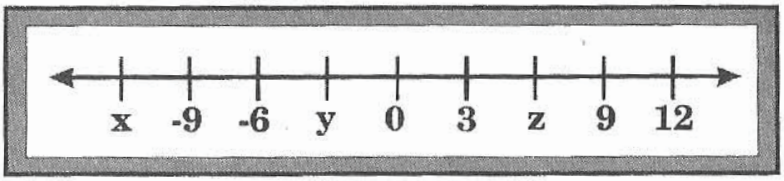
CLASS : VII MATHEMATICS

1 **The two consecutive integers between which the rational number $\frac{31}{4}$ lies :**

(A) 5 and 6 (B) 7 and 8 (C) 6 and 8 (D) 8 and 9

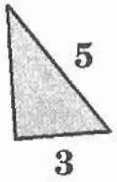
2 **In the figure given below,**

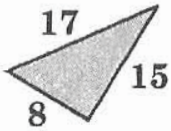


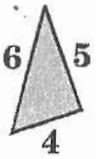
Based on the number line, the value of x – y – z is:

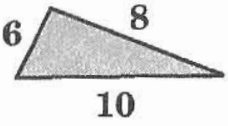
(A) –21 (B) –15 (C) –3 (D) 15

3 **Which of the following is NOT a right-angled triangle?**

(A) 

(B) 

(C) 

(D) 

4 **The data 29, 32, 48, 50, 2x, 2x + 4, 72, 78, 84, 95 is in ascending order and has median 64. The value of 'x' is:**

(A) 62 (B) 31 (C) 124 (D) 68

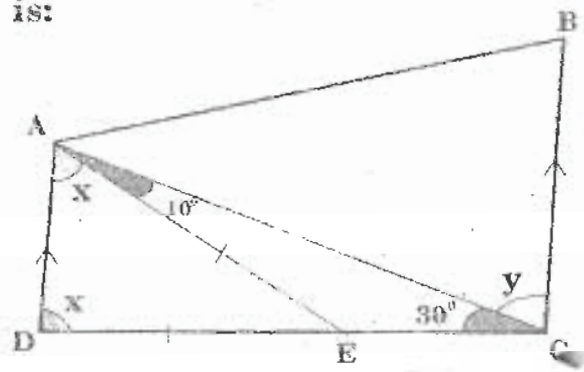
5 **For what value of 'x' does the equation**

$$\frac{a+b-x}{c}+\frac{a+c-x}{b}+\frac{c+b-x}{a}+\frac{4x}{a+b+c}=1$$ **satisfy.**

(A) ab + bc + ca (B) 0

(C) a + b + c (D) 1

6 In the diagram, AD||BC. AED is an isosceles triangle. $\angle x - \angle y$ is:



(A) 20^0 (B) -40^0 (C) 10^0 (D) -10^0

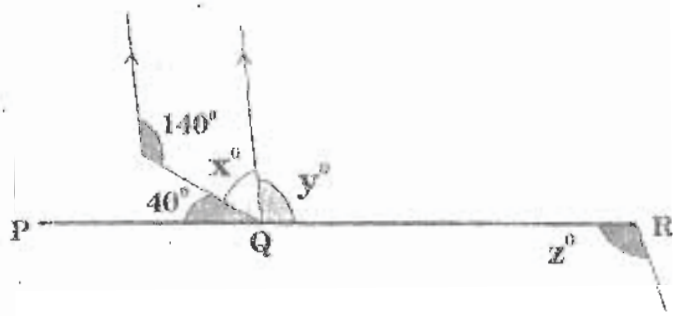
7 For what positive integer 'n' does $n^2 \times 1995^3 \times 1996^2 \times 1997^2 = 3990^2 \times 3992^2 \times 3994^2$?

(A) 2 (B) 4 (C) 5 (D) 8

8 What number should be added to $\frac{-7}{10}$ to get $\frac{-5}{16}$?

(A) $\frac{-31}{80}$ (B) $\frac{131}{80}$ (C) $\frac{131}{80}$ (D) $\frac{31}{80}$

9 In the diagram, PQR is a straight line.



Which of the following is incorrect?

(A) $y - x = 60^0$ (B) $x = 40^0$

(C) $y + z = 200^0$ (D) $x + y + z = 220^0$

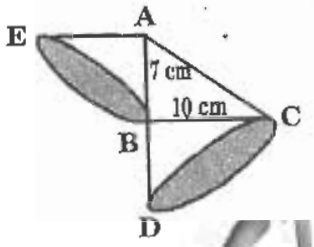
10 If $ab = 1$, then $\frac{1}{1+a^{-1}} + \frac{1}{1+b^{-1}}$ is:

(A) 0 (B) $a + b$ (C) 1 (D) $a - b$

11 The ratio of Mr. X's score to Mr. Y's score for a test is 8 : 9. If Mr. Y had scored 30 marks lower, the ratio would have been 4 : 3 instead. How many marks did Mr. X score?

