CLASS : VII MATHEMATICS

1. **If the circumference of a circle is 16π cm, what is its area?**

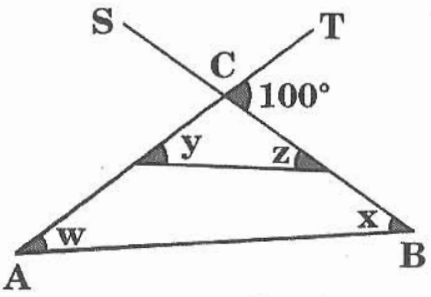
   (A) 32π cm^2 (B) 64π cm^2 (C) 128π cm^2 (D) 256π cm^2

2. $6\frac{3}{4} \times 1.2 = 1.2 + 0.9 + 1.2 + 1.2 \times \underline{?}$

   What is the missing value in the above problem?

   (A) 4 (B) 3 (C) 2 (D) 6

3. **In the diagram below, ACT and BCS are straight lines. Find the value of $\angle w + \angle x + \angle y + \angle z$.**



   (A) 180° (B) 200° (C) 280° (D) 360°

4. **If Swapna gives Jyothi Rs. 7, Swapna will have the same amount of money as Jyothi. If Jyothi gives Swapna Rs. 16, the ratio of the amount of money Jyothi has to the amount of money Swapna has will be 5 : 7. How much does Jyothi have?**

   (A) Rs. 181 (B) Rs. 131 (C) Rs. 91 (D) Rs. 61

5. **Mr. Khan had Rs. 700. He gave Rs. 5h to his son and $\frac{1}{4}$ of the remainder to his 4 daughters. He used the rest to buy some cakes. How much did the cakes cost?**

   (A) Rs. $\frac{700-5h}{4}$ (B) Rs. $\frac{3(700-5h)}{4}$

   (C) Rs. $\frac{700-5h}{16}$ (D) Rs. $\frac{700-5h}{12}$

6. **Which one of the following statements is true?**

   (A) $4^{3^2} = (4^3)^2$ (B) $4^{3^2} > (4^3)^2$

   (C) $4^{3^2} < (4^3)^2$ (D) they cannot be compared

7. **A sum of money becomes 4 times at simple interest in 10 years. What is the rate of interest?**

(A) 10% (B) 20% (C) 30% (D) 40%

8. **Guru folded a piece of square paper two times. The area of the portion of paper was reduced by $\frac{1}{2}$ with each fold. At the end of the second fold, the portion of paper had an area of 9 cm^2. What was the perimeter of the square paper at first?**

(A) 16 cm (B) 24 cm (C) 36 cm (D) 81 cm

9. **In a Mathematics test, Tina answered 18 out of 25 questions correctly. How many percent more correct answers than wrong answers did she get?**

(A) 11% (B) 44% (C) 157% (D) 280%

10. $\frac{A}{15} = \frac{B}{10}$; $\frac{B+7}{36} = \frac{5}{12}$

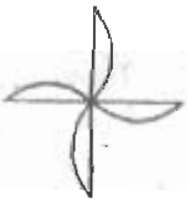
What fraction of A is B?

(A) $\frac{2}{3}$ (B) $\frac{8}{20}$ (C) $\frac{3}{2}$ (D) $\frac{12}{20}$

11. **Product of two integers is –216. If one of integers is 6, then the other is:**

(A) 36 (B) 21 (C) – 21 (D) –36

12. **Which of the following figures have rotational symmetry of order more than 1?**

(A)  (B)  (C)  (D) All the given

13. **Which of the following statements is false?**

(A) $(-1)^n = -1$, if n is an odd integer

(B) For any rational number a, $a^0 = 1$

(C) If $4 \times 8^m = 2^5$, then m =1

(D) None of these

14. If $1 + \frac{1}{x} = \frac{x+1}{x}$, what does x equal to?

(A) 1 or 2 only (B) 1 and 0 only

(C) 1 and –1 only (D) any number except 0

15. In a ΔPQR, if $PQ^2 = QR^2 + PR^2$, then the right angle is at:

(A) P (B) Q (C) R (D) any vertex

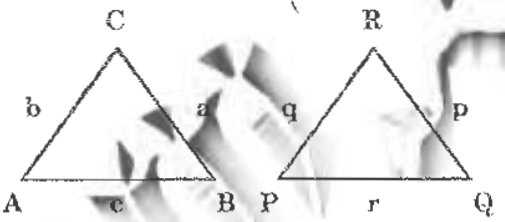
16. Priya read $\frac{1}{3}$ of a book on Saturday and 70% of the remaining pages on Sunday. She then had 6q pages left to read. Find the total number of pages in the book in terms of q.

(A) 180 q (B) 90 q (C) 30 q (D) 15 q

17. 400 oranges were bought at Rs. 125 per hundred and were sold at a profit of Rs. 100. Find the selling price per dozen.

