

**Std VI - Dr Homi Bhabha Bal Vaidyanik Spardha  
2015 Test Paper**

1. Select the planets which appear serially in the solar system ?

- (a) Jupiter, Saturn, Mars, Uranus
- (b) Mars, Saturn, Jupiter, Uranus
- (c) Mars, Jupiter, Saturn, Uranus
- (d) Mars, Jupiter, Uranus, Saturn

2. Which metal is least affected by the environment ?

- (a) Copper (b) Iron (c) Silver (d) Gold

3. Which one of the following natural calamities is not related to sea ?

- (a) Tsunami (b) Earthquake
- (c) Cloud bursting (d) Cyclone

4. Complete the analogy:

Resistance Power : Vitamins :: Body

- (a) Water (b) Minerals (c) Fats (d) Proteins

5. Flower in form of a bud is protected by\_\_\_\_\_.

- (a) Calyx (b) Androecium
- (c) Gynoecium (d) Corolla

6. A ml water is taken in a measuring flask.

When substance C is dipped in; water level becomes B ml. What is the volume of substance C ?

- (a) A – B (b) B – A (c) A – C (d) B – C

7. Recognise the improper pair.

- (a) Plant — Stomata (b) Whale — Gills
- (c) Earthworm — Skin (d) Kite — Lungs

8. Which is the artificial preservative from the following ?

- (a) Sugar (b) Salt (c) Asafoetida (d) Vinegar

9. Each step of a staircase in a building is 90 cm. long, 30 cm. wide and 20 cm. high. There are 15 such steps from first floor to second floor. Find out the height of that floor.

- (a) 13.50 m (b) 4.5 m (c) 3.0 m (d) 9.0 m

10. Which of the following pair has 'Ozone gas' layer in between ?

(a) Stratosphere ; Mesosphere

(b) Mesosphere ; Inosphere

(c) Inosphere ; Exosphere

(d) Troposphere; Stratosphere

11. Why are leaves of *Neem* tree kept in a grain storage ?

(a) To avoid the growth of fungus

(b) To protect the grain from bandicoots and rats

(c) To keep grain free from maggot

(d) To keep the grain dry

12. Which of the following group is non-magnetic ?

(a) Iron — Cobalt (b) Nickel — Iron

(c) Zinc - Gold (d) Cobalt - Nickel

13. Raju's house is 1,500 m away from his school. If he walks the distance to the school, he takes 30 minutes. If he runs the distance he takes 20 minutes to reach the school. Find out the difference in the speed of running and walking per minute.

(a) 50 m/min (b) 30 m/min

(c) 25 m/min (d) 20 m/min

14. Why do we use Carbon after coarse and fine sand in water purification process ?

(a) To kill germs in water.

(b) Water becomes colourless and odourless.

(c) To separate the soluble elements from the water.

(d) To separate the insoluble elements from the water.

15. Mushroom plant is \_\_\_\_\_ .

(a) Non flowering and parasite.

(b) Flowering and parasite.

(c) Flowering plant living on garbage.

(d) Non-flowering plant living on garbage.

16. Which one of the following statements is irrelevant to the function of dam ?

(a) Water supply on a large scale is possible.

(b) Electricity is generated.

(c) Bio-diversity is enriched.

(d) Increases farm yield.

17. Once a scorpion stung Sanjay. What order of first - aid treatment should be given to him ?

i) Apply an anti-septic medicine on the wound,

ii) Tie a tourniquet above the 'sting wound',

iii) Take him to the dispensary,

iv) Remove the poisonous blood with proper method from the wound.

(a) i, ii, iii, iv

(b) ii, iv, i, iii

(c) iii, iv, i, ii

(d) iv, iii, ii, i

18. Which of the following plants is not Biennial?

(a) Radish (b) Carrot (c) Beet root (d) Maize

19. Through which organ animals do not excrete ?

(a) Kidney (b) Intestine (c) Nose (d) Skin

20. Many birds are vanishing from cities, because \_\_\_\_\_.

(a) there is heavy rain in the city.

(b) grain is not provided to the birds in the cities.

(c) number of trees are decreasing in cities.

(d) All the reasons given above.

21. For which sickness, decoction of lemon grass and Adulsa is useful ?

(a) Stomachache (b) Cough and cold

(c) Malaria (d) Vomiting and dysentery

22. 'दो बूंद जिंदगी के' In what context this sentence is used ?

(a) Eradication of Dengue

(b) Pulse Polio Campaign

(c) Campaign against Chicken-Gunia

(d) Campaign against Swine-flu

23. A room measurements are: 6 m length,

5 m width and 4 m height. The room does not have doors or windows. Find out the total area of walls in that room.

