## CLASS : VI                    MATHEMATICS
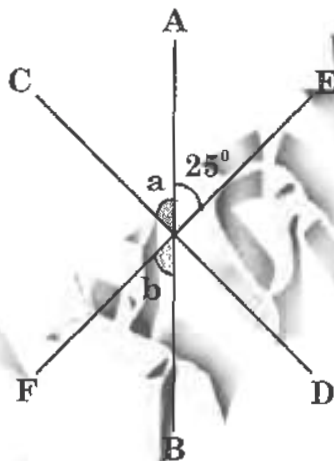
1.  The difference between the largest 8 digit number and the smallest 6 digit number is:

    (A) 100099999   (B) 99899999   (C) 99989999   (D) 99998999

2.  Match List – I with List – II and select the correct answer using the codes given below.

    | List - I (Number) | | List - II (Divisible by) | |
    |---|---|---|---|
    | p. | 4926549 | 1. | 11 |
    | q. | 54192039 | 2. | 5 |
    | r. | 394192045 | 3. | 4 |
    | s. | 19706196 | 4. | 3 |

    (A) p-4, q-1, r-2, s-3       (B) p-1, q-3, r-2, s-4

    (C) p-4, q-2, r-3, s-1       (D) p-2, q-1, r-4, s-3

3.  

    In the figure above, AB, CD and EF are straight lines. The ratio of $\angle a$ to $\angle b$ is 8 : 5. What is the value of $\angle a$ ?

    (A) 25⁰        (B) 35⁰        (C) 40⁰        (D) 45⁰

4.  If 8 boys share 14 cakes, how much of the cakes does each boy get?

    (A) $\frac{3}{7}$        (B) $\frac{4}{7}$        (C) $1\frac{3}{4}$        (D) $2\frac{1}{3}$

5. What is the smallest number of oranges that can be shared equally among 2, 5 or 9 children without leaving any remainder?
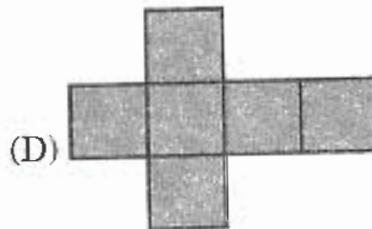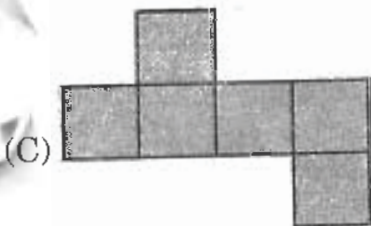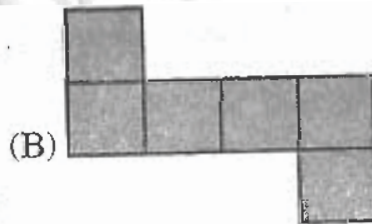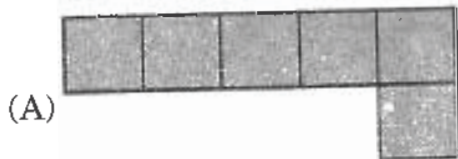
(A) 10            (B) 18            (C) 45            (D) 90

6.



In the above figure, the angle formed between the hour and minute hands is:

(A) acute angle                    (B) obtuse angle

(C) right angle                    (D) straight angle

7. In the word, "UNIFIED COUNCIL", the ratio of number of consonants to the number of vowels is:

(A) 5 : 9         (B) 6 : 8         (C) 11 : 3         (D) 1 : 1

8. Which of the following is not a net of a cube?



9. The length of a rectangle is 4 times as long as its breadth. If the length is 8 cm shorter and the breadth is 4 cm longer, a square will be formed. What is the area of the rectangle?

(A) 16 cm²        (B) 32 cm²        (C) 64 cm²        (D) 80 cm²

10. Which of the following property/ properties satisfied by whole numbers under multiplication?

   (A) Closure                    (B) Commutative
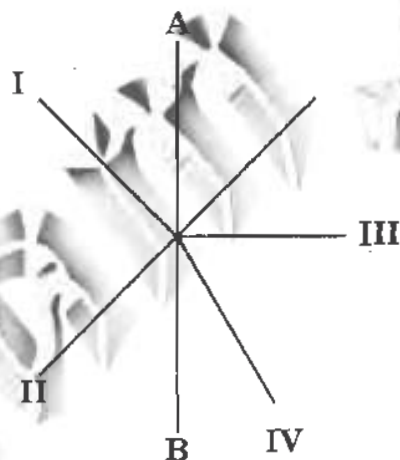
   (C) Associative                (D) All the given

11. If 6 notebooks cost Rs. x, how many notebooks can I buy with Rs. 8?

   (A) $\dfrac{x}{3}$      (B) $\dfrac{3x}{4}$      (C) $\dfrac{4x}{3}$      (D) $\dfrac{48}{x}$

12. Raja spent $\dfrac{7}{12}$ of his salary. If the remaining of his salary is Rs. 250 less than what he spent, what is his salary?