(A) 50 (B) 30 (C) 80 (D) 60

12 In the figure given below, ABC is a right angled triangle where AB = 7 cm and BC = 10 cm. Given that AEB and BCD are quadrants. Area of shaded region is :



(A) $57\frac{1}{7}\text{cm}^2$ (B) 82 cm^2 (C) $85\frac{1}{7}\text{cm}^2$ (D) $75\frac{1}{7}\text{cm}^2$

13 At what rate percent per annum will a sum of money double in 8 years?

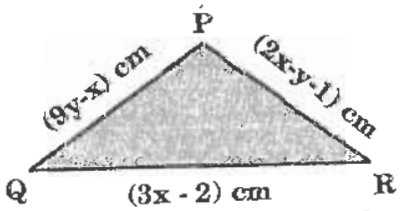
(A) $3\frac{1}{3}\%$ (B) $12\frac{1}{2}\%$ (C) $33\frac{1}{3}\%$ (D) $3\frac{1}{2}\%$

14 When simplified, the product

$$\left(2-\frac{1}{3}\right)\left(2-\frac{3}{5}\right)\left(2-\frac{5}{7}\right).....\left(2-\frac{997}{999}\right)$$ is equal to:

(A) $\frac{5}{999}$ (B) $\frac{1001}{999}$ (C) $\frac{1001}{3}$ (D) $\frac{5}{3}$

15 In the figure given below,



The perimeter, in cm, of the triangle is:

(A) $8y + 4x - 3$ (B) $8y - 4x + 3$

(C) $14x - 2y - 3$ (D) $12xy - 3$

16 The value of 'm' in the equation $\frac{7}{10}+\frac{3}{1000}+\frac{9}{m}=0.712$ is:

(A) 10 (B) 100 (C) 1000 (D) 10,000

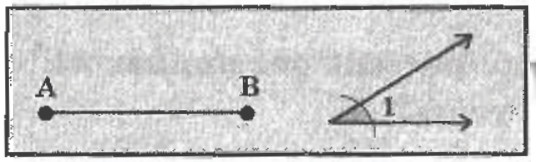
17 If your classroom had 38 pupils and 1 was absent on Monday, 2 on Tuesday, 4 on Wednesday, 0 on Thursday and 3 on Friday. What was the average daily attendance?

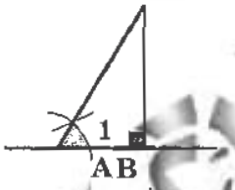
(A) 32 (B) 28 (C) 36 (D) 30

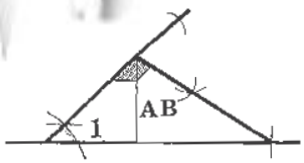
18 The largest of three consecutive multiples of 7 whose sum gives 777 is:

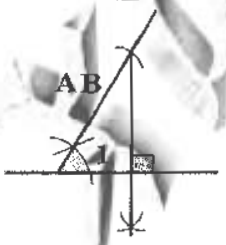
(A) 259 (B) 352 (C) 189 (D) 266

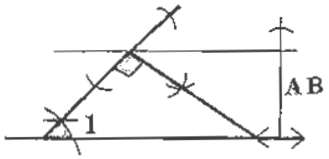
19 The correct construction of a right triangle with acute angle equal to $\angle 1$ and the altitude to the hypotenuse equal to AB is:



(A)


(B)


(C)


(D)


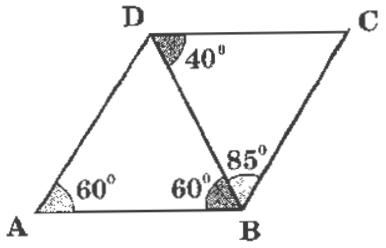
20 The mean of the data $\alpha_1, \alpha_2, \ldots\ldots \alpha_n$ is p then the mean of the data $\alpha_1+p,\ \alpha_2+p,\ \ldots\ldots \alpha_n+p$ is:

(A) p (B) p^2 (C) 2p (D) p(n + 1)