(a) 20 sq. m

(b) 24 sq. m

(c) 120 sq. m

(d) 88 sq. m

24. Which of the following creature moves by contracting and expanding its body ?

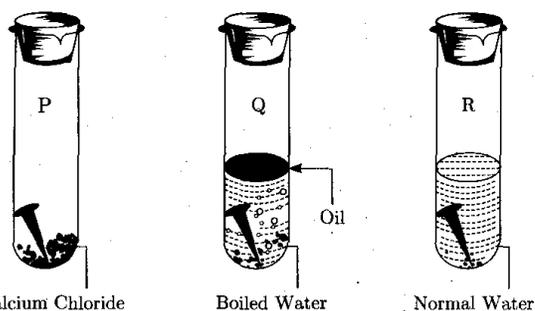
(a) Earthworm

(b) Silkworm

(c) Millipede

(d) Centipede

25. Nails from which test tubes will not catch rust ?



(a) P, Q (b) Q, R (c) R, P (d) Only R

26. What is the correct order of farming ?

P — Cutting, Q — Ploughing, R — Winnowing, S — Sowing of seeds, T — Threshing

(a) P, Q, R, T, S

(b) T, S, Q, R, P

(c) Q, T, P, R, S

(d) Q, S, P, T, R

27. What will happen if humidity in atmosphere is more ?

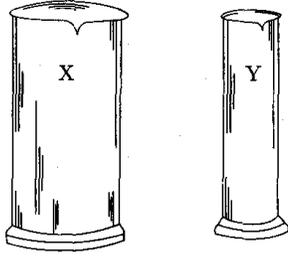
(a) Clothes will not dry easily.

(b) Wind will flow forcefully.

(c) A rainbow will be seen.

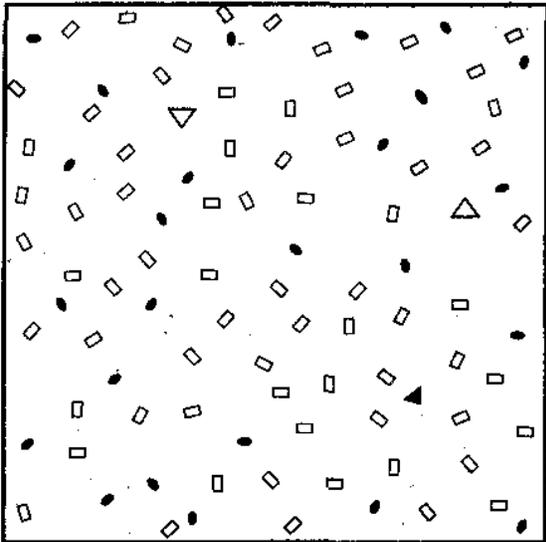
(d) We will not perspire more.

28. As shown in the diagram, two cylindrical pots are kept in an open ground in rain. What can we say about the water level in both the pots, after a few hours ?



- (a) Water level in pot 'X' will be more than 'Y'
- (b) Water level in pot 'X' will be less than 'Y'
- (c) Water level in pot 'X' and 'Y' will be equal
- (d) Can not be sure

29. Different elements of air are shown in the figure, by signs. Which is the sign of 'Oxygen' ?



- (A)  $\diamond$  (B)  $\bullet$  (C)  $\triangleleft$  (D)  $\blacktriangleleft$

30. A caterpillar of a butterfly moults, because \_\_\_\_\_.

- (a) its legs grow longer
- (b) it gets wings
- (c) it grows very rapidly
- (d) it is very hungry

31. We have a balance of environment due to \_\_\_\_\_.

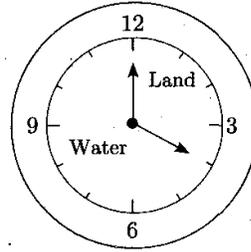
- (a) water cycle
- (b) Nitrogen cycle
- (c) Carbon dioxide cycle
- (d) All above cycles

32. Vulture, Butterfly, Aeroplane, frog. ,.

From the above group, the frog is different from other three because \_\_\_\_\_.

- (a) it is an amphibious creature.
- (b) it is cold blooded creature.
- (c) it can not fly.
- (d) it has four legs.

33. Proportion of land and water on the surface of the Earth is shown in the diagram in the form of a clock. Say how much part is occupied by land and how much by water.



- (a) Land  $\frac{1}{4}$ ; Water  $\frac{3}{4}$
- (b) Land  $\frac{2}{3}$ , Water  $\frac{1}{3}$
- (c) Land  $\frac{1}{3}$ , Water  $\frac{2}{3}$
- (d) Land  $\frac{3}{4}$ , Water  $\frac{1}{4}$

$\frac{1}{4}$

34. For which purpose animals are not useful to the plants ?

- (a) Spreading of seeds
- (b) Manure
- (c) Photosynthesis
- (d) Respiration

35. Who am I ?

I am generated in gobar gas. I am used as fuel. I am one of the cause of global warming.