   (A) Rs. 600      (B) Rs. 1500    (C) Rs. 850      (D) Rs. 1250

13. Which of the following lines is perpendicular to line AB?

   

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

14. The number of negative integers between –6 and 6 is:

   (A) 5            (B) 6            (C) 11           (D) 12

15. "a" and "b" are two natural numbers such that their GCD is same as their LCM, then which of the following is necessarily true?

   (A) a = b = 1                  (B) a < b

   (C) a divides b, but a ≠ b     (D) a > b

16. Which of the following are the highest and lowest decimals?

> I.   3.1258
> II.  2.07
> III. 3.6
> IV.  2.051

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

17. The figure below is made up of a trapezium and a rectangle. Find the sum of $\angle w + \angle x + \angle y + \angle z$.
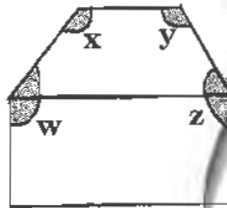
(A) $360^0$      (B) $450^0$      (C) $540^0$      (D) $720^0$

18. A number is always divisible by 40 if:

(A) it is divisible by both 2 and 20

(B) it is divisible by both 4 and 10

(C) it is divisible by both 5 and 8

(D) All the above

19. If the cost of 12 mangoes is Rs. 144, then the cost of 20 mangoes is:

(A) Rs. 288           (B) Rs. 240

(C) Rs. 216           (D) Rs. 192

20. The number of straight lines in the given figure are:
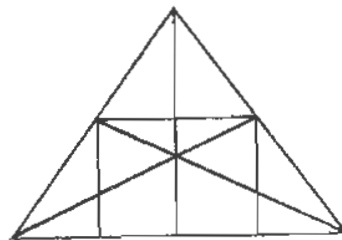
(A) 9                  (B) 10

(C) 14                (D) 32

21. Circumference of a circle is approximately equal to _____ times the diameter.

    (A) 6                         (B) 5

    (C) 4                         (D) 3

22. Which of the following has no lines of symmetry?

    (A) A rectangle           (B) A circle

    (C) A scalene triangle    (D) A square

23. The perimeter of the rectangle whose length 25 cm and breadth 15 cm is:

    (A) 80 cm$^2$             (B) 375 cm

    (C) 40 cm               (D) 80 cm

24. 1 billion = _____ crores

    (A) 1                         (B) 10

    (C) 100                    (D) 1000

25. The incomplete pictograph shows the number of ice-creams bought by four boys.
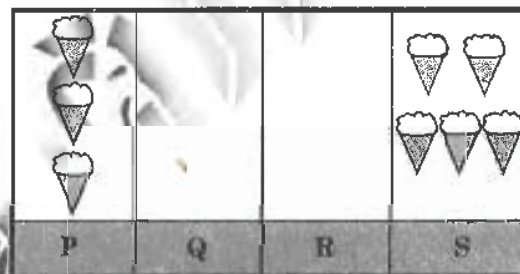


represents 10 ice-creams

The total number of ice-creams bought by them was 150. Q and R bought the same number of ice-creams. How many ice-creams did Q buy?

    (A) 25                      (B) 35

    (C) 50                      (D) 70

CLASS : VI                                                   PHYSICS

26. The length of a tube is 5643 mm. What would be its length when expressed in SI units ?

(A) 5 m          (B) 56 cm          (C) 5.3 m          (D) 5.643 m

27. In the diagram shown below a shadow formed when the light is blocked by an opaque object :
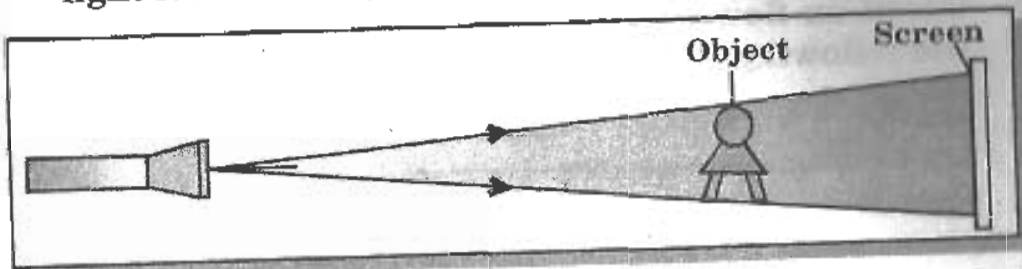


Which of the following is the characteristic of the shadow?

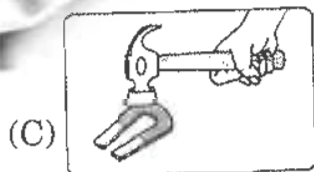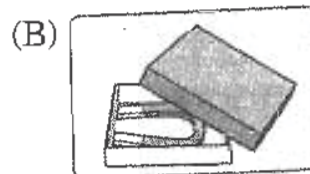(A) Same size as the object.     (B) Same colour as the object.

