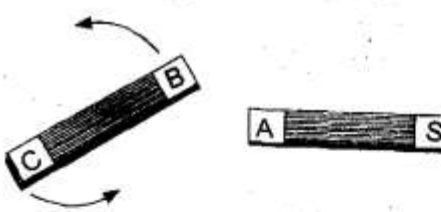


- Q. 1.** Find the odd one out with reference to vision.
Crow, Frog, Dog, Gorilla
① Crow ② Frog ③ Dog ④ Gorilla
- Q. 2.** When we add a drop of ink to the water, it gets coloured. Which property of matter is responsible for this?
① Matter has mass ② Matter has volume
③ Matter is made up of particles ④ Matter can change its state
- Q. 3.** Chemical changes in nature are normally _____.
① slow ② periodic ③ reversible ④ irrevresible
- Q. 4.** Why should we use taps with pressure knob at public places?
① They are easy to operate
② They avoid wastage of water
③ They are light and durable
④ They do not rust
- Q. 5.** Observe the figure of the magnets and identify the South pole.
- 
- ① A
② B
③ C
④ None of these
- Q. 6.** Cobalt : Magnetic :: Sal ammoniac : _____.
① Sublimative ② Insoluble ③ Non-degradable ④ Evaporative
- Q. 7.** Find the incorrect pair:
① *Tulsi* – medicinal plant ② *Jamun* – dispersal by animals
③ Beetlenut – dispersal by water ④ Banyan – wood for furniture
- Q. 8.** Who am I?
I Protect important internal organs and help them to give out Carbon dioxide.
① Skin ② Ribcage ③ Skull ④ Diaphragm
- Q. 9.** Which statement is incorrect with respect to the plants?
① Plants have movements ② Plants grow continuously
③ Plants do not excrete ④ Plants respond to the stimuli

Q. 17. When we boil an egg in water, there are two changes. How these changes can be described?

- ① Both the changes are physical
- ② Both the changes are chemical
- ③ Chemical change takes place because of physical change
- ④ Physical change takes place because of chemical change

Q. 18. Arrange following statements in proper order for making sprouts:

- a. Tie the pulses in a clean cloth
- b. Drain out the water after 5-6 hours
- c. Wash pulses clean
- d. Soak pulses in water

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

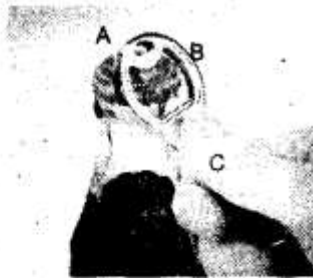
Q. 19. Why watermelons grow well in sandy soil?

- ① Sandy soil retains water
- ② Sandy soil allows air circulation
- ③ Humous is more in this soil
- ④ We can give more fertilizers to this soil

Q. 20. Find the odd pair:

- ① Lung, trachea
- ② Pancreas, liver
- ③ Intestine, kidney
- ④ Brain, nerve

Q. 21. Figure shows a bottle opener. Select the correct labels of A, B and C.



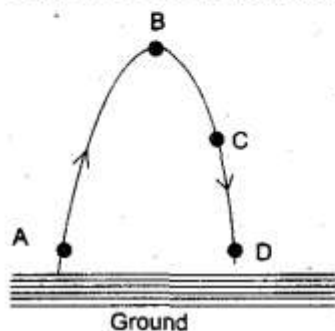
- ① A - Force, B - Fulcrum, C - Load
- ② A - Fulcrum, B - Load, C - Force
- ③ A - Load, B - Fulcrum, C - Force
- ④ A - Fulcrum, B - Force, C - Load