- (a) Ozone
- (b) Methane
- (c) Nitrogen
- (d) Carbon dioxide

36. Recognize the correlation and fill in the blank.

Nannaj : Maldhok :: Chincholi : \_\_\_\_\_.

- (a) Peacock
- (b) Flamingo
- (c) Tiger
- (d) Rhinoceroses

37. Which of the following systems in our body contribute to gain energy ?

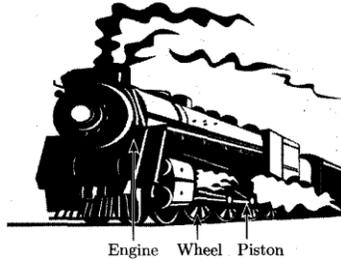
- P) Respiratory system
- Q) Digestive system

R) Blood circulation system

S) Excretory system

(a) P, Q, R (b) Q, R, S (c) R, P (d) Q, R

38. When a railway is running on a track, which type of motion the engine, wheel and piston has serially ?



(a) Linear, Circular, Oscillatory

(b) Circular, Linear, Oscillatory

(c) Oscillatory, Linear, Circular

(d) Linear, Oscillatory, Circular

39. Certain forests are reserved for 'Gods' from ancient times. What are they called ?

(a) National Park (b) Sanctuary

(c) Devrai (d) Gardens

40. Which of the following substances have same properties ?

(a) Iodine (b) Common Salt

(c) Baking soda (d) Cement

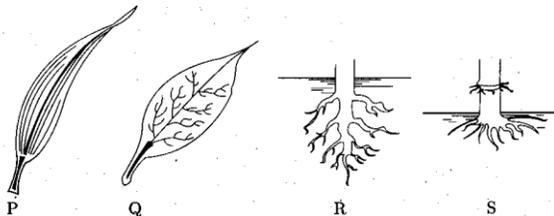
(a) P, Q (b) Q, R (c) R, S (d) P, S

41. Homo-habilis means \_\_\_\_\_ human being.

(a) skilled (b) with straight spine

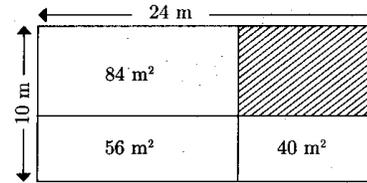
(c) strong (d) intelligent

42. Figure shows two types of leaves and two types of roots. Recognise the correct pair.



(a) P, R (b) P, S (c) Q, S (d) None of these

43. A rectangle of 24 m. x 10 m. is shown in the figure. Using given information find the length and breadth of shaded portion.



(a) 12 m, 5 m.

(b) 10 m, 6 m.

(c) 15 m, 4 m.

(d) 20 m., 3 m.

44. 'Platipus' an animal that looks like a duck, belongs to \_\_\_group.

(a) reptiles

(b) birds

(c) mammals

(d) amphibians

45. Which instrument changes sound into an electric wave ?

(a) Amplifier

(b) Radio set

(c) Microphone

(d) Television set

46. Why is it more beneficial to eat organic food ?

(a) It tastes well

(c) It is nutritious

(c) It is easy for digestion

(d) All of the above

47. Find the odd man out.

(a) High tide - Low tide

(b) Sunrise - Sunset

(c) Phases of moon

(d) Cyclone

48. As shown in the figure, branch of a plant is covered with a plastic bag. After a few hours, we can see drops of water in the bag. What process of the plant is responsible for these drops ?



(a) Osmosis

(b) Respiration

(c) Transpiration

(d) Photosynthesis

49. Recognize the correlation and fill in the blank. Bay leaf : Leaf : : Cardamum : \_\_\_\_\_.

- (a) To enhance the flavour of food
- (b) Fruit
- (c) Seed
- (d) Mouth Freshener

50. Which of the following substance is not decayed ?

- (a) A papad with fungus
- (b) Rancid groundnut
- (c) Fermented dough of Idli
- (d) A potato with a sprout

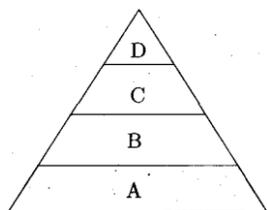
51. Which of the following diet is necessary to avoid constipation ?

- (a) Sugarcane juice
- (b) Ice Cream
- (c) Green vegetables
- (d) Chocolates

52. In which option molecules of Ozone gas are present ?

- (a) 2 atoms of Oxygen
- (b) 3 atoms of Oxygen
- (c) 2 atoms of Hydrogen
- (d) 3 atoms of Hydrogen

53. The pyramid shows 4 groups of living things as herbivorous animals, carnivorous animals, omnivorous animals and green plants. Area covered by each group in the pyramid represents its proportion required to maintain the natural balance. Select which living things fall into group 'B'.