21 In simplest form, the value of the quotient $\frac{19^{98}+(342)(19^{97})}{19^{99}}$ is:

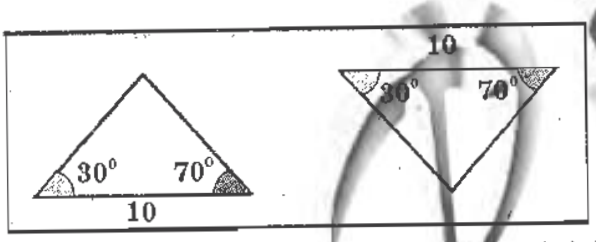
(A) 0 (B) 1 (C) 19 (D) 100

22 **The longest segment shown in the figure is:**



(A) $\overline{AB}$ (B) $\overline{BD}$ (C) $\overline{DC}$ (D) $\overline{BC}$

23 **The method used to prove the two triangles are congruent is:**

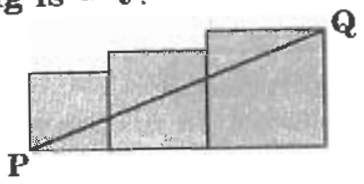


(A) SSS (B) SAS (C) ASA (D) AAS

24 **A trader has purchased pens at the rate of ₹ 42 per dozen. If he has earned a profit of $14\frac{2}{7}\%$. What is his selling price?**

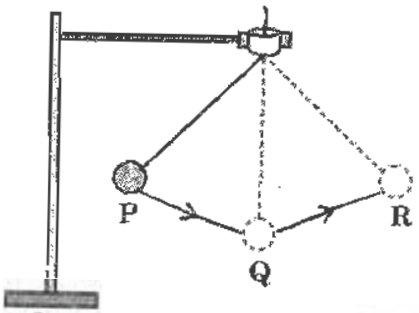
(A) ₹ 42 (B) ₹ 52 (C) ₹ 48 (D) ₹ 38

25 **Three squares are lined up horizontally as shown. The area of the first square is 9 cm², the area of the second square is 16 cm², and the area of the third square is 25 cm². How long is $\overline{PQ}$?**



(A) 8 cm (B) 17 cm (C) 13 cm (D) 7 cm

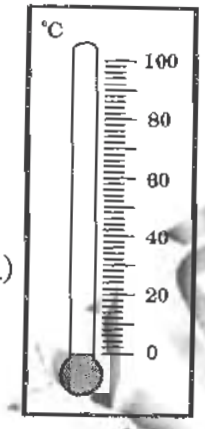
26 **Look at the diagram of a pendulum below:**

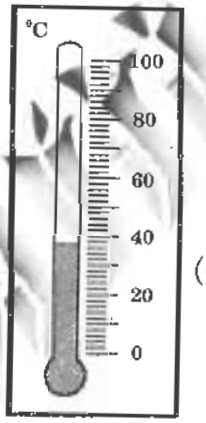


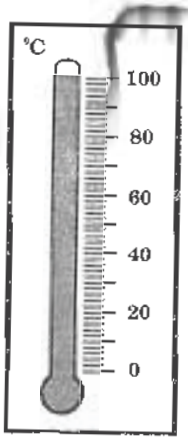
An oscillation of a pendulum is from P to R and back to P again. If it takes 0.5 second to swing from P to Q, then how long will it take to make 5 oscillations?

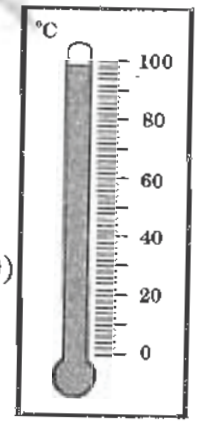
(A) 5 seconds (B) 7.5 seconds
(C) 2.5 seconds (D) 10 seconds

27 **Which of the following thermometers shows the normal human body temperature?**

(A) 

(B) 

(C) 

(D) 

28 **Identify the reasons for excessive currents in electrical circuits.**

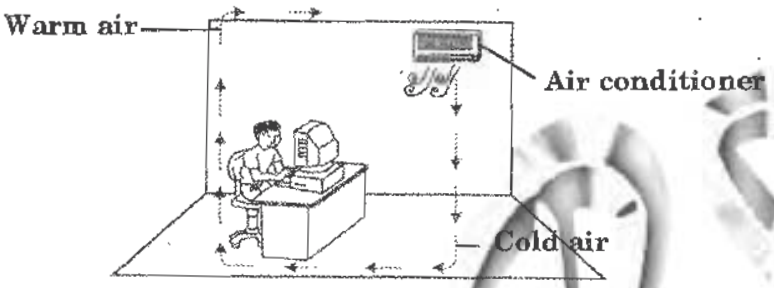
I.	Short circuit
II.	Connection of many devices to a single socket
III.	Using MCB's instead of fuses

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

29 **What happens when light falls on a wooden chair?**

(A) Some part of light reflected from the chair enter our eyes
(B) Light passes through the wooden chair
(C) The chair sends a signal to our eyes that enables us to see it
(D) Electrical energy is given out by the chair