(A) Rs. 20 (B) Rs. 12 (C) Rs. 18 (D) Rs. 40

18. For the congruence of ΔABC and ΔPQR, which one of the following sets of conditions is not sufficient?



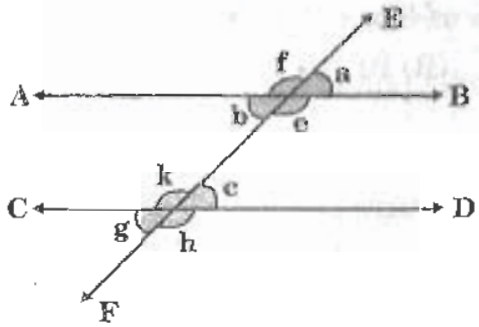
(A) $\angle ABC = \angle PQR$, a = p, c = r

(B) $\angle CAB = \angle RPQ$, $\angle ABC = \angle PQR$, c = r

(C) b = q, $\angle CAB = \angle RPQ$, a = p

(D) a = p, c = r, $\angle ABC = \angle PQR$

19. AB and CD are two straight lines parallel to each other and a straight line EF intersects them as shown in the given figure. If $\angle b = \angle e$, then :



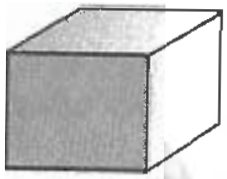
(A) $\angle a = \angle k$ (B) $\angle a = \angle c$ (C) $\angle g = \angle e$ (D) $\angle g = \angle f$

20. Which one of the following is the rational number lying between $\frac{6}{7}$ and $\frac{7}{8}$?

(A) $\frac{3}{4}$ (B) $\frac{99}{112}$ (C) $\frac{95}{112}$ (D) $\frac{97}{112}$

21. Which of the following figure has six faces?

(A) 

(B) 

(C) 

(D) 

22. If $x + y = 5$, $x + z = 7$ and $y + z = 12$, then the value of $x + y + z$ is:

(A) 12 (B) 2 (C) 5 (D) 24

23. Choose the correct statement from the following.

(A) A triangle has 3 sides and 4 vertices

(B) A cylinder has 3 faces

(C) All sides of the rectangle are equal

(D) A cuboid has 4 flat faces and 12 straight edges

24. The average of the even numbers from 1 to 30 is:

(A) 15 (B) 16 (C) 17 (D) 19

25. The solution of $3(x + 2) - (x - 8) = 3(x + 8)$ is:

(A) –10 (B) 10 (C) 2 (D) –2

CLASS : VII PHYSICS

26. The base of a cooking vessel such as a pot is usually dull and black. Why is it made this way ?

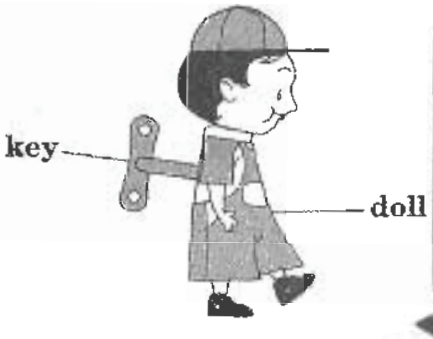
(A) Black is a favourite colour of most consumers.

(B) Dull surfaces prevent slipping.

(C) Black and dull surfaces are good absorbers of heat.

(D) Black and dull surfaces are good reflectors of heat.

27. Rohan carried out an investigation into the speed of his doll and the results are tabulated below :



Number of turns of the key	2	4	6	8
Distance moved in 20 seconds (cm)	40	60	80	100

What is the speed of the doll when the key is turned 8 times ?

(A) 5 cm s^{-1} (B) 100 cm s^{-1} (C) 12.5 cm s^{-1} (D) 4 cm s^{-1}

28. Which of the following is true about the fuse ?

I. It is a safety device
II. Its rating must be always higher than the maximum electric current in the circuit
III. It has a low melting point

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

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

29. An object placed 3 m from a plane mirror is shifted by 0.4 m away from the mirror. What is the distance between the object and its image ?

(A) 6.4 m (B) 6.8 m (C) 6 m (D) 5.2 m

30. **Which part of a thermos flask cannot help to reduce loss of heat by radiation ?**

(A) Vacuum (B) Cork stopper

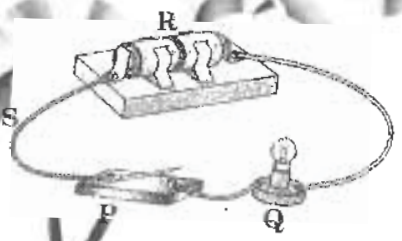
(C) Double glass walls (D) Shiny silvery wall

31. **What kind of graph will be obtained by the data given below?**

Dist (in m)	0	1	2	3	4
Time (in s)	0	3	6	9	12

(A) A curve (B) A straight line (C) A circle (D) A U-curve

32. **Which components in the circuit given below can stop the flow of electrical energy in the circuit ?**



(A) P (B) Q

(C) R (D) S

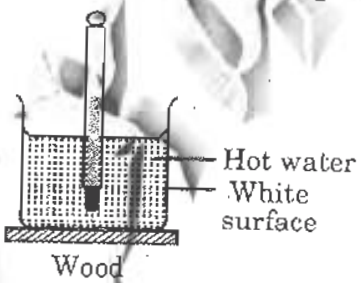
33. **The image produced by Q is real. Identify Q from the following.**