(C) Same shape as the object.    (D) Grey coloured.

28. Identify why a bulb does not glow even if correct connections are made?

| I.   | Battery is dead      |
| II.  | Filament is broken   |
| III. | Switch is closed     |

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

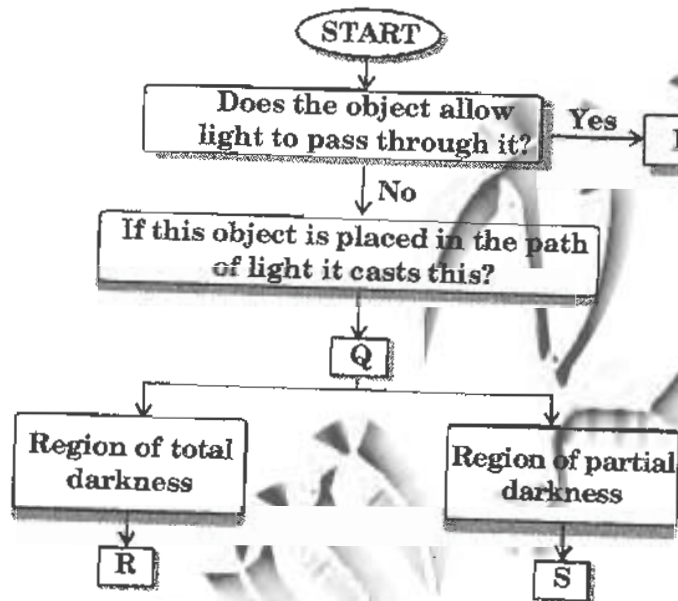29. Which of the following is correct method to handle magnets?
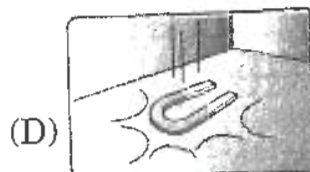
30. Identify from the following that show movements without changing their place.

| I. | The hands of a clock |
| II. | Opening and closing of flowers |
| III. | A flying bird |

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

31. Based on flow chart given below, identify umbra from the following.



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

32. Look at the figure shown below :
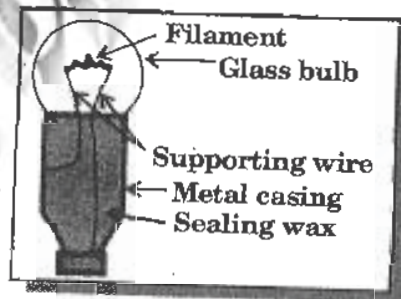


What is the reason for filling sealing wax for the space in between the terminals of the bulb ?

(A) To prevent the escape of air inside the bulb

(B) To prevent the contact of terminals with one another

(C) To have better contact of terminals with one another

(D) To have proper mounting of filament over supporting wires

33. Vishnu holds a magnet above 3 pins made of different materials as shown below. Pins Y and Z gets attracted whereas pin X remain in its place.



What metals can the pins X, Y and Z be made of ?

|     | Pin X  | Pin Y  | Pin Z     |
|-----|--------|--------|-----------|
| (A) | Copper | Iron   | Steel     |
| (B) | Steel  | Nickel | Aluminium |
| (C) | Copper | Brass  | Cobalt    |
| (D) | Iron   | Copper | Brass     |

34. The length of a metre is divided into 100 equal parts. What will be the value of each part ?

(A) One decimetre

(B) One millimetre

(C) One centimetre

(D) One kilometre

35. Which of the following factors affect the image produced by a pinhole camera ?

I.   Enlarging the size of the pinhole
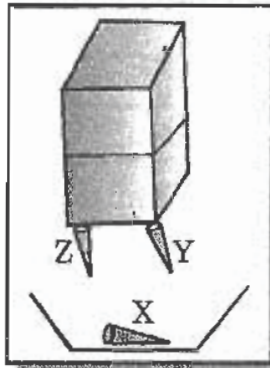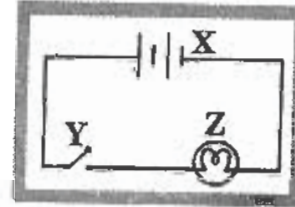II.  Increasing the distance between the screen and the pinhole
III. Increasing the distance between the object and the pinhole

(A) I and II only

(B) II and III only

(C) I and III only

(D) I, II and III

36.