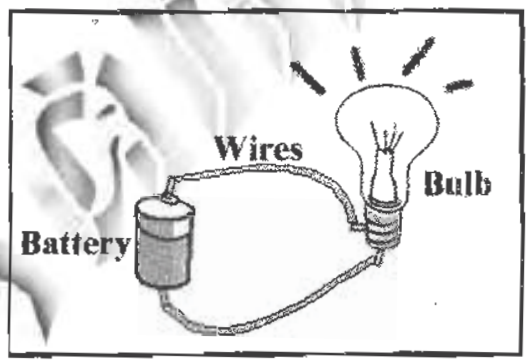
30 **Figure below shows an air conditioner used to cool a room:**



By which mode of transfer of heat does the air conditioner cool the room?

(A) Conduction (B) Radiation
(C) Convection (D) Any of the above

31 **In the circuit given below, the wires connecting the battery and the bulb create a closed circuit.**



What would happen if one of these wires were cut?

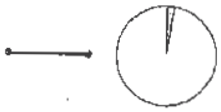
(A) The connecting wires loses charge
(B) The glass would crack
(C) The bulb stops glowing
(D) The wire would become hot

32 **For each of the following, the length of the line taken to the scale indicates the distance travelled by an object. The respective time is shown on the clock at the end. Which of the following shows the object travelling at the greatest speed?**

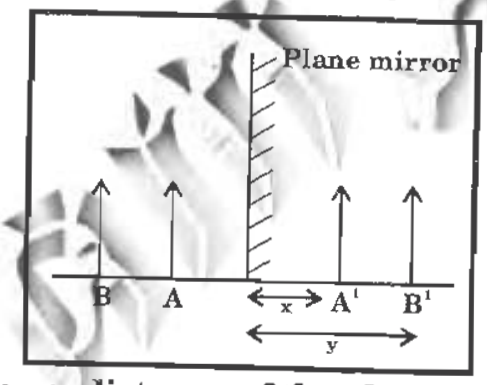
(A)  **15 seconds**

(B)  **10 seconds**

(C)  **20 seconds**

(D)  **1 second**

33 **Observe the position of images of an object from the mirror for the positions of the object infront of it:**



If 'x' is the image distance of the object at position A while 'y' is the image distance of the object at position B, then which of the following statement is correct?

(A) Distance of object at A > distance of object at B

(B) Distance of object at B > distance of object at A

(C) Distance of object at A = distance of image at B

(D) Distance of object at B = distance of image at A

34 **Which of the following is the advantage of an accumulator over a dry cell?**

(A) Leak proof (B) Cheap

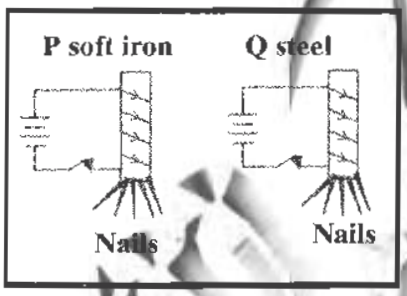
(C) Rechargeable (D) Portable

35 **During the dispersion of white light, violet colour suffers the greatest deviation while red colour suffers the least deviation. Arrange colours yellow, green, orange in ascending order of deviation.**

(A) Yellow, green, orange (B) Green, yellow, orange

(C) Orange, yellow, green (D) Yellow, orange, green

36 **The figure below shows a coil wound on a soft iron core P and an identical coil wound on a steel core Q.**



When switch is closed, 4 nails are attracted to each of them. On opening of switch, what is the probable number of nails still attracted to P and Q?

	P	Q
(A)	0	0
(B)	0	4
(C)	4	0
(D)	4	4

37 **Which of the following conditions enables heat to flow from one body to another body?**

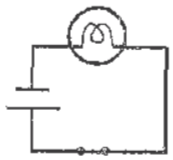
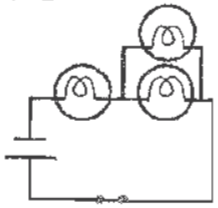
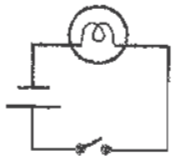
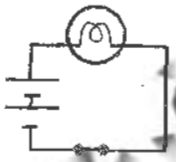
(A) The difference of temperature between the bodies

(B) The difference of the pressure exerted on the two bodies

(C) The difference of density between the two bodies

(D) The difference of size between the two bodies

38 **In which of the following circuit diagram, no current flows through any part of the circuit?**

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

39 **Which of the following phenomenon does not involve convection?**

(A) Sea breeze
(B) Land breeze
(C) Cooling of water in a pool
(D) The flow of electricity in a conducting wire

40 **Which kind of mirror is used by an E.N.T. doctor to see the internal parts of the body?**