(A) Plane mirror (B) Convex lens

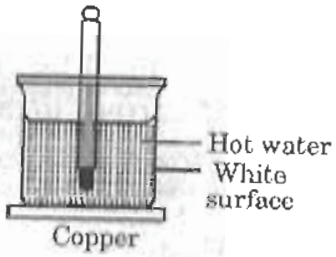
(C) Concave lens (D) Convex mirror

34. **All the beakers below contain the same volume of water and has the same initial temperature. Which beaker will show the lowest temperature after 10 minutes ?**

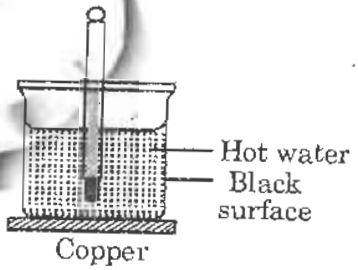
(A)



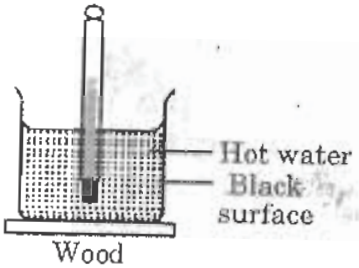
(B)



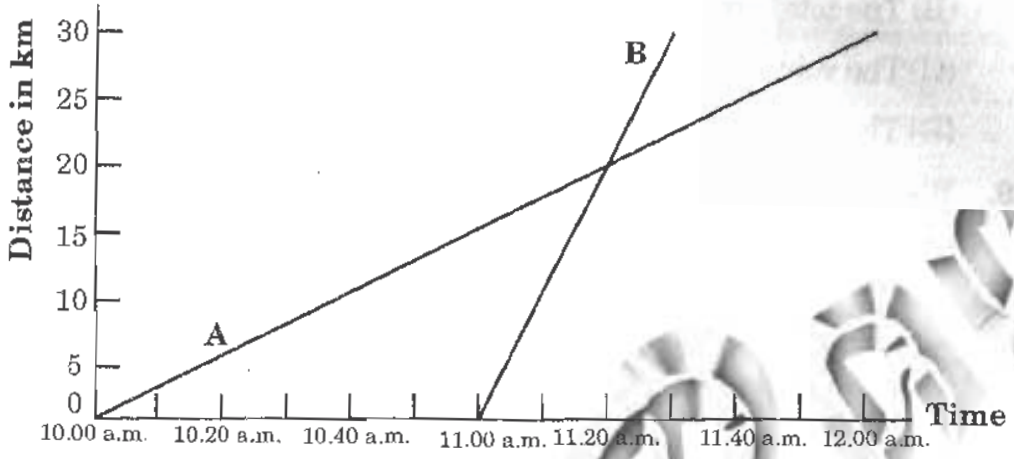
(C)



(D)



35. Two friends A and B started from the same location and went 30 km along a road in the same direction as shown in graph.



Identify the correct statement from the following ?

(A) A and B move with same speed at 10.30 a.m.

(B) B moves with non uniform speed.

(C) A completes his journey early.

(D) B overtakes A at 11.20 a.m.

36. Which of the following statements is true about convection ?

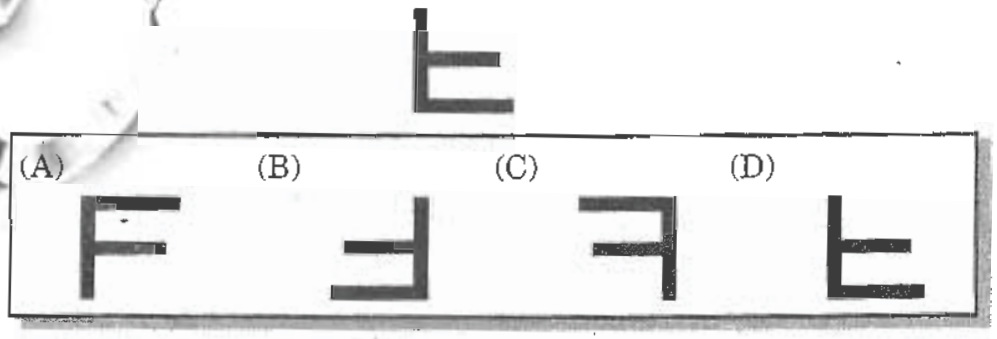
(A) In solids, heat is transferred only by convection.

(B) Convection can occur in cold liquids.

(C) Convection does not requires medium for transmission.

(D) Heat flows from the hot end to the cold end.

37. Fig. below shows an image produced by an object placed in front of a plane mirror. What is the object from the following?



38. What does the temperature show ?

(A) The rate of expansion of an object.

(B) The total amount of heat energy.

(C) The volume of a gas occupied.

(D) The degree of hotness of a body.

39. Which of the following events are used for measurement of time ?

(A) Occurrence of an earthquake.

(B) Speedometer in a vehicle.