- (a) Carnivorous
- (b) Omnivorous
- (c) Herbivorous
- (d) Green plants

54. Which of the following statements are correct in relation with respiration ?

1) Rib cage becomes big and exhalation takes place

2) Rib cage becomes big and inhalation takes place

3) Rib cage becomes small and inhalation takes place

4) Rib cage becomes small and exhalation takes place

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

55. Recognize the correlation and fill in the gap.

Pancreatic juice : Pancreas :: Bile : \_\_\_\_\_

- (a) Stomach
- (b) Gall bladder
- (c) Liver
- (d) Small intestine

56. Constellation means

- (a) A group of planet
- (b) Sun and a group of stars
- (c) A group of stars
- (d) Planet and a group of stars

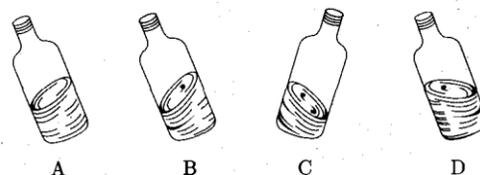
57. Which is the most responsible factor for the ruins of Bio-diversity ?

- (a) Urbanisation
- (b) Earthquakes
- (c) Floods
- (d) Drought

58. In an egg, \_\_\_\_\_ are not present.

- (a) carbohydrates
- (b) fats
- (c) proteins
- (d) minerals

59. A bottle, half filled with water is placed in different four positions. Find which position is correct.



- (a) A
- (b) B
- (c) C
- (d) D

60. Find the odd substance from the group.

- (a) Sesame
- (b) Coconut
- (c) Safflower
- (d) Gramdal

61. Recognize the correlation and fill in the gap.

Sucrose : Sugarcane juice :: Lactose : \_\_\_\_\_.

- (a) Date
- (b) Milk

(c) Coca cola (d) Kokam Sarbat (Mangosteen)

62. Notable sensitivity is not seen in which of the following plants ?

- (a) Sunflower (b) Mimosa pudica  
(c) Pitcher (d) Vinca-Rosa periwinkle

63. Fill in the blank.

Milk → Curd → Butter → \_\_\_\_\_.

- (a) Lassi (b) Ghee (c) Paneer (d) Milkshake

64. Which of the following species is not unicellular ?

- (a) Hydra (b) Amoeba (c) Yeast (d) Chlorella

65. For which purpose, the method invented by Carolus Linnaeus is useful ?

- (a) To separate the elements from mixture  
(b) Classification of plants  
(c) Study of micro-organisms  
(d) Weather forecast

66. A farmland is 40 m. long and 15 m. broad. 1,200 cubic meter soil is to be excavated from it. How much deep a ditch is to be dug ?

- (a) 8 m. (b) 10 m. (c) 200 cm. (d) 500 cm.

67. Which digestive juice can digest boiled corn first ?

- (a) Gastric juice (b) Pancreatic juice  
(c) Saliva (d) Bile juice

68. The motion of the runners in the game of football is of \_\_\_\_\_ type.

- (a) random motion (b) oscillatory motion  
(c) periodic motion (d) uniform motion

69. Why does an earthworm go deep into damp, wet soil ?

- (a) The earthworm wants to alter the layers of soil.  
(b) The earthworm is a timid creature.  
(c) To protect himself from other creatures.  
(d) The earthworm gives response to sunshine and goes into opposite direction.

70. On which date do we have 12 hour's day and 12 hour's night ?

- (a) 22<sup>nd</sup> September (b) 22<sup>nd</sup> August  
(c) 23<sup>rd</sup> December (d) 21<sup>st</sup> June

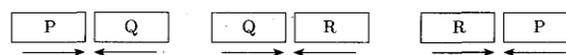
71. To flow the eaten morsel easily through the throat to the stomach, the wall of the food pipe is

- (a) thick (b) hard (c) flexible (d) oily

72. Recognise the correlation and fill in the blank. Millet : An ear of corn :: Green pea :

- (a) Bunch (b) Bean  
(c) An ear of green pea (d) Protein

73. From the given figure P, Q, R which one is not a magnet ?



- (a) P (b) Q (c) R (d) Can be not sure

74. Guess the word that does not fit in the group.

P) Liver Q) Pancreas R) Stomach

- (a) P (b) Q (c) R (d) S

75. In MKS system unit of weight is \_\_\_\_\_.

- (a) Kg (b) Kg.m/s<sup>2</sup>  
(c) g.cm/s<sup>2</sup> (d) Kg.cm/s<sup>2</sup>

76. Ram is playing on a slide. Sham is playing on merry go round. Select the correct statement about the work done by them.