Identify the symbols of electrical components used in the construction of the given electric circuit.



|     | X       | Y      | Z        |
| --- | ------- | ------ | -------- |
| (A) | Switch  | Cell   | Bulb     |
| (B) | Battery | Cell   | Bulb     |
| (C) | Battery | Switch | Bulb     |
| (D) | Switch  | Cell   | Resistor |

37. A magnet in the form of a cube is placed on a piece of cork that floats on water. The compass needle points in the direction shown:
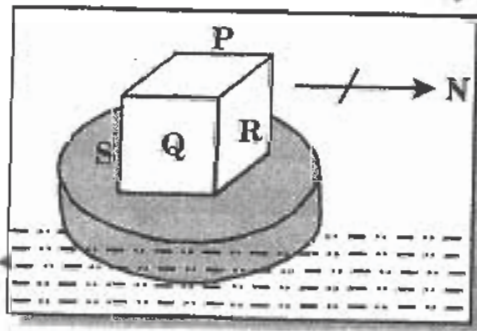


Which of the following denote the N – pole and S – pole of the magnet ?

|     | N- pole | S - pole |
| --- | ------- | -------- |
| (A) | P       | Q        |
| (B) | Q       | R        |
| (C) | R       | S        |
| (D) | S       | R        |

38. Identify which of the following statements is incorrect ?

    (A) Curvilinear and rectilinear together are referred as translatory motion.

    (B) Rotational motion is always oscillatory.

    (C) Motion of a stone dropped from a roof is rectilinear.

    (D) Motion of a simple pendulum is periodic.

39. Figure below shows a card with the letters A and E printed on it :



    Which of the following shows the image of the letters when the card is placed infront of a plane mirror ?

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



40.

    The figure shows an electric circuit made up by a battery and a bulb. Consider the direction of current at X, Y and Z.
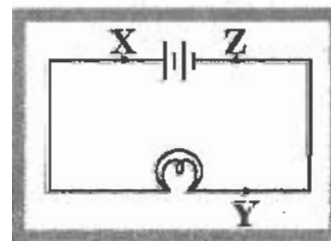


    Which of the following directions is correct ?

|      | X  | Y  | Z  |
|------|----|----|----|
| (A)  | ↑  | ↓  | ↑  |
| (B)  | ↓  | ↑  | ↓  |
| (C)  | →  | ←  | →  |
| (D)  | ←  |    |    |

41. Bhavya brings a magnet near a metal ball and observes the following:



Magnet          Metal ball

The ball moves away

What can she conclude about the metal ball ?

(A) It is a magnet.              (B) It is made of aluminum.

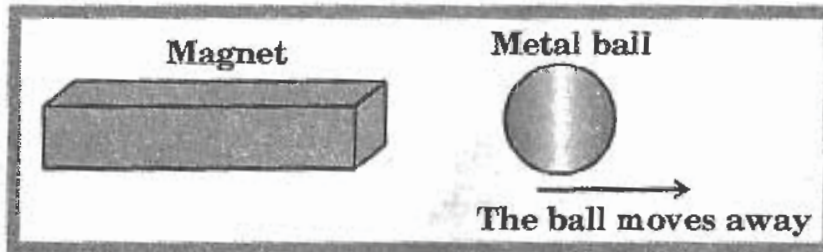(C) It is made of steel.          (D) It is not a magnet.

42. On which of the following does the nature of measuring device for length depend ?

(A) Type of material.            (B) Type of surface.

(C) Type of measurement.         (D) Type of person using.

43. Which of the following is a source of light ?

(A) Earth                        (B) Television screen

(C) Shadow                       (D) Moon

44. The thickness of a dozen of coins on a metre scale was found to be 18 cm. What is the thickness of one coin ?

(A) 15 cm      (B) 1.2 cm      (C) 1.8 mm      (D) 15 mm

45. Observe the set up shown below:



S - pole

N - pole
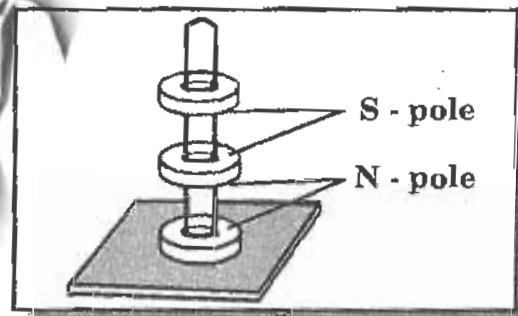
Why are the ring magnets floating ?

(A) Due to repulsion.            (B) Due to attraction.

(C) Due to directive property. (D) Due to weakening of magnets.

46. Varun strikes the membrane of a drum, such that it vibrates up and down. The motion of membrane is :

(A) oscillatory                    (B) rotatory

(C) translatory                    (D) rotatory and translatory

47. Look at the diagram below carefully:
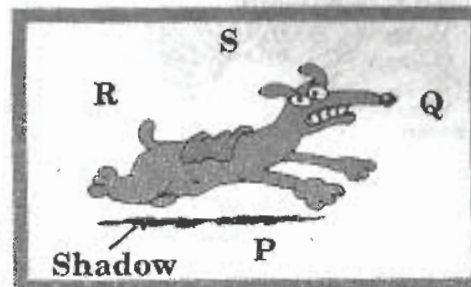


Which of the following is the likely position of the Sun ?