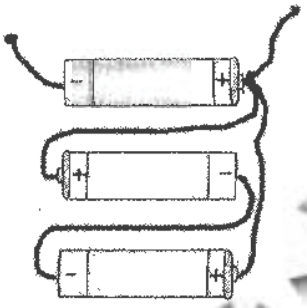
(A) Convex mirror (B) Concave mirror
(C) Plane mirror (D) Either A or C

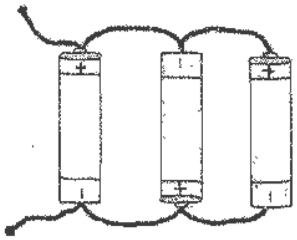
41 **The 'average speed' of a motorist on a journey is:**

(A) the total distance travelled divided by the total time
(B) the average of the fastest and slowest speeds
(C) the average of his initial and final speeds
(D) the total time divided by the total distance travelled

42 **Rana's teacher asked him to connect 3 cells in different ways to form a battery. Identify the correct way he must connect to form a battery.**

(A) 

(B) 

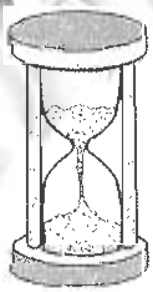
(C) 

(D) 

43 **A marathon runner runs at an average speed of 14 km h^{-1}. How long would it take for him to complete a marathon of 42 km?**

(A) 2 hours (B) 3 hours (C) 14 hours (D) 42 hours

44 **The figure shows an object which is seldom used nowadays.**



What is the object and its function?

	Object	Function
(A)	Hour glass	To measure time
(B)	Sundial	To measure time
(C)	Wax clock	To tell the temperature
(D)	Glass cup	To store sand

45 **A reflecting surface is curved outwards. The mirror formed will he:**

(A) concave (B) convex (C) plane (D) any of the above

46 **Which of the following statements is *incorrect*?**

(A) In a distance time graph, steeper the line, slower is the speed of the moving body.

(B) The distance time graph of a body in uniform motion is a straight line.

(C) SI unit of speed is m s^{-1}.

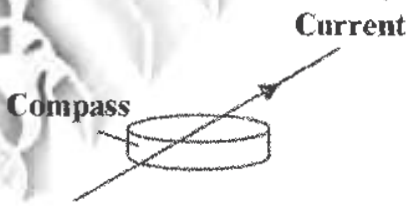
(D) Waxing and waning of the moon is periodic.

47 **A piece of silver becomes hot when exposed to sunlight for a while. The silver does not receive heat of the sun through:**

I. Radiation
II. Convection
III. Conduction

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

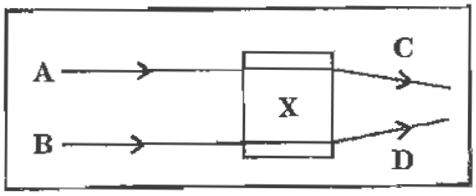
48 **Figure below shows a compass placed below a long straight wire carrying current in the direction south to north, while the compass needle pointing in the north west direction.**



If the direction of current in the wire is reversed, then the compass needle:

(A) does not show any deflection (B) points in the NE-direction
(C) points in the SE-direction (D) points in the SW-direction

49 **The diagram below shows two incident parallel rays A and B which emerge as rays C and D.**



What is the appropriate lens used in the box 'X'?

(A) Convex lens (B) Concave lens

(C) Plane lens (D) Plano-concave lens

50 **Which of the following shows that certain solids are bad conductors of heat?**

(A) The particles in the substance cannot vibrate freely.

(B) The particles are far apart in the substance.

(C) The particles in the substance cannot move randomly.

(D) The particles are closely packed together in the substance.

CLASS : VII CHEMISTRY

51 **Look at the figure of whipping an egg white:**

What kind of change is undergone by egg white?

(A) Reversible chemical change

(B) Irreversible chemical change

(C) Physical change

(D) Both physical as well as chemical change

52 **Neha was performing an experiment bare handed. After the experiment was over, she realised that her palms became slippery and slimy. What do you think is the reason for it?**

(A) She must have dropped NaOH on her hands

(B) She must have dropped H_2SO_4 on her hands

(C) She must have dropped $NaCl$ on her hands

(D) She must have dropped distilled water on her hands

53 **The factor which contribute to the development of cyclones is/are:**

I.	**Wind speed**
II.	**Temperature**
III.	**Humidity**

(A) I and II only

(B) II and III only

(C) I and III only

(D) I, II and III

54 **The amount of rainfall at a place depends on :**

(A) terrain

(B) geographic location

(C) nature of soil

(D) proximity to sea

55 **Karan cuts a piece of wire and then bends to form a pattern. Identify the change undergone by the wire.**

(A) Irreversible physical change
(B) Reversible physical change
(C) Chemical change
(D) Initially chemical change later physical change

56 **A tornado is:**

(A) uneven heating between two regions
(B) a violent, twisting funnel of wind
(C) vent through which hot gases emerge out
(D) a sudden movement of earth's crust

57 **In a pressure kerosene stove:**

I. We pump kerosene and convert it into vapours
II. The vapours are then ignited

Which of the following is *true* about the above statements?