Q. 22. We have to use a large box for TV than for DVD player, because TV has more_____.

- ① area
- ② volume
- ③ mass
- ④ length

- Q. 23. Find the odd one out:
① Air ② Water ③ Insect ④ Dust
- Q. 24. A bus is moving at a speed of 48 km/hr. How much distance will it cover in 1 hour 15 minutes?
① 60 km ② 72 km ③ 50 km ④ 63 km
- Q. 25. Why some mountain peaks from the Himalayan ranges are always covered with snow?
① They receive heavy rainfall ② They do not have plants
③ They have many plants ④ They fall in high altitude range
- Q. 26. ORS or *Jalsanjivani* is prepared from_____.
① 1 litre boiled water + 8 kg sugar + $\frac{1}{2}$ kg salt
② 1 litre boiled water + $\frac{1}{2}$ kg sugar + 8 kg salt
③ 1 litre boiled water + 8 teaspoons sugar + $\frac{1}{2}$ teaspoon salt
④ 1 cup boiled water + 8 teaspoons salt + $\frac{1}{2}$ teaspoon salt
- Q. 27. Find the odd one out:
① Stone ② China clay ③ Marble ④ Brick
- Q. 28. Which planet has very low temperature?
① Mercury ② Venus ③ Earth ④ Neptune
- Q. 29. Area of a paper is 0.06 m^2 . If length of the paper is 30 cm, what will be its breadth?
① 0.2 m ② 0.02 m ③ 2 m ④ 20 m
- Q. 30. Tsunamis are caused due to the earthquakes_____.
① on an island ② near seashore
③ in the riverbeds ④ at oceanbeds
- Q. 31. Arrange the following plants in descending order of their life span:
a. Coconut tree b. Sugarcane c. Radish
① a, b, c ② b, c, a, ③ c, a, b ④ a, c, b
- Q. 32. Who am I?
I digest food using three different digestive juices.
① Large intestine ② Small intestine ③ Stomach ④ Liver
- Q. 33. What will be the relation between the volume and capacity of a wooden box?
① Capacity = Volume ② Capacity < Volume
③ Capacity > Volume ④ No fixed relation

- Q. 34.** A boatman uses a pole_____.
- ① to set his boat afloat
 - ② to balance the boat in deep water
 - ③ to change direction in deep water
 - ④ None of these
- Q. 35.** Food, wood and coal store energy from which basic source?
- ① Plant
 - ② Carbon
 - ③ Sun
 - ④ Earth
- Q. 36.** Find the odd pair:
- ① Iodine, Camphor
 - ② Sugar, Alum
 - ③ Chalk, Sand
 - ④ Milk, Salt
- Q. 37.** Coordination between which organs is needed when we cut our nails with nail cutter?
- ① Hand, Foot
 - ② Hand, Foot, Eye
 - ③ Hand, Foot, Eye, Ear
 - ④ Foot, Eye
- Q. 38.** Choose the correct statement about vaccine:
- ① It contains very less number of microorganisms of that disease
 - ② It acts as a medicine
 - ③ All vaccines are 100% effective
 - ④ Vaccines are always injected in body
- Q. 39.** State the correct statement about strength of a bar magnet.
- ① Strength of a magnet is maximum at the centre and goes on decreasing towards the end
 - ② Strength of a magnet is same all over the length
 - ③ Strength of a magnet is maximum near end and minimum at the centre
 - ④ Magnet has strength only at the end points
- Q. 40.** Figure shows path of a body thrown in the upward direction from ground. Find the correct statement.




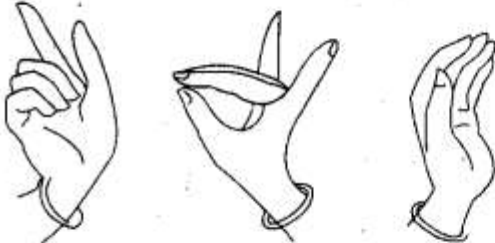
- ① At point A kinetic energy of the body is minimum
 ② At point B potential energy of the body is minimum
 ③ At point C potential energy of the body is maximum
 ④ At Point D kinetic energy of the body is maximum
- Q. 41. Which of the following represents the quantity of matter in a substance?
 ① Volume ② Mass ③ Density ④ Weight
- Q. 42. Which of the following organs work as a pump?
 ① Lungs ② Heart ③ Intestine ④ Kidney
- Q. 43. Heaviness : Density :: Space occupied : _____
 ① Length ② Area ③ Volume ④ Mass
- Q. 44. Which of the following will decrease consumption of natural resources?
 ① Use of paper for writing
 ② Use of disposable dishes
 ③ Use of slate for doing rough work
 ④ Use of thermocoal glasses
- Q. 45. Why does the speed increase while sliding down a slide?
 ① Due to muscular force ② Due to mechanical force
 ③ Due to gravitational force ④ Due to frictional force
- Q. 46. Mammals have a cover of _____ on their skin.
 ① scales ② hair ③ feathers ④ mucous
- Q. 47. This experiment is related to the working of _____.



