electric bulb

CLASS : VI BIOLOGY

71. Figure given below shows the characteristics of some plants.



Which of the following plants is correctly represented by R, S and T?

	R	S	T
(A)	Paddy	Balsam	Orchid
(B)	Maize	Paddy	Papaya
(C)	Coconut	Fern	Hibiscus
(D)	Mango	Maize	Sugarcane

72. Plants tend to loose a lot of water in hot weather. Which of the following helps plants to save water?

I - Shedding leaves
II - Having spongy stem
III - Having leaves with waxy surfaces

(A) I and II only (B) I and III only
(C) II and III only (D) I, II and III

73. Mr. X is suffering from goitre. What is the cause of this disease?

(A) X eats too much much of fatty food
(B) X's food lacks vitamin B and C
(C) X does not eat enough seafood
(D) X's food lacks magnesium salts

74.

What are the similarities between these two plants shown in the above figures?

I - Both have parallel veins

II - Both have tap roots

III - Both have flowers

(A) I and II only (B) II and III only

(C) I and III only (D) I, II and III

75. Identify the organism given here.

(A) A sea-anemone (B) A bacteria

(C) A virus (D) A paramoecium

76. Which of the following food helps to build new cells and repair damaged tissues?

(A) Rice (B) Bread (C) Fish (D) Butter

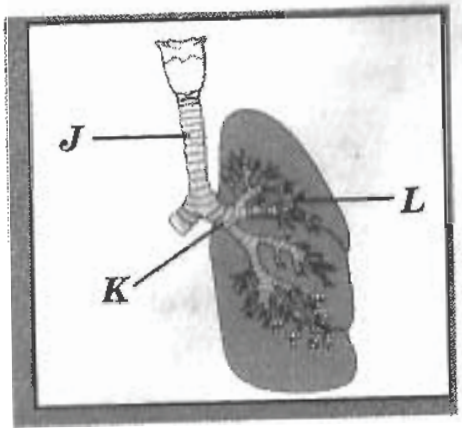
77. The adjacent figure shows part of the human respiratory system. Identify the parts J, K and L.

(A) J - Trachea, K - Alveolus, L - Bronchus

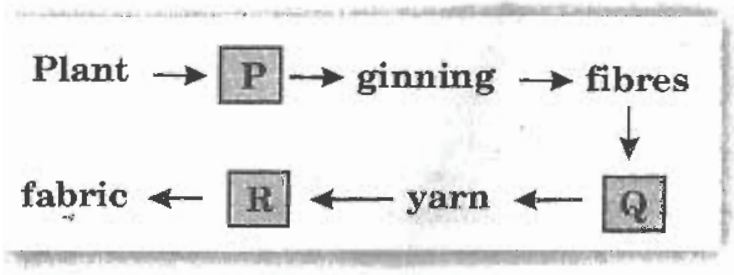
(B) J - Bronchus, K - Diaphragm, L - Alveolus

(C) J - Bronchus, K - Bronchiole, L - Alveolus

(D) J - Trachea, K - Bronchus, L - Alveolus



78. **The flow chart given below shows the production of cotton fabric. What could be P, Q and R?**



(A) P - buds, Q - spinning, R - weaving

(B) P - bolls, Q - spinning, R - weaving

(C) P - bolls, Q - weaving, R - spinning

(D) P - bolls, Q - ginning, R - carding

79. ***Preserves the health of the skin***

Prevents bleeding of gums

Found in fruits and vegetables

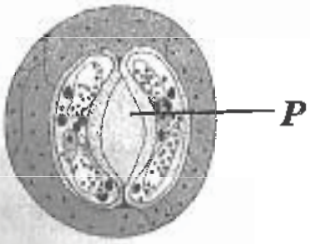
Based on the above information, which of the following vitamins is described?

(A) Vitamin A (B) Vitamin B (C) Vitamin C (D) Vitamin D

80. **Which of the following pairs of food classes and examples is NOT correct?**

	Food class	Example
(A)	Protein	Pulses
(B)	Carbohydrate	Rice
(C)	Roughage	Vegetable oils
(D)	Fat	Cheese

81. **Based on the figure given here, which substance is removed through P during daytime by plants?**



(A) Oxygen (B) Carbon dioxide

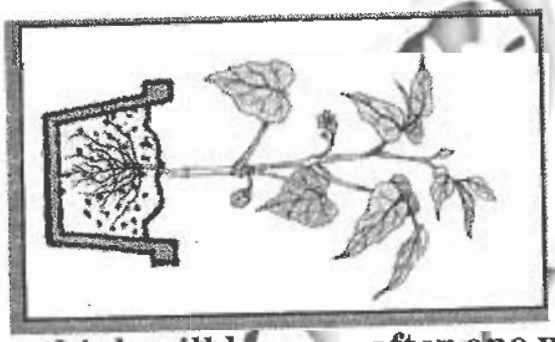
(C) Sugar (D) Salt

82. **Which of the following is NOT a protective function of the endoskeleton?**

(A) Ribcage - lungs (B) Skull - brain

(C) Pelvic girdle - kidneys (D) Vertebral column - spinal cord

83. **A plant is placed outside the laboratory as shown in the figure.**



What do you think will happen after one week?