(C) Motion of a pendulum.

(D) Collision of a meteorite with a planet.

40. Study the given statements below :

I. Electro magnets are more powerful than ordinary bar magnets

II. Soft iron is easy to magnetize and demagnetize

III. The poles of an electromagnet are not affected by the direction of the current

Which of the above statements about the electro magnets are correct ?

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

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

41. What is the reason for the formation of spectrum, when the sunlight passes through the prism ?

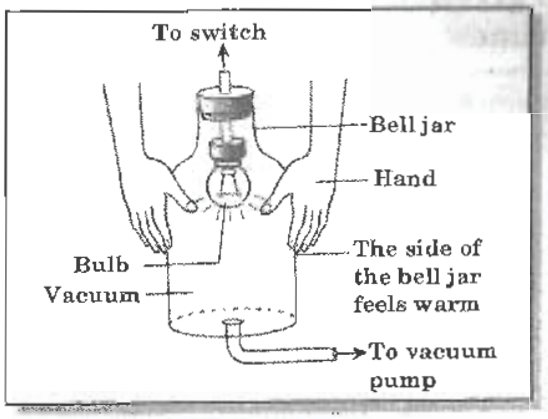
(A) White light is a mixture of seven colours.

(B) Coloured light reflects at different angles in a glass prism.

(C) The prism add colour to the white sunlight.

(D) Because light travels at high speed.

42. Observe the given figure below:



The heat produced in the bulb is transferred to the bell mainly by :

(A) conduction (B) convection (C) radiation (D) condensation

43. Which of the following events can be used for measuring time?

I. Swing of a pendulum
II. Pulse rate
III. Changing day and night

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

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

44. Rahul told his friend that 'X' can form a virtual image larger than the object by reflection. What is X Rahul was speaking about ?

(A) Plane mirrors (B) Convex mirrors

(C) Concave mirrors (D) Convex lens

45. Study the characteristics of wire X given below :

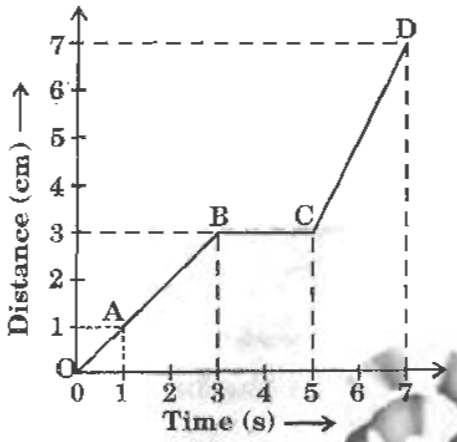
X is an insulated wire wrapped around a piece of iron and when electric current flows through this wire, it behaves like a magnet
X weakens the cell quickly when left connected

Based on the above information, identify X ?

(A) Electric fuse (B) Electric switch

(C) Electro magnet (D) Electric bulb

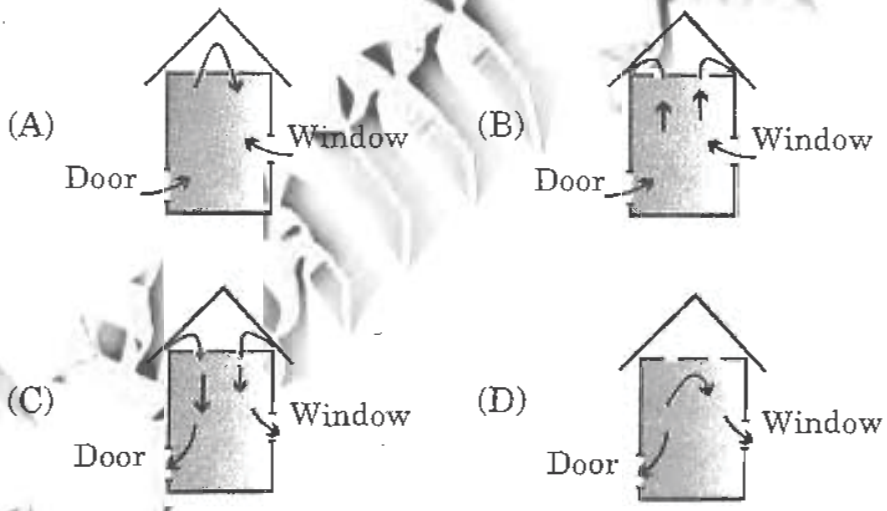
46. The graph given below shows the position of an insect at different times:



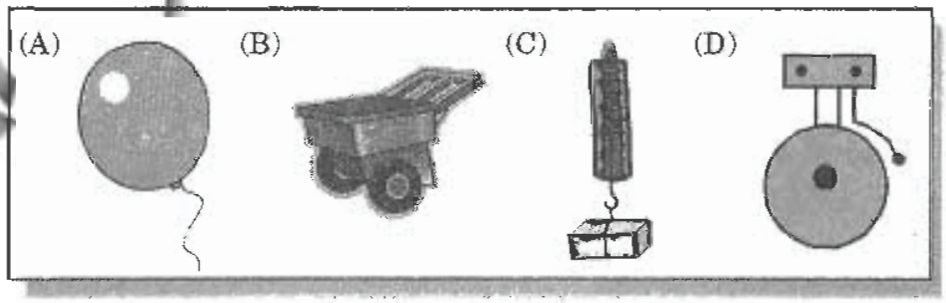
What was the average speed of the insect ?