- ① nose ② trachea
 ③ alveolus ④ lungs

- Q. 48. Find the odd one out with reference to vaccination:
 ① Polio ② BCG ③ Measles ④ Diphtheria

- Q. 49. Which gas from the atmosphere forms a compound that is useful for growth of the plants?
 ① Helium ② Carbon dioxide ③ Nitrogen ④ Water vapour
- Q. 50. Find the odd one out:
 ① Salt ② Sugar ③ Potassium permanganate ④ Alum
- Q. 51. Which of the following is not produced from a plant?
 ① Coir ② Jute ③ Silk ④ Catechu
- Q. 52. A and B have performed same amount of work. A has displaced an object by 4 m. and B has displaced same object by 2 m. Hence force applied by A is _____ times that applied by B.
 ① $\frac{1}{2}$ ② 1 ③ 2 ④ 4
- Q. 53. What is the distance between the Earth and the Sun?
 ① 15 thousand km ② 150 thousand km
 ③ 15 lakh km ④ 15 crore km
- Q. 54. When a child plays see-saw, his motion is _____ motion.
 ① oscillatory ② uniform ③ random ④ non-uniform linear
- Q. 55. The clock in the figure has *only hour hand*. Estimate the time shown by the watch.
- 
- ① 3 hr. 15 min. ② 2 hr. 15 min.
 ③ 3 hr. 45 min. ④ 2 hr. 45 min.
- Q. 56. Which method has to be used to get both solvent and solute from a solution?
 ① Evaporation ② Filtration
 ③ Distillation ④ Centrifuge
- Q. 57. Fertility of soil can be increased by which of the following methods?
 (a) Supply plenty of water (b) Grow same crop every year
 (c) Use fertilizers (d) Grow different crops alternate year
- ① a, c ② a, d ③ b, c ④ c, d
- Q. 58. 1 hectare = _____ square metres.
 ① 100 ② 1,000 ③ 10,000 ④ 10

- Q. 59. Find the odd one out on the basis of mode of reproduction:
 ① Frog ② Snake ③ Butterfly ④ Bear
- Q. 60. Mohan applies brakes to a moving scooter. Choose correct statement from the following:
 ① Work is done by Mohan
 ② No work is performed
 ③ Work is done by engine of the scooter
 ④ Work is done by gravitational force
- Q. 61. How hibiscus plant can be described?
 ① Herb, perennial ② Shrub, perennial
 ③ Herb, annual ④ Shrub, annual
- Q. 62. What is the speed of second's hand of a clock?
 ① 1 rotation per second ② 1 rotation per minute
 ③ 1 rotation per hour ④ 60 rotations per minute
- Q. 63. Gum from *Babul* is _____.
 ① food prepared by *Babul* ② fruit of *Babul*
 ③ excretory product of *Babul* ④ digestive juice of *Babul*
- Q. 64. Movements of hand as shown in figure are possible due to which type of joint?
- 
- ① Ball and socket joint ② Pivot joint
 ③ Gliding joint ④ Hinge joint
- Q. 65. When a person has snakebite on his leg, where the tourniquet is tied?
 ① On the site of snakebite ② Above the site of snakebite
 ③ Below the site of snakebite ④ Anywhere on the body
- Q. 66. Which is the innermost whorl of *Gulmohor* flower?
 ① Calyx ② Corolla ③ Gynoecium ④ Androecium