(A) I is a chemical change; II is a physical change
(B) I is a physical change; II is a chemical change
(C) Both I and II are physical changes
(D) Both I and II are chemical changes

58 **A colourless liquid turns blue litmus red and reacts with magnesium to produce a gas. What type of substance must the colourless liquid be?**

(A) Acid (B) Base (C) Salt (D) Both (B) and (C)

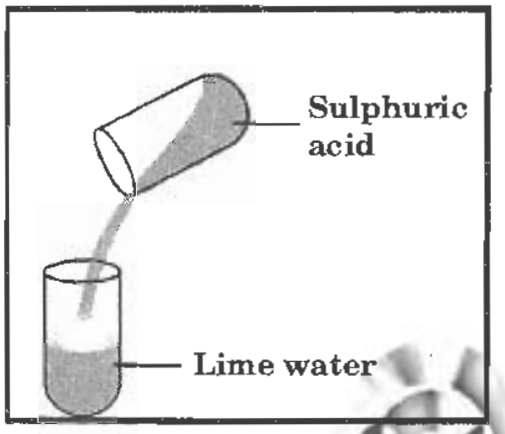
59 **Rohant observed formation of the green patina on a copper statue in his home. This formation is due to:**

(A) chemical change (B) physical change
(C) periodic change (D) both (B) and (C)

60 **Which of the following is an example of a physical change?**

(A) Burning (B) Rusting (C) Melting (D) Corroding

61 **Observe the given figure carefully and select the correct option.**



I.	A white precipitate is obtained
II.	Effervescence is observed in the test tube containing lime water
III.	The test tube containing lime water becomes hot

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

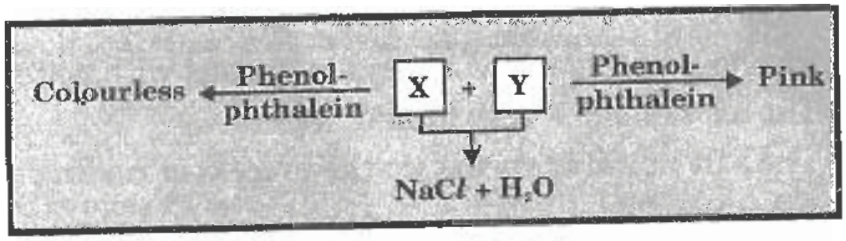
62 **Identify a *true* statement regarding a physical change?**

(A) During the change energy is evolved in the form of heat or light
(B) It alters the form or appearance of a substance
(C) It changes a substance into a different substance
(D) More than one substance must be present to have physical change

63 **How does cyclone decrease the fertility of the soil in the coastal areas?**

(A) By flooding the land with saline water
(B) By dissolving soil and rocks
(C) By increasing the water table of the place
(D) By decreasing the water table of the place

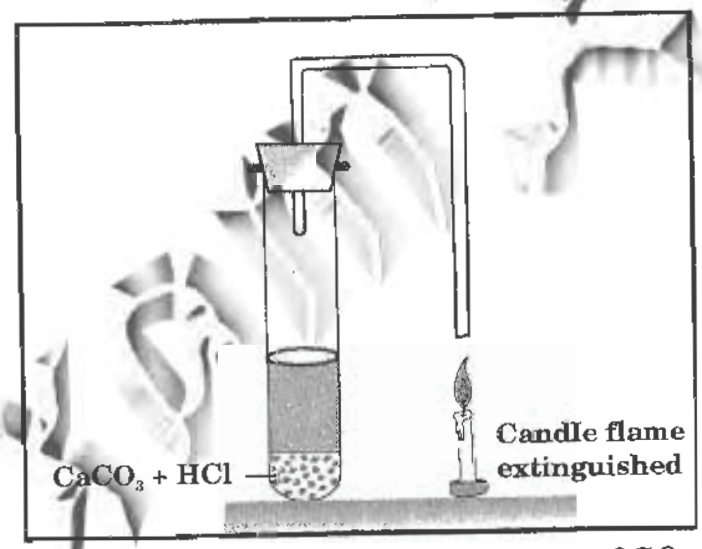
64 **Study the flow chart carefully.**



Identify X and Y.