- (a) Ram and Sham's work is equal.  
(b) Ram's work is zero but Sham does some work.  
(c) Ram does some work but Sam's work is zero.  
(d) Work done by both is zero

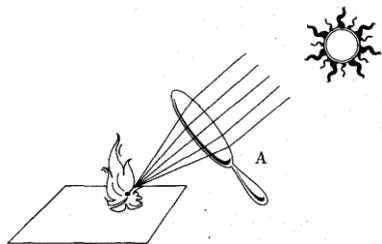
77. \_\_\_\_\_ is used for making fuel oil.

- 1) Karanja 2) Maize 3) Arabica tree 4) Neem  
(a) 2, 4 (b) 3, 1 (c) 1, 2 (d) 1, 4

78. In a diet 4 kcal heat is obtained from 1 g proteins. Then to obtained 202 kcal heat, how much proteins are required ?

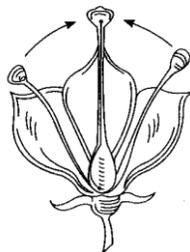
- (a) 50 g (b) 55 g (c) 50.5 g (d) 55.5 g

79. Where else do we use the thing that is shown in the following figure, as 'A'?



- (a) Periscope (b) Kaleidoscope  
(c) Microscope (d) Near the car driver

80. Arrows in the figure are indicating some action related with flower. What is the name of that action ?



- (a) Pollen grains (b) Sprouting  
(c) Pollination (d) Fertilization

81. Which statement is true for a ball ?

- (a) When a ball is going in upward direction its potential energy (P.E.) increases and kinetic energy (K.E.) decreases.  
(b) When a ball is going in upward direction both K.E. and P.E. decreases  
(c) When a ball is coming downward P.E. increases and K.E. decreases.  
(d) When a ball is coming downward both P.E. and K.E. increases.

82. If a plastic comb is run into dry hair, small bits of paper are attracted towards comb. When can we see the same effect in the following situation ?

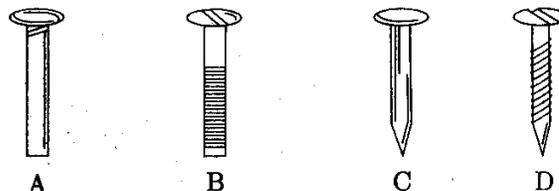
- (a) Steel spatula is rubbed on a silk cloth.  
(b) Wooden scale is rubbed on a cotton cloth.

- (c) Plastic container rubbed on a nylon cloth.  
(d) Glass rod rubbed on wool.

83. From the usage, find the plant which does not fit in this group.

- (a) Neem (b) Aloe (c) Basil (d) Teak

84. Which of the following object should be used so that, it will require less effort and it will fit properly in the wood ?



- (a) A (b) B (c) C (d) D

85. Which one of the following animals is arboreal ?

- (a) Rabbit (b) Monkey (c) Pigeon (d) Deer

86. Covering food items with net is made compulsory by law. Find the reason.

- (a) Flies cannot sit on food items.  
(b) Dust is not accumulated on food due to net.  
(c) Food is kept away from the polluted air.  
(d) Micro-organisms from air cannot enter the food.

87. Arrange the proper order of these animals according to their first appearance on earth.

- P) Birds Q) Paramecium R) Dog S) Frog  
(a) QPSR (b) PQRS (c) QSPR (d) QRSP

88. Which of the following statements is wrong in context with the growth of plants ?

- (a) Growth is continual 'as long as plant is alive  
(b) Growth is uniform all over the plant  
(c) Growth is due to cells at the tip of roots and stem.  
(d) Growth is at a particular place.

89. In the following figure, a farmer is carrying water. Which type of lever is it ?



- (a) First (b) Second (c) Third (d) Fourth

90. If a metal ball is kept in boiling water,

- (a) it will give heat continuously.  
(b) it will take heat continuously.  
(c) it will continue to give heat till temperature of ball and water becomes equal.  
(d) it will continue to take heat till the temperature of ball and water becomes same.