- Q. 67. If we put salt near an earthworm, what will it do?
① It will move towards the salt ② It will eat the salt
③ It will move away from the salt ④ There will be no effect on it
- Q. 68. Which of the following quantity is measured using spring balance?
① Volume ② Mass ③ Weight ④ Area
- Q. 69. Ganesh and Geeta brought green leafy vegetables from market. Ganesh washed it before cutting but Geeta washed it after cutting. Who is correct?
① Geeta ② Ganesh ③ Both ④ None of them
- Q. 70. Ice cream is a mixture of _____.
① liquid and soluble solids ② liquids, soluble solids and gas
③ liquid and gas ④ solid and gas
- Q. 71. Find the incorrect pair for nutrient and its main resource:
① Starch – potato ② Protein – leafy vegetables
③ Fats – coconut ④ Vitamins – fruits
- Q. 72. Some conditions about weights used for weighing are given below. State which of them are essential according to the law:
a. A weight has to be made up of metal
b. A weight must be hexagonal
c. A weight must have mark of the manufacturing company on it
d. A weight must have mark of weights and measures department
① a, b, c, d ② a, b, c ③ a, c, d ④ a, d
- Q. 73. Choose the correct option for the spread of T. B.:
(a) Through air (b) Through water
(c) Through food (d) Due to habit of spitting
① a, b, ② b, d ③ a, d ④ c, d
- Q. 74. When a vehicle goes up the mountain slope on a circular road, which of the following statements stand true?
① This is a short cut
② The time required to go up is less than that required in straight road
③ It is easy to go up by this road
④ All of these
- Q. 75. In which of the following, spring like parts may be present on the stem?
① Trees ② Shrubs ③ Climbers ④ Herbs

- Q. 76.** How can you estimate the weight of a big pumpkin?
 ① By taking weight of many pumpkins together
 ② By taking weight of $\frac{1}{4}$ or $\frac{1}{8}$ of it
 ③ By taking actual weight of it
 ④ By observing it
- Q. 77.** Find the odd one out:
 Hands of a clock, Swing, See-saw, Needle of sewing machine
 ① Hands of a clock ② Swing
 ③ See-saw ④ Needle of sewing machine

- Q. 78.** Observe the figure and choose the correct option:



- ① Wheel
 ② Slope
 ③ Pulley
 ④ Wheel and slope

- Q. 79.** Running of trains as per the time table is which type of change?
 (a) Irreversible (b) Non-periodic (c) Periodic (d) Reversible
 ① a, b ② b, d ③ a, c ④ c, d
- Q. 80.** Which of the following description is most correct for carrot?
 ① Lateral root ② Fruit ③ Food storing stem ④ Food storing root
- Q. 81.** Find the odd one out:
 Stray animals, Pastures, Strong wind, Heavy rains
 ① Stray animals ② Pastures ③ Strong wind ④ Heavy rains
- Q. 82.** Which method can be used for cleaning wheat adulterated by chaff and sand?
 ① Threshing and sifting ② Winnowing and sifting
 ③ Sifting and picking ④ Threshing and winnowing
- Q. 83.** When an object is hung on a spring balance, what effect it has on the spring of the balance?
 ① Potential energy increases ② Potential energy decreases

- ③ Kinetic energy increases ④ Kinetic energy decreases
- Q. 84. Jelly fish can be classified as _____.
- ① aquatic vertebrate ② amphibious vertebrate
③ aquatic invertebrate ④ amphibious invertebrate
- Q. 85. Arrange the statements in proper order:
- a. Manure is prepared from wet garbage
b. The garbage in the bins is collected and transported to designated places outside the town
c. Garbage bins are provided for collecting garbage
d. The garbage is separated into wet and dry categories
- ① a, b, c, d ② d, c, b, a ③ c, b, d, a ④ b, d, c, a
- Q. 86. While suggesting a diet, which factors are considered by a dietician?
- ① Age ② Health problem ③ Type of work ④ All of these
- Q. 87. Why we have to increase the use of solar energy, wind energy and energy from waves?
- ① These are conventional sources of energy
② These are non-conventional of energy
③ These are strong sources of energy
④ These are everlasting sources of energy
- Q. 88. Components of which mixture can be separated by centrifuge method?
- ① Water and turmeric ② Water and salt
③ Salt and turmeric ④ Water and sugar
- Q. 89. Which of the following substances is brittle?
- ① Steel glass ② Wooden block
③ Aluminium ruler ④ A piece of charcoal
- Q. 90. Which energy is used when we run?
- ① Kinetic energy ② Potential energy
③ Physical energy ④ Heat energy
- Q. 91. Which of the following ingredients is present in gel pen ink?
- ① Bone extract ② Xanthen gum ③ Acetone ④ Glue