(A) 1.5 m s^{-1} (B) 3 cm s^{-1} (C) 1 cm s^{-1} (D) 4.5 cm s^{-1}

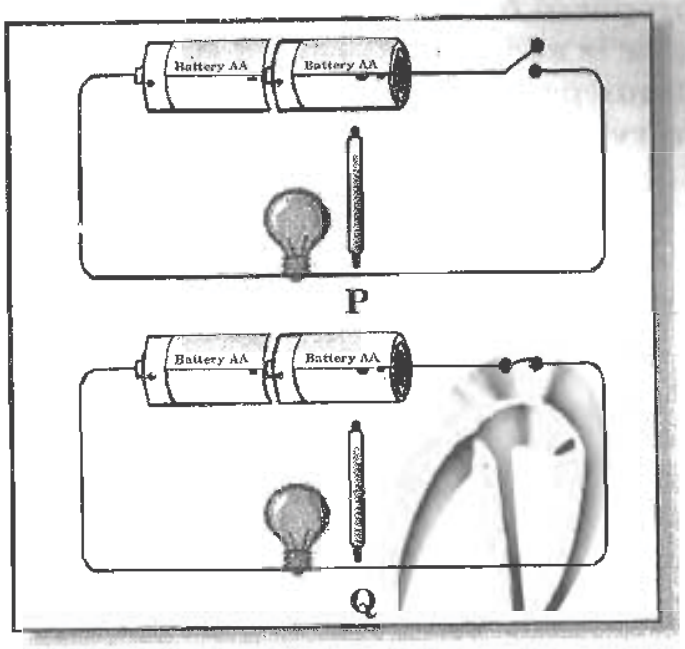
47. Which of the following shows the correct direction of air flow inside a building ?



48. Which of the following objects makes use of electro magnets ?



49. Two circuits were set up as shown below :



What is the aim of the investigation ?

(A) To determine the brightness of the bulbs.

(B) To show the amount of electrical energy produced.

(C) To show that electrical energy produces heat energy.

(D) To identify the functions of each component.

50. Why does solar panels have black surfaces ?

(A) Because they are good absorbers of heat.

(B) Because they are bad absorbers of heat.

(C) Because they are good reflectors of heat.

(D) Because they are bad radiators of heat.

CLASS : VII CHEMISTRY

51. Juice prepared from lemon is taken into a glass tumbler and water is added to it. Then a red litmus paper and a blue litmus paper are dipped into it. What changes do you observe ?

(A) Red litmus paper turns blue.

(B) Blue litmus paper turns red.

(C) Red litmus paper becomes white.

(D) Blue litmus paper becomes white.

52. Karuna wrapped some green gram pulses in a wet cotton cloth and when she opened after a couple of days she found small white growth on the seeds. What could be the change undergone ?

(A) It could be physical change.

(B) By washing and drying pulses could become fresh as usual.

(C) It is a reversible chemical change.

(D) It is an irreversible physical change.

53. Identify the correct answer in the following.

(A) Wind movements are caused by uneven heating on the earth.

(B) The movement of air from land to sea is called sea breeze.

(C) When the air moves from sea to land is called land breeze.

(D) When air moves from low pressure to high pressure it is called wind.

54. From where does a tropical cyclone get its energy ?

(A) From the strong air pressure.

(B) From the energy of the ocean waves.

(C) From the energy of the wind.

(D) From the sun's energy.

55. John added 10 ml – 12 ml of concentrated sulphuric acid in a test tube containing 5 g – 6 g of sugar crystals and warmed gently. He noticed that white crystals slowly turned brown and became black mass. What has happened?

(A) Sulphuric acid turned black but no change took place.

(B) Sugar got charred by the action of hot concentrated sulphuric acid and chemical change took place.

(C) It is only a physical change.

(D) It is an irreversible physical change.

56. Choose the correct answer from the following.

(A) High speed winds are accompanied by reduced air pressure.

(B) High speed winds are accompanied by increased air pressure.

(C) Change in pressure does not affect the wind velocity.

(D) Humidity can change the velocity and direction of wind.

57. When Sohail was asked by his teacher to identify what is the correct order of the processes listed below to purify water and make it safe for drinking ?