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

48. What does a battery contain?

(A) A minimum of two cells     (B) A minimum of three terminals

(C) A cell and a switch         (D) A bulb and a switch

49. In which of the following figure poles are not correctly shown?
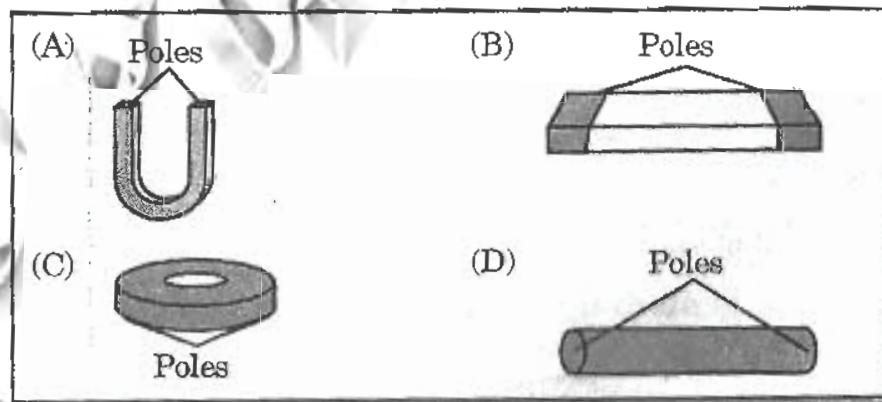


50. Which of these is longer ?

(A) kilometre    (B) mile        (C) yard         (D) metre

# CLASS : VI                                            CHEMISTRY

51. A designer is trying to find a material to make the following object :
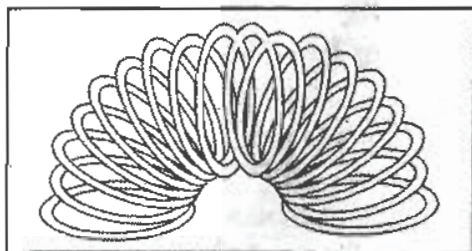


What material should be used to make the above object ?

(A) Plastic        (B) Rubber      (C) Metal        (D) Wood

52. Study the information given below :

- The substances is made up of two or more elements combined together chemically
- Properties of the resultant substance is different from the elements that make it
- The new substance cannot be broken down by physical methods

Which of the following substances has the properties listed above?

(A) Iodine        (B) Calcium    (C) Air          (D) Sugar

53. Identify a change that is man made as well as reversible.

(A) Eruption of volcanoes

(B) Stretching of a spring on suspending a weight

(C) Soil erosion due to flood

(D) Boiling of an egg

54. Study the venn diagram given below :
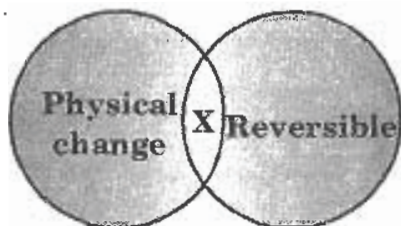
Identify which of the following process could be X.

(A) Rusting of iron        (B) Burning of wood

(C) Melting of wax         (D) Milk changing to curd

55. Which of the following substances contain a lot of water?

| I. | Milk |
| II. | Blood |
| III. | Oil |
| IV. | Fruits |

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

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

56. Which of the following is true about air ?

| I. | Air is a mixture of several types of gases |
| II. | Air exerts pressure |
| III. | The composition of air is constant in the atmosphere |

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

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

57. Abhi bought an object. It is made from a hard material. It is fragile and allows light to pass through. What can the object be ?

(A) Shoes      (B) Mirror      (C) Blouse      (D) Fish tank

58. A mixture contains tiny particles of three different substances X, Y and Z. They are of same size, shape and colour. X particles are heavy, insoluble and non-magnetic. Y particles are very light, insoluble and non-magnetic. Z particles are heavy and magnetic. Which of the following methods can be used to separate X, Y and Z ?

(A) Winnowing followed by filtration.

(B) Sieving followed by winnowing.

(C) Winnowing followed by magnetic separation.

(D) Hand picking followed by magnetic separation.

59. Look at the diagram shown below :

Matter

| X | Y |
|---|---|
| Air<br>Liquor ammonia<br>Milk | Silver<br>Aluminium<br>Copper |
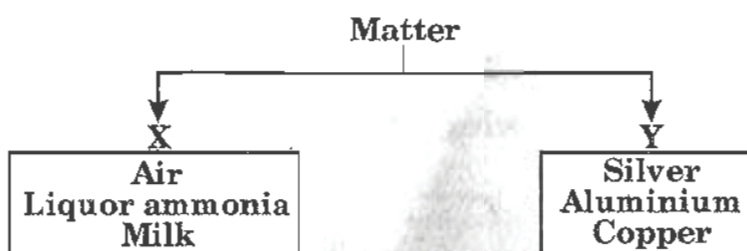
What conclusions can be drawn from the above ?

|     | X | Y |
|-----|---|---|
| (A) | Non metals | Metals |
| (B) | Mixtures | Metals |
| (C) | Compounds | Elements |
| (D) | Compounds | Pure substances |

60. Given below is a change that occurs in butter :

| Butter<br>(Solid state) | $\xrightarrow{X}$ $\xleftarrow{Y}$ | Butter<br>(Liquid state) |
|---|---|---|
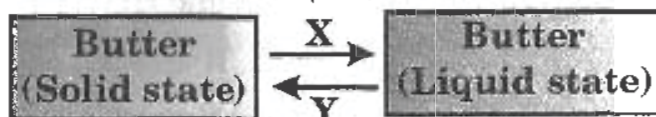
Identify X and Y that causes change in state of butter.