- Q. 92.** Which of the following is used as a coolant in ice cream factories?
① Liquid nitrogen
② Ice + Salt + Saw dust
③ Freon
④ Liquid ammonia
- Q. 93.** Which method is used to get diesel from crude oil?
① Setting
② Evaporation
③ Distillation
④ Fractional distillation
- Q. 94.** Which waves are used in a remote control of TV?
① Infrared
② Ultraviolet
③ Ultrasonic
④ FM
- Q. 95.** Which fibers are used in a bullet proof jacket?
① Silk
② Spider-web
③ Kevlar
④ Melamine
- Q. 96.** Which ingredient in chillies make them taste hot?
① Theocynate
② Lacrimator
③ Capsicin
④ Pepperoni
- Q. 97.** Year 2011 is being celebrated as International year of_____.
① Environment
② Astronomy
③ Biodiversity
④ Chemistry
- Q. 98.** Construction of a dam by China on which of the following rivers originating in Tibet is considered to be a threat to India and Bangladesh?
① Sutlaj
② Brahmaputra
③ Khasi
④ Sindhu
- Q. 99.** Select correct option for screen of laptop computer.
① LED
② Plasma
③ LCD
④ Cathode Ray Tube
- Q. 100.** Which of the following is the State Flower of Maharashtra?
① Gulab
② Lotus
③ Tamhan
④ Bahawa

- A. 1. (4) **Explanation:** Gorilla has eyes on the front side of the face. Distance between its two eyes is less. Rest three animals have eyes on both sides of the face. Their range of vision is more than gorillas.
- A. 2. (3) **Explanation:** Matter is made up of tiny particles. There is space between these particles. When we add a drop of ink to the water, the particles of ink occupy the space between the particles of the water and the water gets coloured.
- A. 3. (4) **Explanation:** Ripening of fruit, burning of wood or coal, ripening of leaves, conversion of milk to curd are some natural chemical changes. All these changes are irreversible.
- A. 4. (2) **Explanation:** We get water from the tap having pressure knob only when we apply pressure. As pressure is removed, the flow stops and the water does not flow continuously. This avoids wastage of water.
- A. 5. (3) **Explanation:** In one magnet, S denotes the South pole. Hence second pole A must be the North pole. From the figure, pole B of the second magnet repels A, while pole C get attracted towards A. This means C is the pole opposite to the pole A. As A is the North pole, C must be the South pole.
- A. 6. (1) **Explanation:** The second word *magnetic* describes the property of the first word *Cobalt*. Hence to fill in the gap we must find the property of Sal ammoniac, which is sublimative.
- A. 7. (4) **Explanation:** *Tulsi* is a medicinal plant. Animals eat *Jamun* and its seeds are dispersed by them. Beetlenut trees grow near water. Its fruits have light cover, and they can float on water and get dispersed by water. All the three options are correct. Banyan wood is soft and not so durable. Hence it is not used for furniture.
- A. 8. (2) **Explanation:** Ribcage protects lungs and the heart. It also helps the contraction and expansion of lungs which give out Carbon dioxide.
- A. 9. (3) **Explanation:** Though plants do not move from one place to other, we can see a movement in plants like *touch-me-not* (*Mimosa pudica*). When flower blossoms there is a movement of petals. Plants grow continuously and when they move towards light, they show response to the stimuli. Plants excrete in the form of water vapour, rubber, gum etc. Hence, plants do not excrete is an incorrect statement.