I. Filtration	II. Sedimentation
III. Chlorination	IV. Addition of chemicals and setting

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

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

58. Two metal pieces magnesium and iron are strongly heated separately. The following changes were observed:

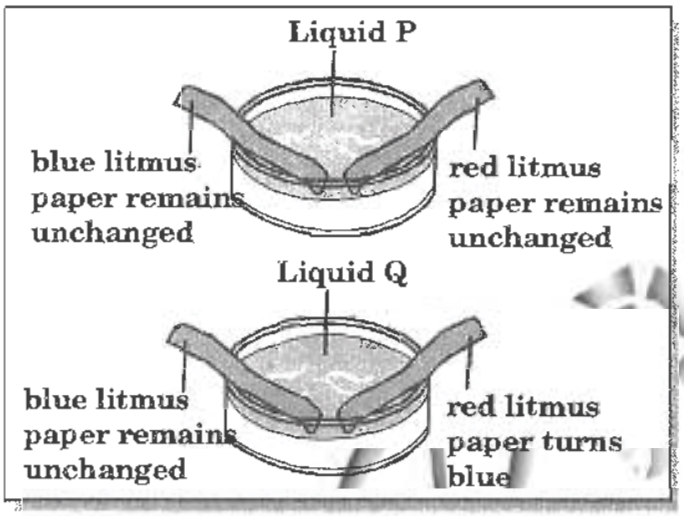
I.	Magnesium pieces burns with bright white flame leaving powdered mass
II.	Iron piece glows red when heated strongly

Which one these is a chemical change ?

(A) I only (B) II only

(C) Both I & II (D) Neither I nor II

59. Diagram shows the observations of an experiment on liquid P and liquid Q.



What are the properties of liquid P and liquid Q ?

	Liquid P	Liquid Q
(A)	Acidic	Alkaline
(B)	Alkaline	Acidic
(C)	Neutral	Acidic
(D)	Neutral	Alkaline

60. Which of the following is not correct about thunderstorm?

(A) They develop in hot, humid tropical areas like India very frequently.

(B) They develop in cold, humid areas like polar region very frequently.

(C) The swift movement of falling water droplets along with rising air create lightening and sound.

(D) Upward rising winds produced by rising temperatures carry water droplets upwards.

61. Jubeda kept some hot roti pieces in a container with a lid and forgot to remove them. After a week or so, when she opened they were hard and she sensed a lot of foul smell and threw them into a dustbin. What could have happened in these week days ?

(A) Microbes reacted with them and a chemical change took place.

(B) Since they lost heat and came to room temperature they become hard and it was a physical change.

(C) There was no change at all and it was the smell of the surroundings.

(D) It was only a reversible physical change.

62. Why is pure water very difficult to obtain ?

(A) Water is impure in nature.

(B) Water cannot exist in pure state.

(C) Water is a universal solvent.

(D) Water cannot attract impurities.

63. What does antacids contain ?

(A) A weak acid

(B) A weak base

(C) A strong acid

(D) A strong base

64. A match stick is burnt. What new products are formed ?

(A) Tip got burnt with a flame and a chemical change took place.

(B) Along with tip, some part of the wood also got burnt and some ash is produced along with evolution of heat. It is a chemical change.

(C) Since the stick without tip can again be lighted, it is a physical change.

(D) Statements A and B are correct.

65. Which of the following methods can be used to control water pollution ?

I. Avoiding the use of chemical substances freely
II. Educating society about the dangers of water pollution
III. Using biological control in agricultural areas instead of using pesticides

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

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

66. Kajal took some solid butter in a container and heated for about 15 minutes. She forgot to use it immediately. Later on the same day after six hours she observed that mass solidified in the container and is different from the original one. What could be the possible reason ?

(A) Both are same but colours are different.

(B) Butter on heating reacted with oxygen of the air and formed a new substance.

(C) Some volatile components of butter escaped out from it leaving behind solid ghee.

(D) It could have formed a different crystalline solid by the process of heating and cooling.

67. Which of the following substances react with each other to form salt and water only ?

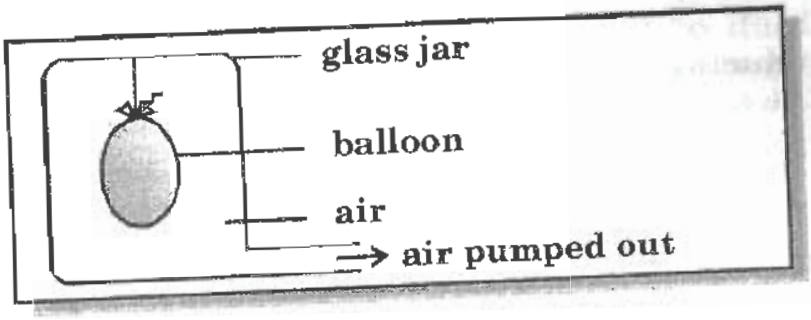
(A) Dilute sodium hydroxide and dilute hydrochloric acid.

(B) Magnesium and dilute hydrochloric acid.

(C) Copper sulphate and dilute sulphuric acid.

(D) Washing soda solution in water and dilute nitric acid.

68. **Figure below shows a balloon in a glass jar :**



What will happen when air is sucked out of the glass jar?

(A) The glass jar will become smaller.

(B) The balloon will become smaller.

(C) The balloon will become bigger and then burst.

(D) Nothing will happen.