(A) The roots of the plant will not bend at all

(B) The roots of the plant will bend downwards

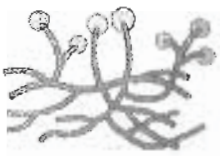
(C) The shoots of the plant will grow upwards

(D) Both B and C

84. **Which of these organisms can lack cell wall but contains the green pigment, chlorophyll?**

(A) 

(B) 

(C) 

(D) 

85. Why is it difficult or impossible to degrade non-biodegradable wastes?

(A) Because non-biodegradable wastes can be recycled

(B) Because microorganisms cannot decompose it

(C) Because it is a solid waste

(D) All of the above

86. Which of the following is NOT an adaptation for the polar bear to live in the arctic region?

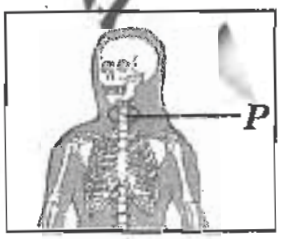
(A) It has a thick coat of fur

(B) It has a layer of insulating fat under its skin

(C) Its hair traps a layer of air which prevents body heat loss

(D) It has short and fat legs to move slowly on ice so that it does not slip

87. Which of these joints are located at P?



(A) Pivot joint

(B) Fixed joint

(C) Ball and socket joint

(D) Hinge joint

88. Protruding belly, skin becomes scaly and peels off, stunted growth and swollen abdomen are the symptoms of the disease:

(A) goitre (B) marasmus (C) obesity (D) kwashiorkar

89. Which of the following habitats have the given characteristics?

Plants are usually weak stemmed with numerous air spaces

Very thin long and waxy coated leaves

(A) Mesophytes (B) Xerophytes

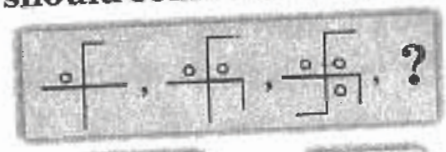
(C) Bryophytes (D) Hydrophytes

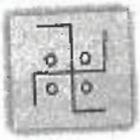
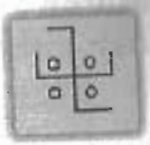
90. Which of the following can manufacture food and supply to other floral parts?

(A) Sepals (B) Pistil (C) Anther (D) Stigma

CLASS : VI GENERAL QUESTIONS

91. **Which figure should come next in the series given below?**



(A)  (B)  (C)  (D) 

92. **Which of the following is opposite in meaning to the word 'invariable'?**

(A) Steadfast (B) Constant (C) Fluctuating (D) Unchanging

93. **Which number should come in the empty box in the number series given below?**

$\frac{1}{3}, \frac{2}{3}, 1, \frac{4}{3}, \frac{5}{3}, 2, \square$

(A) $\frac{7}{3}$ (B) $\frac{8}{3}$ (C) 3 (D) 4

94. **Which of the state(s) is/are beneficiaries of the Tungabhadra Project?**

(A) Andhra Pradesh (B) Tamil Nadu
(C) Karnataka (D) All of the above

95. **Who among the following persons shared the Nobel Prize for Peace for the year 2007 along with IPCC?**

(A) Yasser Arafat (B) Mohammed Yunus
(C) Nelson Mandela (D) Albert Arnold Gore Jr.

96. **Which cricket playing country has created a world record of winning 16 consecutive Test Matches?**

(A) Pakistan (B) South Africa (C) Australia (D) England

97. **The Simla Pact was between:**

(A) Russia–India (B) India–Pakistan
(C) India–China (D) India–Bangladesh

98. **What is the term of the Rajya Sabha member?**

(A) Five years (B) Six years (C) Four years (D) Seven years

99. **Which is the longest National Highway in India?**

(A) NH7 (B) NH5 (C) NH2 (D) NH1

100. **Anita Desai, Vikram Seth and R.K. Narayan are all eminent:**

(A) musicians (B) singers (C) writers (D) dancers

KEY FOR THE Q.P.-2009

1. D	2. A	3. C	4. D	5. C	6. D	7. B	8. C
9. B	10. C	11. C	12. D	13. A	14. B	15. D	16. B
17. D	18. B	19. A	20. C	21. B	22. C	23. D	24. A
25. D	26. C	27. D	28. A	29. D	30. B	31. B	32. B
33. B	34. A	35. A	36. D	37. C	38. D	39. C	40. A
41. D	42. C	43. C	44 B	45. D	46. A	47. D	48. D
49. A	50. A	51. C	52. B	53. C	54. A	55. C	56. D
57. D	58. B	59. C	60. D	61. C	62. D	63. B	64. C
65. C	66. B	67. C	68. B	69. A	70. C	71. B	72. D
73. C	74. C	75. C	76. C	77. D	78. B	79. C	80. C
81. A	82. C	83. D	84. A	85. B	86. D	87. A	88. D
89. D	90. A	91. A	92. C	93. A	94. D	95. D	96. C
97. B	98. B	99. A	100.C				