- A. 10. (4) Explanation:** Machines save time as well as labour. We get product of uniform quality with greater ease by machines. Hence the answer is all of the above.
- A. 11. (4) Explanation:** Wild animals get food, shelter and protection from the forest. And soil erosion due to heavy rain and strong wind is reduced by the trees in the forest. So indiscriminate deforestation will deprive all the above listed advantages of the forest.
- A. 12. (1) Explanation:** Central part of the core of the Earth is made up of Iron and Nickel and is like a solid ball. This is up to 1,200 km from the centre.
- A. 13. (3) Explanation:** Dengue is spread by mosquitoes. Mosquitoes breed in puddles of water. Hence dengue will get spread if there are puddles of water. Drinking contaminated water can cause jaundice or typhoid. T. B. spreads through air.
- A. 14. (3) Explanation:**
 $V_1 = 22 \text{ ml} = \text{Volume of water in the cylinder}$
 $V_2 = 31 \text{ ml} = \text{Volume of water} + \text{Volume of object A}$
 $V_3 = 39 \text{ ml} = \text{Volume of water} + \text{Volume of object A} + \text{Volume of object B}$
Volume of Object B = $V_3 - V_2$
 $= 39 - 31$
 $= 8 \text{ ml}$
- A. 15. (2) Explanation:** Proteins are important building blocks of all the cells in the body. Protein provides all the raw materials the body needs to develop and function. Protein also heals wear and tear of the body. Dietary requirements for protein are affected by many factors, including age and growth. Growing children need more proteins than elders as their bodies are still growing.
- A. 16. (2) Explanation:** In drip irrigation, the water is supplied drop-by-drop near the roots. So roots get enough water and the loss due to evaporation is avoided.
- A. 17. (3) Explanation:** When water is boiled, physical change take place. Due to boiling of water the egg gets boiled exhibiting a chemical change.
- A. 18. (3) Explanation:** Pulses are washed to remove dust and unwanted particles, they are soaked in water for 5-6 hours. They swell in water. The extra water is then drained out and the pulses are tied in a clean cloth to sprout.
- A. 19. (2) Explanation:** Particles of sandy soil are large. There are small spaces between sand particles. So more air circulation takes place in soil. This provides more air to the roots and this is the reason why watermelons grow well in sandy soil.

- A. 20. (3) **Explanation :** Intestine is a part of the digestive system, while kidney is a part of excretory system. In all other options, both the parts belong to the same system.
- A. 21. (2) **Explanation:** While opening the bottle, the part of the opener which do not move is A. Hence, A is fulcrum. Force is applied at C, hence C is force. The lid is lifted at B. Hence B is load.
- A. 22. (2) **Explanation:** To choose a proper box for any substance, we have to think over its volume and not the length, area or mass.
- A. 23. (3) **Explanation:** Insect is a living thing and all other options are non-living things.
- A. 24. (1) **Explanation:**
1 hour 15 minutes = 1.25 hours. (\because 60 minutes = 1 hour)
Distance = Speed \times Time
= 48 \times 1.25
= 60 km
- A. 25. (4) **Explanation:** Heavy rainfall or plants have very small effect on the temperature. But as we go to higher altitudes, the temperature falls to lower levels. At higher altitudes the temperature is usually less than 0 °C. Hence peaks in this region are always covered with snow or ice.
- A. 26. (3) **Explanation:** To prepare ORS, 8 teaspoons of sugar and $\frac{1}{2}$ teaspoon of salt is added to one litre boiled water.
- A. 27. (4) **Explanation:** Brick is a man-made substance, while stone, china clay and marble are natural substances.
- A. 28. (4) **Explanation:** Neptune is the last planet of the Solar system. Its distance from the Sun is much more than the distance of Mercury, Venus or the Earth. And hence it has very low temperature as compared to the other planets.
- A. 29. (1) **Explanation:** Length of the paper = 30 cm = 0.3 m.
Area of rectangle = Length \times Breadth.
$$0.06 = 0.3 \times \text{Breadth}$$
$$\therefore \text{Breadth} = \frac{0.06}{0.3} = 0.2 \text{ m}$$
- A. 30. (4) **Explanation:** Due to the earthquakes at oceanbeds, some part of the ocean bed vibrates. This causes formation of large waves which are called tsunamis.