(A) X – Heat lost, Y – Heat gain.

(B) X – Heat gain, Y – Heat lost.

(C) X – Release of energy, Y – Absorption of Energy.

(D) X – Decrease in temperature, Y – Increase in temperature.

61. Which of the following air pollutants causes acid rain ?

(A) Dust                           (B) Carbon particles

(C) Microorganisms                 (D) Sulphur dioxide

62. Why do all the plants require nitrogen ?

(A) Photosynthesis                 (B) Transpiration

(C) Growth                         (D) Reproduction

63. Which property of water helps us in washing clothes ?

(A) Transparency

(B) Solubility

(C) Conductivity

(D) Compressibility

64. Which of the following method is used to separate water particles from clothes while drying in washing machines?

(A) Magnetic separation

(B) Filtration

(C) Evaporation

(D) Centrifugation

65. Which of the following changes is slow and periodic ?

(A) Rotation of the earth

(B) Rusting of iron

(C) Curdling of milk

(D) Evaporation of petrol

66. Which of the following changes results in the formation of a new substance ?

(A) Physical                 (B) Chemical

(C) Reversible               (D) Periodic

67. Carbon dioxide gas can be tested by using :

| I. | Blue litmus paper |
| II. | Lime water |
| III. | Burning splinter |

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

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

68. **Why is air displaced by water?**

    (A) Air is heavier than water.

    (B) Air is as heavy as water.

    (C) Air is lighter than water.

    (D) Air is a homogeneous mixture.

69. **Which of the following are desirable changes?**

    | I.   | Drying of clothes |
    |------|-------------------|
    | II.  | Melting of ice cream |
    | III. | Cement getting hard when exposed to moisture |
    | IV.  | Desalination of sea water |

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

    (C) II and III only          (D) II and IV only

70. **Nisha poured a mixture of salt, iron filings, sand flour into a container:**
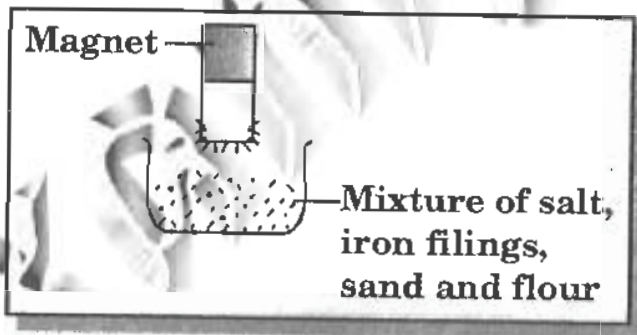
    

    Which of the following substances can be separated from the mixture by using a magnet ?

    (A) Salt                     (B) Flour

    (C) Sand                     (D) Iron filings

# CLASS : VI                                                    BIOLOGY
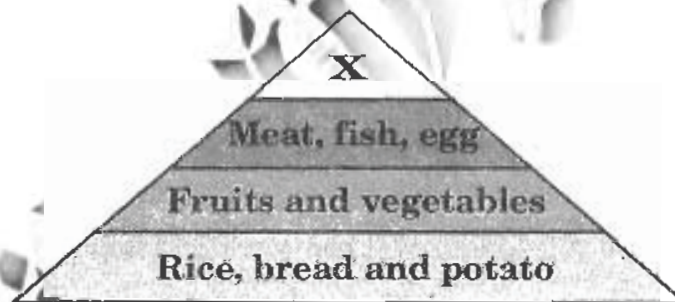
71. Which of the following is NOT a characteristic feature of living organisms?

   (A) Respiration                (B) Excretion

   (C) Immortality                (D) Response to stimuli

72.

| W – Tissues | Y – System |
|-------------|------------|
| X – Organs  | Z – cells  |

   The table above shows the various structures in the human body. Which of the following shows the correct sequence of the organisation of these structures in humans?

   (A) W → Z → Y → X              (B) X → Y → Z → W

   (C) Z → X → W → Y              (D) Z → W → X → Y

73. The figure given below shows the food guide pyramid.



   Which of the following foods represent 'X'?

   (A) Milk          (B) Butter     (C) Nuts          (D) Seafood

74. Observe the figure given below. It possess characteristics of both plants and animals.

Which of the following statements prove that the organism possess the characteristic of an animal?

(A) It lacks cell wall      (B) It lacks chloroplast

(C) It is unicellular      (D) It exhibits movement

75. Beri-beri is a condition caused by the deficiency of a vitamin in our body. A regular intake of which of these food items will help in preventing it?