69. **What kind of change is obtained by heating magnesium wire ?**

(A) Physical change

(B) Chemical change

(C) Both (A) and (B)

(D) Nuclear change

70. **Which of the following maintains balance of water on the earth ?**

(A) Water table

(B) Glaciers

(C) Aquifer

(D) Water cycle

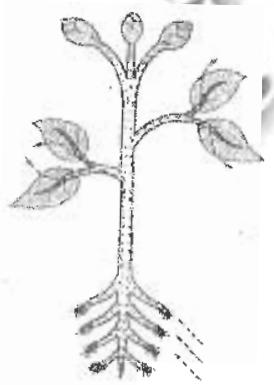
CLASS : VII BIOLOGY

71. **Which of the following systems is responsible for producing enzymes that aid in breaking down substances to be absorbed for the body's growth and repair?**

(A) Respiratory system (B) Digestive system

(C) Circulatory system (D) Nervous system

72. **The figure given below shows how water is transported through a plant.**



Which part of the leaf controls the rate of loss of water to the air?

(A) Epidermis (B) Stomata

(C) Vascular bundles (D) Cuticle

73. **Study the characteristics given below.**

- It has high tensile strength
- It has high water absorption capacity
- When burnt it smells like burnt hair

Which of the following yields fibres possessing the above characteristics?

(A) Sheep (B) Silkworm (C) Cotton plant (D) Flax

74. **The given plant closes its lid when the insect enters it.**

What role does the insect play in the given plant?

(A) Fertilization process

(B) Providing nutrients to the plant

(C) Dispersal of seeds

(D) Providing carbon dioxide to the plant

75. **Penguins live in the South Pole. Which of the following is NOT an adaptation that enable them to survive?**

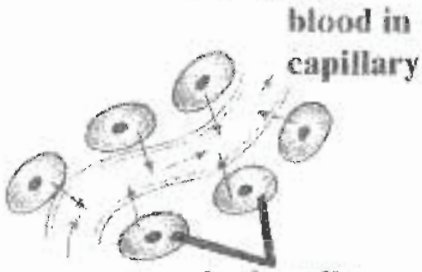
(A) They have a layer of fat under their skin

(B) They have webbed feet

(C) They migrate to warmer regions during winter

(D) They tuck in their flippers close to their bodies

76. **Observe the figure given below.**



The gas which diffuses from the body cells into the capillary is most likely to be:

(A) carbon dioxide (B) hydrogen (C) oxygen (D) carbon monoxide

77. **Which of these is NOT an asexual reproductive body in some organisms?**

(A) Spores (B) Buds (C) Gametes (D) Roots

78. **Herbivores do not produce enzymes that digest cellulose. How does the cellulose in their food get digested?**

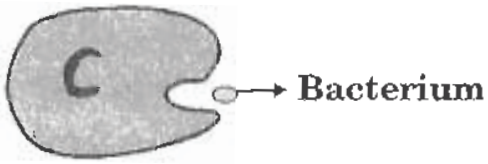
(A) Algae in their gut convert the cellulose into simple sugars

(B) Bacteria in their gut convert the cellulose into glucose

(C) Viruses in their gut convert the cellulose into simple sugars

(D) Fungi in their gut convert the cellulose into simple sugars.

79. **The figure given below shows the function of a blood cell.**



Which of the following blood cells can do this?

(A) Red blood cells (B) White blood cells

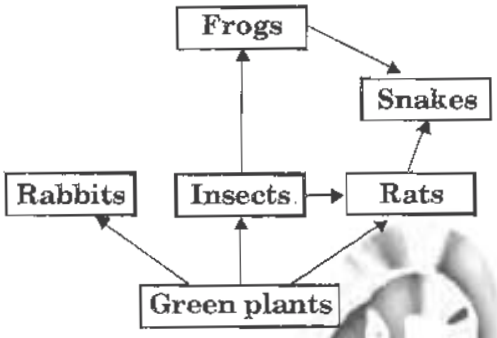
(C) Platelets (D) Denucleated red blood cells

80. Which one of the following organs is NOT associated to the alimentary canal?

(A) Liver (B) Gall bladder

(C) Diaphragm (D) Colon

81. The figure given below shows a simple food web.



Which organism(s) is/are omnivore(s) in the food web?

(A) Frogs only (B) Rats only

(C) Insects and frogs only (D) Snakes and rats only

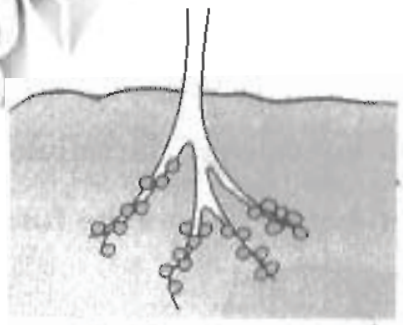
82. The following word equation shows a chemical process.

$$\text{Glucose} \xrightarrow{Y} \text{Ethanol} + \text{carbon dioxide}$$

What is organism 'Y'?

(A) Alga (B) Protozoan (C) Yeast (D) Hydra

83. The diagram given below shows nodules on roots of leguminous plants which contain symbiotic bacteria.



What is the role of the bacteria?