- A. 31. (4) Explanation:** Coconut tree is perennial plant. Its life span is of many years. Sugarcane is also a perennial plant, but its life span is about 6–8 years. Radish is a biennial plant. Its life span is 2 years.
- A. 32. (2) Explanation:** In small intestine food is digested using digestive juices produced by liver, pancreas and small intestine.
- A. 33. (2) Explanation:** Volume of a vessel is the space occupied by it. The volume of the liquid that a vessel can hold is called the capacity of the vessel. This is the inner volume of the vessel. Hence, capacity is always less than volume.
- A. 34. (1) Explanation:** When the boat is steady in shallow water, force is applied on the ground using pole and the boat is pushed forward.
- A. 35. (3) Explanation:** In photosynthesis, plants store solar energy in the form of chemical energy. We get food from plants. Wood and coal are the different forms of plants only. Hence basic source of food, wood and coal is the Sun.
- A. 36. (4) Explanation:** In options 1, 2 and 3, both substances have same property. In option 4, milk is a liquid while salt is a soluble solid. Properties of these two substances are different.
- A. 37. (2) Explanation:** We cut the nails of our hand and foot by hand. To place the nail cutter at proper place, we have to see it.
- A. 38. (1) Explanation:** Vaccine contains very less number of microorganisms of that disease. It is given as a preventive measure before the disease occur. Medicines are given on the occurrence of a disease. Hence vaccine is not a medicine. All vaccines are not 100% effective. Vaccines are not always injected in the body. Some vaccines like Polio vaccine are administered orally.
- A. 39. (3) Explanation:** When a bar magnet is kept in Iron filings, very few filings get attracted towards the centre and a large amount of filings get attracted towards the either ends of the magnet.
- A. 40. (4) Explanation:** When we throw a body in the upward direction, its kinetic energy goes on decreasing and potential energy goes on increasing. At maximum height as the body starts coming down its kinetic energy starts increasing and is maximum when it touches the ground. As it touches ground, its kinetic energy becomes zero and potential energy reaches to maximum level.
- A. 41. (2) Explanation:** The quantity of matter in a substance is known as mass of the substance.

- A. 42. (2) **Explanation:** Contraction and relaxation of heart is a periodic phenomenon. When heart contracts, the blood inside it gets pumped out and move to all parts of the the body. Relaxation of heart results in collection of blood from various parts of the body into it. This resembles to the action of a pump.
- A. 43. (3) **Explanation:** As density shows heaviness of a body, volume shows the space occupied by the body.
- A. 44. (3) **Explanation:** Disposable dishes or thermocol glasses can be used only once. When we write on a paper, we cannot use the same paper for writing. But if we use slate for doing rough work, we can rub it and use the slate again and again.
- A. 45. (3) **Explanation:** Any body when comes down from some height, its velocity goes on increasing due to gravitational force.
- A. 46. (2) **Explanation:** Fishes and reptiles have scales on them. Birds have feathers. Amphibians (e. g. frogs) have mucous membrane on them and mammals have cover of hair on their skin.
- A. 47. (4) **Explanation:** When we suck out the air in the bottle by the other tube, the pressure of air inside the bottle decrease. So the outside air enters the balloon and inflates it. When we stop sucking, the air from the balloon goes out. Working of the lungs takes place in the similar manner.
- A. 48. (1) **Explanation:** Vaccines of BCG, measles and diphtheria are injected in the body. But vaccine of Polio is administered orally.
- A. 49. (3) **Explanation:** Nitrogen from air combines with Oxygen to form Nitrogen oxide when lightening occurs. It dissolves in rain water and get mixed with soil. In soil, Nitrogen oxide reacts with different salts and form nitrates, which are soluble. These nitrates are taken by plants and converted into proteins, which are essential for growth of the plants.
- A. 50. (3) **Explanation:** Salt, sugar and alum are white in colour while Potassium permanganate is purple in colour.
- A. 51. (3) **Explanation:** Coir, jute and catechu are produced from plants. Silk is produced from silkworm.