(A) Soya beans, corn, wheat – rich in vitamin E

(B) Wheat, oil seeds, meat – rich in vitamin $B_1$

(C) Sweet potatoes, carrots, radish – rich in vitamin A

(D) Citrus fruit, tomatoes – rich in vitamin C
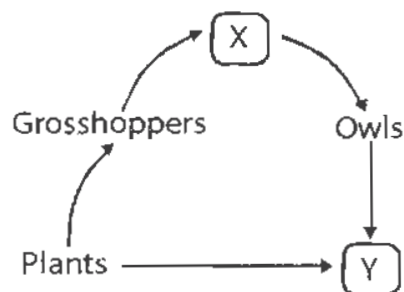
76. P and Q are parts of two different flowering plants.

If you were given one seed from each plant how would you recognize them?

(A) P has two cotyledons, Q has three cotyledons

(B) P has two cotyledons, Q has one cotyledon

(C) P lacks cotyledon, Q has two cotyledons

(D) P has two cotyledons, Q lacks cotyledon

77. Study the food chain carefully.

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Which of these can we say about organisms X and Y based on the above figure?

(A) X is a carnivore, Y is a herbivore

(B) X is an omnivore, Y is an carnivore

(C) X is a herbivore, Y is a herbivore

(D) X is a carnivore, Y is an omnivore

78. The figure given below shows a section through a flower. In which of labelled structures does fertilisation occur?
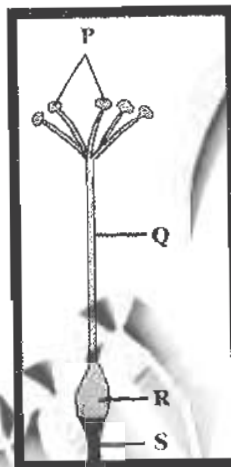


(A) P          (B) Q          (C) R          (D) S

79. Study the chart given below.
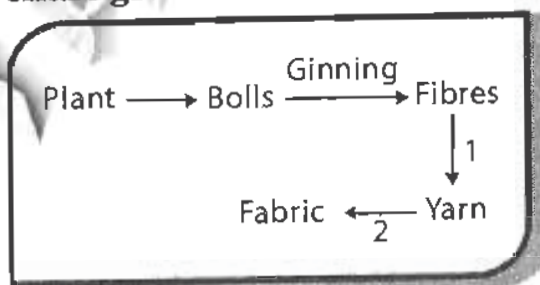


What could be the processes 1 and 2 in the manufacture of cotton fabric?

(A) 1–spinning, 2–weaving          (B) 1-dyeing, 2–weaving

(C) 1-ginning, 2-spinning          (D) 1-knitting, 2-weaving

80. **Study the figure given below. It shows a seedling placed horizontally on some moist cotton wool in a beaker.**


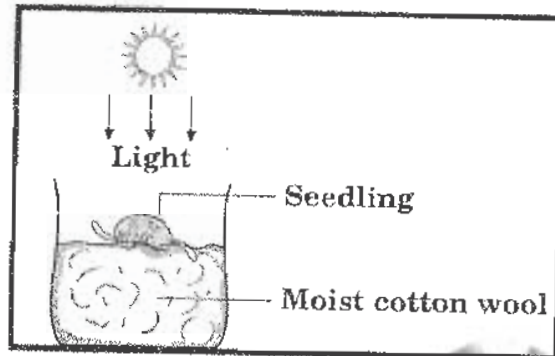
Name the type of response shown by the radicle of the seed.

(A) Positively geotrophic          (B) Negatively geotrophic

(C) Positively phototrophic       (D) Negatively gravitrophic

81. **Which of these plants have a waxy coating so that they do not decay despite being constantly in contact with water?**

(A) Water hyacinth                 (B) Water chestnut

(C) Hydrilla                       (D) All of the above

82. **Which of the following objects take longer time to decompose than the others?**

(A) Wood                           (B) News paper

(C) Metal can                      (D) Fruit peel

83. **Study the part of skeletal system given below.**
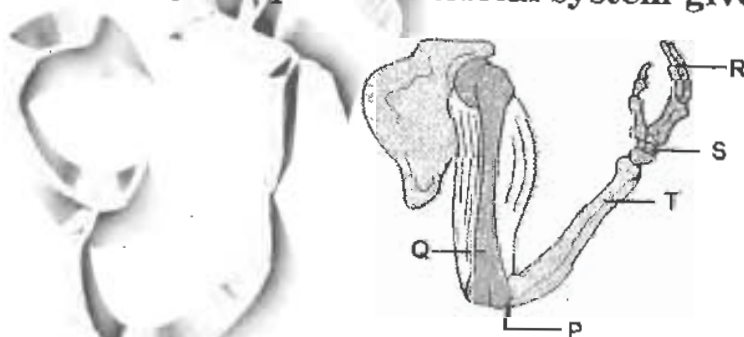


Identify the joints (labelled parts) from the given figure.