	X	Y
(A)	NaOH	NaCl
(B)	HCl	NaOH
(C)	NaOH	HCl
(D)	HCl	NaCl

65 **What causes the candle flame to get extinguished?**



(A) Evolution of O_2 gas (B) Evolution of CO_2 gas

(C) Formation of $Ca(OH)_2$ (D) Formation of $CaCl_2$

66 **Why are acids always stored in glass containers and not in metallic ones?**

(A) Glass containers are transparent

(B) Glass containers are cheaper

(C) Metal containers are not easily available

(D) Metal reacts with the acid stored in them

67 **The shipping industry has to bear huge monetary losses due to rusting of ships. What is/are the cause(s) leading to this?**

(A) The body of the ship is always in contact with water

(B) The air around is very humid

(C) The salt in water speeds up the process of rusting

(D) All of the above

68 **Wind currents are generated due to:**

(A) shape of earth (B) uneven heating on earth

(C) thunderstorm (D) cyclone

69 **Ground near a water body will have:**

(A) more moisture (B) less moisture

(C) no moisture at all (D) more animals

70 **What is the wind carrying water from oceans and bringing rain called as ?**

(A) Cyclone (B) Typhoon (C) Monsoon (D) Tornado

CLASS : VII BIOLOGY

71 **Which of the following organisms clean the Earth's surface?**

(A) Autotrophs (B) Heterotrophs

(C) Chemotrophs (D) Decomposers

72 **Why do plants used to disperse their seeds or fruits?**

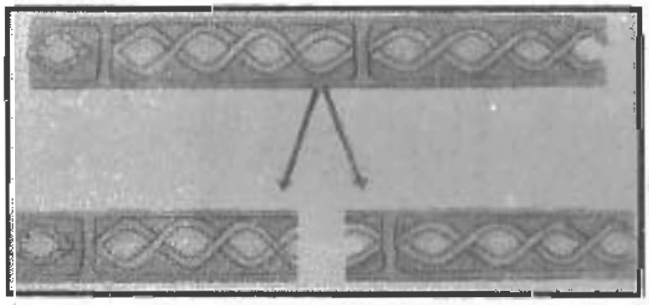
(A) To make a variety of species.

(B) To maintain their species.

(C) To protect their seeds from being eaten by animals.

(D) To get sufficient water, air and space to grow.

73 **Which type of reproduction is shown in the diagram given below?**



(A) Binary fission (B) Fragmentation

(C) Sporulation (D) Budding

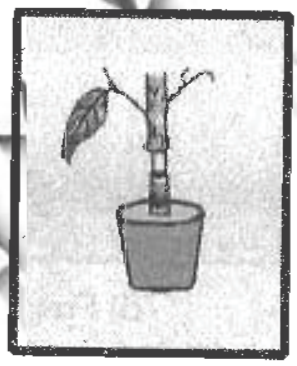
74 **The table given below shows the various ways in which plants reproduce.**

Plants	Ways of Reproduction
Xanthium	Z
X	Spores
Potato	Y

Which of the following would you place in X, Y and Z?

	X	Y	Z
(A)	Seeds	Suckers	Spores
(B)	Maple	Eyes	Seeds
(C)	Mucor	Eyes	Seeds
(D)	Drumstick	Spores	Suckers

75 **Observe the figure given below:**



The stem shows swelling in upper portion. This is due to the blocking of the:

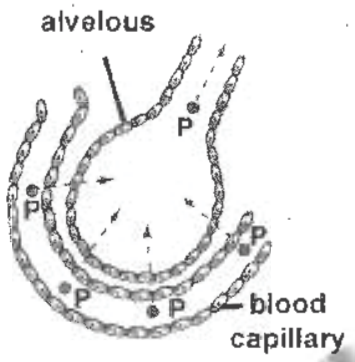
(A) Upward movement of food

(B) Downward movement of food

(C) Upward movement of water

(D) Downward movement of water

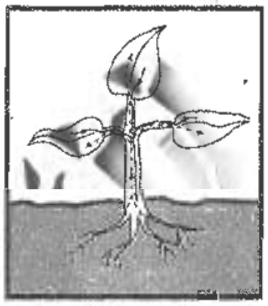
76 **Gas 'P' diffuses from a capillary into an alveolus in the lungs. How is gas 'P' expelled from the alveolus?**



(A) During inhalation (B) During exhalation

(C) During respiration (D) During exercise

77 **The diagram below shows materials needed for survival being transported inside a plant.**



Which body system performs this function in humans?