91. Select the International Yoga Day.

- (a) 5<sup>th</sup> June (b) 21<sup>st</sup> June  
(c) 11<sup>th</sup> July (d) 22<sup>nd</sup> July

92. To remove the blind-faith from the society who has contributed on a large scale?

- (a) Sindhutai Sapkal (b) Medha Patkar  
(c) Anna Hazare  
(d) Dr. Narendra Dabholkar

93. In the first attempt, which country of the world has made successful advent on Mars ?

- (a) India (b) Russia (c) China (d) USA

94. How do the programmes of the television centre reach us ?

1) TV Centre → Satellite → Dish Antenna → Set-top box → TV

2) TV Centre → Dish Antenna → Satellite → Set-top box → TV

3) TV → Set-top box → Satellite → Dish Antenna → TV centre

4) TV Centre → Satellite → Set-top box → Dish Antenna → TV set

- (a) 1 (b) 2 (c) 3 (d) 4

95. Where was Madam Mary Curie, the twice Nobel winner, born ?

- (a) Poland (b) Thailand  
(c) New Zealand (d) Finland

96. Stars are not seen at the day time, because

- (a) stars are not in the sky during the day time.  
(b) the Sun is in the sky during the day time.  
(c) stars are in the sky at the day time but their light is weaker than the sunlight.  
(d) stars are in the sky at the day time but their light is brighter than sun.

97. Select the correct sequence of stages of sugar making process.

- e) Make crystals of sugar from the sugarcane juice  
f) Extract the juice from sugarcane  
g) Make gradation of sugar.  
h) To make the juice colourless using proper process,

- (a) e, f, g, h (b) f, h, g, e  
(c) g, h, f, e (d) f, h, e, g

98. A piece of paper from a notebook and an aeroplane made from the same paper are thrown in the air. The aeroplane moves far away than the piece of paper. Why ?

- (a) Mass of aeroplane < Mass of piece of paper  
(b) Mass of aeroplane > Mass of piece of paper  
(c) Air obstruction decreases  
(d) Air obstruction increases

99. What is the source of rock salt ?

- (a) Sea water (b) Salt lake (c) Rock (d) Plants

100. Recognise the correlation.

Swine flue : Pig : Leptospyrosis \_\_\_\_\_.

- (a) Mosquito (b) Hen (c) Elephant (d) Rats

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### Test Paper Solution

1. (C) **Explanation :** In Solar system, planets are in the following order: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune.
2. (D) **Explanation:** Gold is least affected by the air and water. Hence it is a precious metal.
3. (B) **Explanation:** Earthquake occurs due to some movement in the interior of the Earth. It is not related to sea.
4. (D) **Explanation:** We need different vitamins to resist diseases and proteins for body building.
5. (A) **Explanation:** Calyx is the outermost part of a flower. It protects all inner parts of the flower in the state of bud.
6. (B) **Explanation:** As initial level is A and the final level after dipping substance C is B. Volume of C is B — A ml.
7. (B) **Explanation:** Whale is not a fish; but a mammal. It breaths with lungs.
8. (D) **Explanation:** Sugar and salt are preservatives, but we use them in daily life. Vinegar is an artificial preservative.
9. (C) **Explanation:** While measuring height of a floor, we have to consider height of a step. Hence height of floor — 20 cm.  $\times 15 = 300$  cm. = 3 m.
10. (D) **Explanation:** Ozone layer is in between troposphere and stratosphere. **A. 11. (C) Explanation:** Leaves of *Neem* tree prohibit growth of maggots.
- A. 12. (C) Explanation:** Iron, Nickel and Cobalt are magnetic metals. Zinc and Gold are non magnetic metals.
13. (C) **Explanation:** When Raju walks, his speed is  $1,500/30 = 50$  m./min. When he runs his speed is  $1,500/20 = 75$  m./min. Difference in the speed = 25 m./min.

14. (B) **Explanation:** The coarse sand and fine sand in a filter separates in soluble elements from water. Carbon has special property of absorbing colour and odour. Hence it is used to make water colourless and odourless.
15. (D) **Explanation:** Mushroom is a non-flowering plant. It grows on garbage or dead part of the tree.
16. (C) **Explanation:** Functions given in the option A, B and D are the functions of a dam. But many species of small animals and plants get vanished due to the construction of a dam.
17. (B) **Explanation:** To resist the spread of venum in body and to protect wound from getting infected, first aid treatment should be given in the order ii, iv, i, iii.
18. (D) **Explanation:** Maize completes its life cycle in one year. It is an annual crop.
19. (B) **Explanation:** The process of digestion takes place in intestine.
20. (C) **Explanation:** Many species of birds live on the tree. Due to urbanisation, trees in cities are decreasing and birds are vanishing.
21. (B) **Explanation:** Decoction of lemon grass and Adulsa is useful in cough and cold.
22. (B) **Explanation:** Polio vaccine is given in the form of oral drops. Hence 'दो बूंद जिंदगी के' is used in pulse polio campaign.
23. (D) **Explanation:** Area of the walls is calculated by multiplying perimeter of the room and height. So the area is equal to  $2(\text{length} + \text{breadh}) \times \text{height}$   
 $\text{Area} = 2(6 + 5) \times 4 = 88 \text{ m}^2$ .
24. (A) **Explanation:** Earthworm moves by contracting and expanding its body.
25. (A) **Explanation:** Rust is Oxide of Iron. Formation of rust requires presence of Oxygen

(air) and water or water vapour. In test tube P, Calcium Chloride absorbs water vapour from the air. In test tube Q, as boiled water is taken, dissolved air is not present. Layer of oil prevents absorption of air from atmosphere. So, nail in the test tubes P and Q will not catch rust.