(A) P and S only                   (B) Q and T only

(C) P, R and S only                (D) Q, R and T only

84. The thread like coiled outgrowths with the help of which plants of the gourd family climb are called:

(A) leaf tendrils          (B) spines

(C) hooks                  (D) stem tendrils

85. All of the following are functions of the nervous system except:

(A) receives information from the environment

(B) distributes food to the brain

(C) controls the activities of the body

(D) coordinates the actions of the body

86. Observe the given figure and answer the question. The vertebrae in man are connected together by:
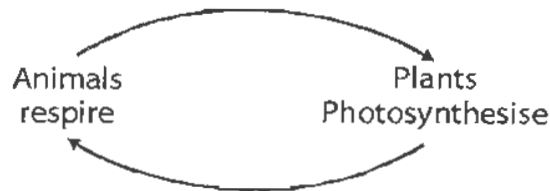


(A) ligaments     (B) tendons     (C) cartilage     (D) cords

87. The diagram given below shows some animals and green plants sealed in an aquarium. What is needed to keep the organisms alive for the longest possible time?



Air tight seal — Glass plate

Water fleas
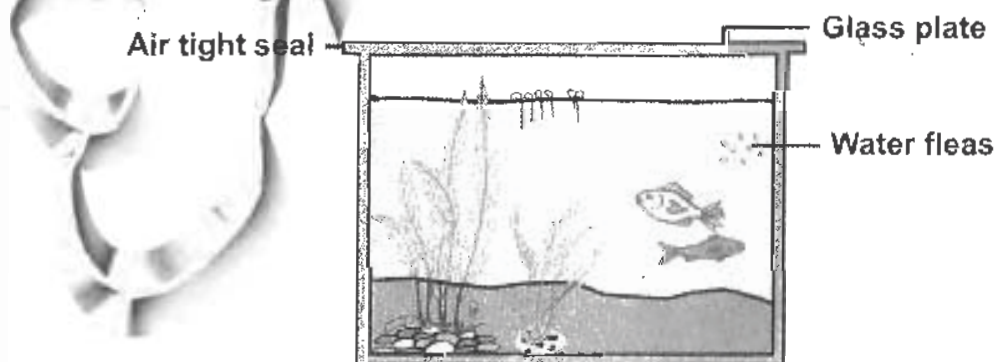
(A) Carbon dioxide   (B) Light energy    (C) Nitrates   (D) Pebbles

88. Look at the diagram given below.



The plants and animals are exchanging _____ for their life processes to take place.

(A) space           (B) gases

(C) nutrients        (D) shelter

89. How do desert animals adjust to very high temperature and lack of water in the area?

(A) They shed their skin

(B) They become active during daytime

(C) They lose much water from their bodies

(D) They use the stored water in their bodies

90. The table given below shows the results of food tests carried out on a food sample.

| Food test | Result |
|---|---|
| 1. A few drops of iodine is added to the food sample | It turns blue-black |
| 2. A few drops of sodium hydroxide and copper sulphate solution is added to the food sample | It turns to purple colour |

Which of the following could be the tested food sample in 1 & 2?

(A) Egg and meat       (B) Bread and jam

(C) Milk and butter      (D) Starch powder and albumen

## CLASS : VI               GENERAL QUESTIONS

91. Study the relation between the figures in Set–I and find the missing figure in Set–II?



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

92. Which number should come next in the series given below?

35, 36, 40, 49, 65, ?

(A) 131      (B) 90      (C) 59      (D) 99

93. Which of the following channels separate the Andaman and Nicobar Islands?

(A) Ten Degree Channel      (B) Nine Degree Channel

(C) Eight Degree Channel      (D) Six Degree Channel

94. Who among the following is the author of the book 'Kim'?

(A) Mark Twain      (B) Lewis Carroll

(C) Rudyard Kipling      (D) Charles Dickens

95. 'Amar Sonar Bangla' is the National anthem of Bangladesh. It was composed by:

(A) R.D. Burman

(B) Ziaur Rahaman

(C) Rabindranath Tagore

(D) Bankim Chandra Chatterji

96. Which of the following groups of letters is different from the other three?

(A) MNW      (B) OPY      (C) JKT      (D) GHO

97. The Bhagirathi, Alaknanda and Mandakini are headstreams of which of the following Indian rivers?

    (A) Brahmaputra          (B) Ganga

    (C) Cauvery              (D) Ravi

98. Who among the following appoints the judges of the Supreme Court?

    (A) The Prime Minister    (B) The Chief Justice

    (C) The Governor         (D) The President

99. At an interval of how many years are the Commonwealth Games held?

    (A) 3         (B) 4         (C) 5         (D) 6

100. What is the full form of the satellite television channel, HBO?

    (A) Hollywood Box Office  (B) Highland Blue Office

    (C) Home Box Office       (D) Home Bank Organization

## KEY FOR THE Q.P.-2010

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