(A) Circulatory system (B) Digestive system

(C) Excretory system (D) Respiratory system

78 **Identify the animal that pops out its stomach through its mouth to eat the food?**

(A) Hydra (B) Starfish (C) Amoeba (D) Snail

79 **Which of the following describes moulting?**

(A) Spinning of cocoon

(B) Casting off of old skin

(C) The resting stage is the life cycle of a silk worm

(D) Change in appearance in the life cycle of silk worm

80 **Given below are the various steps involved in animal nutrition.**

I. Assimilation
II. Ingestion
III. Absorption
IV. Digestion
V. Egestion

Arrange them in proper sequential order.

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

81 **Which of the following two terms are related to silk production?**

(A) Sericulture and floriculture
(B) Floriculture and horticulture
(C) Apiculture and floriculture
(D) Sericulture and moriculture

82 **Symbiosis is the phenomenon in which two different kinds of organisms pool together their nutritional requirements. From the following figures, which one represents such association?**

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

83 **Why do we have muscular cramps after strenous exercise?**

(A) It is due to the breakdown of glucose
(B) It is due to the slow circulation of blood
(C) It is due to accumulation of lactic acid
(D) It is due to muscle cells respiring aerobically

84 **The change in the fur of an artic hare from summer to winter helps it to.**

(A) lower their body temperature

(B) protect their eyes from sunlight

(C) help them to move on slippery ice

(D) make them less visible to predators

85 **Which of the following statements best explains why fruits and leafy vegetables are included in a healthy diet?**

(A) They have a high water content

(B) They are the best source of protein

(C) They are rich in minerals and vitamins

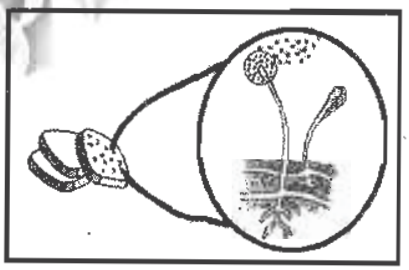
(D) They are the best source of carbohydrates

86 **Abhi fell down from a bicycle and got minor injuries on his body. He noticed that blood was coming out from the injuries but it stopped after sometime, a dark red clot was formed there. The clot is formed because of the presence of:**

(A) Red blood cells (B) Plasma

(C) White blood cells (D) Platelets

87 **The figure given below illustrates?**



(A) Autotrophic nutrition (B) Saprophytic nutrition

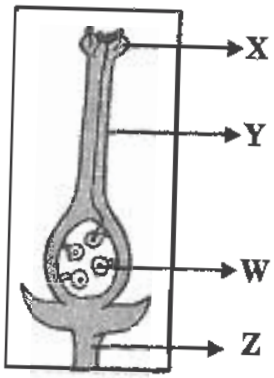
(C) Parasitic nutrition (D) Symbiotic nutrition

88 **The hydra pushes food into its mouth by using:**

(A) cilia (B) proboscis

(C) tentacles (D) pseudopodia

89 **The given figure represents a carpel:**



Which part bears the female gamete?

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

90 **Which of the following is the correct order of transport of water from the soil to the leaf of a plant?**

(A) Root → Root hair → Phloem → Leaf

(B) Roothair → Root → Xylem → Leaf

(C) Root → Root hair → leaf → Phloem

(D) Root → Xylem → Phloem → Leaf

CLASS : VII GENERAL QUESTIONS

91 **What is the next number in the pattern given below?**

3, 9, 15, 21 (?)

(A) 22 (B) 24 (C) 27 (D) 28

92 **Which instrument is used to measure pressure?**

(A) Ammeter (B) Manometer
(C) Lactometer (D) Telescope

93 **Name the famous boxing champion who bit off his opponent's ear?**

(A) Evander Holy Field (B) Mike Tyson
(C) Dinko Singh (D) Cassius Clay

94 **The meetings of the Rajya Sabha are presided over by:**

(A) President (B) Vice-president
(C) Prime Minister (D) Speaker

95 **Who among the following is NOT a Nobel Prize winner?**

(A) Mahatma Gandhi (B) Rabindranath Tagore
(C) C.V. Raman (D) Mother Teresa

96 **How many Academy Awards did the film "TITANIC" win at the Oscar?**

(A) 11 (B) 13 (C) 9 (D) 18

97 **In which year did India won all the three beauty crowns?**

(A) 1994 (B) 1997 (C) 1966 (D) 2000

98 **What is the former official name of Thailand?**

(A) Myanmar (B) Siam (C) Kampuchia (D) Pataliputra

99 **Which dance form is Leela Samson associated with?**

(A) Mohinattam (B) Kuchipudi (C) Bharatnatyam (D) Odissi

100 **In which sport do we use the term 'Half Nelson"?**

(A) Wrestling (B) Shooting (C) Swimming (D) Boxing

KEY FOR THE Q.P.-2011

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