26. (D) **Explanation:** In farming, it is necessary to follow a specific procedure to get a proper yield.

27. (A) **Explanation:** Clothes dry due to evaporation of water from them. Rate of evaporation of water decreases as humidity increases. Hence clothes will not dry easily if humidity is more. We will also perspire more in humid air. The phenomenon of wind and rainbow is not related to humidity.

28. (C) **Explanation:** When it is raining, amount of water rained on each square meter is same. If the area of the cylinder is more, volume of water collected will be more as compared to the smaller cylinder kept alongwith the larger one. However, levels in both the cylinders will be the same.

29. (B) **Explanation:** Air has nearly 20% Oxygen, 79% Nitrogen and 1% Carbon. Dioxide and other gases. In the given figure, if we compare different signs, we see that are maximum. So, these signs must be representing Nitrogen. are second in number, representing Oxygen.

30. (C) **Explanation:** Caterpillar grows very rapidly. In the first 2-3 days, it grows so much that it does not fit in its old skin. A new loose skin is formed under the old skin. The caterpillar sheds its old skin. i. e. it moults.

31. (D) **Explanation:** All living things take Oxygen, Nitrogen, Water, Carbon dioxide and

many other things from atmosphere. All these elements are given back to the atmosphere through different cycles. Balance of environment is maintained due to all these cycles.

32. (C) **Explanation:** A common property of Vulture, Butterfly and Aeroplane is that, they can fly. Frog does not have this property.

33. (C) **Explanation:** Clock has twelve parts. Land is shown by 4 parts and water by remaining 8 parts. Hence, the proportion of land is  $1/3^{\text{rd}}$  and that of water is  $2/3^{\text{rd}}$  on the surface of the Earth.

34. (D) **Explanation:** For respiration, both plants and animals take Oxygen and give away Carbon dioxide. Hence, in this process animals are not useful to the plants.

35. (B) **Explanation:** Methane is generated is gobar gas. It can absorb heat similar to Carbon dioxide. So it causes global warming.

36. (A) **Explanation:** As Nannaj is famous for Maldhok, Chincholi is famous for Peacock.

37. (A) **Explanation:** Oxidation of food (sugar) from blood is required to gain energy. Respiratory system absorbs Oxygen from air. Digestive system absorbs digested food into blood. The circulatory system transports both food and Oxygen to the cells of the body. So all three systems contribute to gain energy.

38. (A) **Explanation:** The engine has linear motion, the wheels have circular motion and the piston connected to wheels has oscillatory motion.

39. (C) **Explanation:** Forests reserved for Gods are called Devrai.

40. (B) **Explanation:** From the given substances, common salt and baking soda are both white and soluble in water.

41. (A) **Explanation:** Horno-habilis is the first stage in the evolution of mankind. In this stage, human species can use their hands skillfully.

42. (B) **Explanation:** Picture P shows leaf with parallel veins, picture S shows fibrous roots. Both these are present in monocot plants.

**43. (B) Explanation:**  
 Area of shaded portion. =  $240 - (84 + 56 + 40) = 60 \text{ m}^2$  Rectangle of area  $56 \text{ m}^2$  and  $40 \text{ m}^2$  together form a rectangle with area  $96 \text{ m}^2$  and length 24 m. Hence, its breadth must be 4 m and breadth of the shaded portion is 6 m. As area of the shaded portion is  $60 \text{ m}^2$ , its length is 6 m.

44. (C) **Explanation:** Platipus is unique Australian mammal.

45. (C) **Explanation:** When we speak near microphone (commonly known as mic) the sound energy gets converted into electric wave. These waves are amplified by amplifier and a speaker converts these waves into sound.

46. (D)

47. (D) **Explanation:** Except cyclone, all other phenomenon occur periodically.

48. (C) **Explanation:** Transpiration is nothing but the evaporation of water from plant leaves. This water vapour gets converted into water and accumulates on the surface of the plastic bag.

49. (B) **Explanation:** Bay leaf is leaf of the plant, while cardamum is fruit of the plant.

50. (C) **Explanation:** Fermented dough of idli is deliberately fermented. Hence, it *f* can not be considered as decayed.

51. (C) **Explanation:** Green vegetables contain fibers. Fibers help to form stool from undigested food. Hence, green vegetables are necessary to avoid constipation.