(A) Convert oxides of nitrogen into soil nitrates

(B) Convert atmospheric nitrogen gas into soil nitrates

(C) Convert soil nitrates into gaseous nitrogen

(D) Convert plant proteins into ammonia

84. Deforestation results in all of the following except:

(A) floods (B) soil erosion

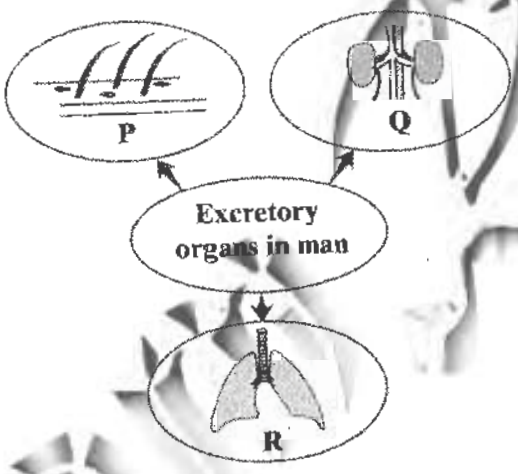
(C) eutrophication (D) decrease in animal and plant species

85. Which of the following is true of parasitic plants?

I. They absorb food from their host
II. They compete with the host for sunlight
III. They kill the host plant eventually

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

86. The figure given below shows three types of excretory organs in man.

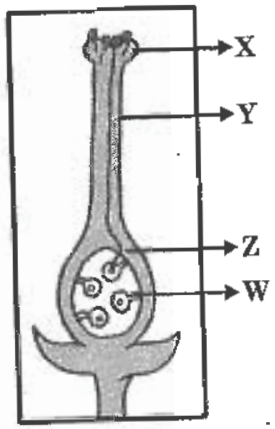


Which excretory organs are responsible for the excretion of urea?

(A) P and Q (B) Q and R (C) R only (D) P and R

87. Study the diagram given below.

What happens after the above stage?



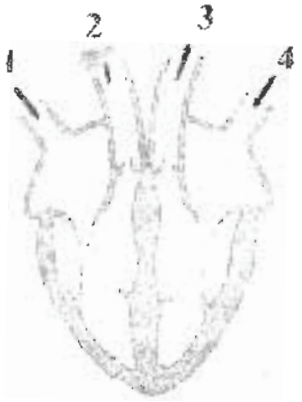
(A) The ovary splits open

(B) Ovary develops into a fruit and ovules into seeds

(C) The ovules are dispersed

(D) Germination of seeds take place

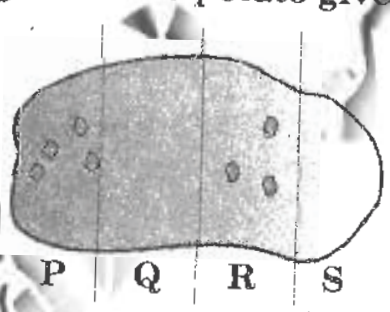
88. The diagram shows a section through the human heart.



Which blood vessels carry blood to and from the lungs?

	Blood to lungs	*Blood from lungs*
(A)	1	3
(B)	1	4
(C)	2	3
(D)	2	4

89. Observe the figure of the potato given below.



Kittu cut the potato into sections as shown. Which section(s) will NOT produce new plants?

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

90. Anu took three pots P, Q and R. She filled them with sand, clay and loam respectively and planted one sapling in each of them. Which sapling is most likely to show healthy growth?

(A) The sapling in pot P
(B) The sapling in pot Q
(C) The sapling in pot R
(D) None will grow

CLASS : VII GENERAL QUESTIONS

91. If in certain code TRAIN is written as VTCKP. How will FIGURE be written in that code?

(A) DGESPC (B) HWKITG

(C) HKIWTG (D) DEGPSC

92. From which of the following states was Haryana created?

(A) Uttar Pradesh (B) Himachal Pradesh

(C) Rajasthan (D) Punjab

93. Who among the following is the first woman speaker of Lok Sabha?

(A) Sonia Gandhi (B) Meira Kumar

(C) Vijayalakshmi Pandit (D) Sarojini Naidu

94. A student got twice as many sums wrong as he got right. If he attempted 48 sums in all, how many did he solve correctly?

(A) 12 (B) 16 (C) 18 (D) 24

95. The international symbol of the awareness of which disease is the red ribbon?

(A) Cancer (B) AIDS

(C) Hepatitis (D) Swine Flu

96. Teen Bigha corridor links:

(A) India and Pakistan

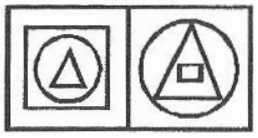
(B) India and China

(C) Pakistan and Bangladesh

(D) Bangladesh and India

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

Set-I



Set-II

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

98. The minimum age required for an Indian citizen to become a member of the Lok Sabha is:

(A) 21 years (B) 25 years

(C) 30 years (D) 35 years

99. Which of the following shall host the 2012 Olympic Games?

(A) Japan (B) Maldives

(C) London (D) Canada

100. What is the traditional name for a 30th anniversary?

(A) Ruby (B) Sapphire

(C) Pearl (D) Diamond

KEY FOR THE Q.P.-2010

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