**52. (B) Explanation:** Oxygen molecule contains 2 atoms of Oxygen, while Ozone molecule has 3 atoms of Oxygen.

**53. (C) Explanation:** To maintain the natural balance, population of different groups required in following order:  
 Carnivorous < Omnivorous < Herbivorous < Green plants.

**54. (D) Explanation:** When rib cage becomes small, air pressure inside it increases and we exhale air. When rib cage becomes large, air pressure inside it decreases and we inhale air.

**55. (C) Explanation:** Pancreatic juice is produced in pancreas. Bile is produced in liver.

**56. (B)**

**57. (A) Explanation:** In the process of urbanisation many ecosystems get disturbed. E. g. to get more land for building houses and roads, many trees are cut. . . .

**58. (A) Explanation:** An egg of hen contains proteins and fats.

**59. (D) Explanation:** Water always remains horizontal. . . .

**60. (D) Explanation:** Except gram dal all other options contain oil.

**61. (B) Explanation:** Sucrose is present in sugarcane juice. Lactose is present in milk.

**62. (D) Explanation:** Vinca - Rosa periwinkle does not have sensitivity as other three.

**63. (B) Explanation:** We get ghee from butter.

**64. (A)**

**65. (B)**

**66. (C) Explanation:** Volume of the soil =  $1,200 \text{ m}^3$   
 $= 1 \times b \times \text{depth of ditch}$   
 $= 40 \times 15 \times d$   
 $= 2 \text{ m} = 200 \text{ cm}.$

**67. (C) Explanation:** Corn contains carbohydrates. Digestion of carbohydrates is begun by saliva in the mouth.

**68. (A) Explanation:** In the game of football, players run according to the movement of the football. As the ball moves randomly, players had to run randomly.

**69. (D)**

**70. (A)**

**71. (C) Explanation:** Contraction and relaxation of the flexible food pipe moves the eaten morsel.

**72. (B)**

**73. (D) Explanation:** Iron bar gets attracted towards magnet. Two opposite poles of magnets also get attracted towards each other. In the given figure, we see only-attraction between different bars. If there is repulsion between any two bars, we can conclude that those two are magnets.

**74. (C) Explanation:** All other options are glands.

**75. (B) Explanation:** Weight of a substance is given by product of mass (m) and gravitational acceleration (g). Unit of mass in MKS system is kg and unit of acceleration is  $m/s^2$ .

**76. (C) Explanation:** Work is done when there is displacement due to force. Ram is playing on the slide. Gravitational force is acting on him and there is displacement from lower point to upper point of the slide. Sham is playing on merry-go-round. There is no displacement of Sham. So Ram does some work but Sham's work is zero.

**77. (C)**

**78. (C) Explanation:** Proteins required to get 202 K.cal heat  
 $= 202/4 = 50.5 \text{ gm}$

**79. (C) Explanation:** In the figure, A represents convex lens. It is used in microscope.

**80. (C) Explanation:** Figure shows stamens (androecium) and pistil (gynoecium) of the flower. Pollen grains are transferred from stamens to pistil. This process is called pollination.

**81. (A) Explanation:** When height of any substance is increased, its potential energy increases. When an object is thrown in upward direction, its speed (velocity) goes on decreasing. Kinetic energy depends upon speed of an object.

**82. (C) Explanation:** The given effect is due to static electricity. When a plastic container is rubbed against any synthetic cloth, static electricity is produced.

**83. (D) Explanation:** All plants except teak can be used as medicine.

**84. (D) Explanation:** D is pointed screw. Pointed part makes it easy to insert in the wooden material. Force required to insert the screw is less and it also fits properly due to the threads on it.

**85. (B)**

**86. (A)**

**87. (C) Explanation:** Stages of evolution of animals are i) unicellular ii) multicellular iii) invertebrates iv) aquatic vertebrates v) amphibians vi) reptiles vii) mammals.

**88. (B) Explanation:** In plants, the rate of growth is more at the tip of the stem as well as at the root, than other parts.

**89. (A) Explanation:** The fulcrum is at the shoulder of the man. Load and efforts - are at the ends of the stick.

**90. (D) Explanation:** Heat travels from the higher temperature point to the lower temperature point. This flow of heat continues till the temperature of both the points become same.

**91. (B)**

**92. (D)**

**93. (A)**

**94. (A)**

**95. (A)**

**96. (C) Explanation:** We can see stars in the day time when there is total solar eclipse, as at that time sunlight is weaker.

**97. (D)**

**98. (C) Explanation:** When we take a paper, its area is large and it has large air obstruction. When we make aeroplane of that paper, due to its pointed shape, its air obstruction decreases. .

**99. (C)**

**100. (D)**