- A. 52. (1) Explanation:** Work = Force x Displacement
 $W = F.S$
 Let F_A and F_B represent force applied by A and B respectively
 As work done by both of them is same,
 $F_A \times 4 = F_B \times 2$
 $F_A = F_B \times 2/4$
 $F_A = \frac{1}{2} F_B$
- A. 53. (4) Explanation:** The distance between the earth and the Sun is 15 crore km.
- A. 54. (1) Explanation:** When a child plays see-saw, he moves up and down repeatedly. Hence this is an oscillatory motion.
- A. 55. (4) Explanation :** As the hour hand is between 2 and 3, the timing must be between 2 hr. and 3 hr. Hence 3 hr. 15 min and 3 hr. 45 min. are not correct options. The hour hand is very near to 3. At 2 hr. 15 min., hour hand will be near to 2. Hence time shown by the watch is 2 hr. 45 min.
- A. 56. (3) Explanation:** When a solution is distilled, the solvent gets converted into gas and again to liquid. The Solute remains in the pot.
- A. 57. (4) Explanation:** Every crop requires different ingredients from the soil. When we grow different crops different ingredients from the soil are used. The loss of used ingredients from the soil is compensated after some period naturally.
- A. 58. (3) Explanation:** 1 hectare is the area of a square having sides of 100 m each.
 $1 \text{ hectare} = (100 \text{ m})^2$
 $= 10,000 \text{ m}^2$
 $= 10,000 \text{ square meters}$
- A. 59. (4) Explanation:** Frog, snake and butterfly are oviparous, while bear is viviparous animal.
- A. 60. (1) Explanation:** Mohan applied brakes means he is applying force. Due to this force, the speed of the scooter decreases and it stops after going some distance. As force applied by Mohan changes speed, work is done by Mohan.
- A. 61. (2) Explanation:** Height of hibiscus plant is 2 to 3 m. So it is a shrub. It persists for several years usually with new growth from a perennating part. Hence it is perennial.
- A. 62. (2) Explanation:** Second's hand completes one rotation in one minute. Hence its speed is one rotation per minute. Speed of the minute hand is 1 rotation per hour.

- A. 63. (3) **Explanation:** A liquid oozes out from the stem of the *Babul*. It gets solidified over the period and get collected on the stem. This excretion is called gum of *Babul*.
- A. 64. (3) **Explanation:** Figure shows movement of wrist joint. Wrist has a gliding joint.
- A. 65. (2) **Explanation:** When snake bites, its poison gets mixed with blood. To avoid poison from reaching heart, tourniquet is tied above the site of snake bite.
- A. 66. (3) **Explanation:** In *Gulmohor* flower the four whorls are in the order calyx, corolla, androecium and gynoecium as we go from outside to inside the flower.
- A. 67. (3) **Explanation:** Salt absorbs water from the skin of the earthworm, so it will move away from the salt.
- A. 68. (3) **Explanation:** When a body is hung from the hook of the spring balance, the gravitational force on a body (i. e. weight of the body) pulls it down. The spring of the balance gets stretched due to this force. This force can be measured from the scale of the spring balance.
- A. 69. (2) **Explanation:** When we wash leafy vegetables after cutting it, vitamins from the vegetables get washed. Hence leafy vegetables must be washed before cutting.
- A. 70. (2) **Explanation:** When ice cream is prepared, sweet milk is churned and cooled. Cooling will solidify the sweet milk and churning mixes air with it. Hence ice cream is basically a mixture of sugar, milk and air.
- A. 71. (2) **Explanation:** Leafy vegetables are rich in vitamins and minerals. Protein is present in large amounts in pulses, fishes and in meat.
- A. 72. (4) **Explanation:** According to the law, a weight has to be made up of metal and it must have mark of weights and measures department.
- A. 73. (3) **Explanation:** Germs of T. B. are present in the spittle of a person having T. B. When this person spits of coughs, the germs spread in air. These germs enter the bodies of people who are nearby through the air they breathe in.
- A. 74. (3) **Explanation:** The circular road in the mountain has more length and requires more time to cross. But due to less slope, vehicles can easily go up by this road.
- A. 75. (3) **Explanation:** Shrubs, herbs and trees have strong stem but climbers have weak stem. They require support. That way a spring like part may be present in climbers, because it winds and clings to the support.

- A. 76. (2) Explanation:** A pumpkin has large volume. All pumpkins do not have same volume. Hence weighing many pumpkins together to estimate weight of one is not a good idea. By observing the pumpkin we can estimate its volume and not the weight. So by taking weight of $1/4^{\text{th}}$ or $1/8^{\text{th}}$ of pumpkin is the best idea to estimate its weight.
- A. 77. (1) Explanation:** Swing, see-saw and needle of sewing machine have oscillatory motion, while hands of a clock have periodic motion.
- A. 78. (4) Explanation:** In the figure no use of pulley is shown. The heavy box is pushed up on the slope using wheels.
- A. 79. (4) Explanation:** If trains are running according to the time table, then at a particular station trains will come at some fixed time every day. Hence the change is periodic. If a train goes from X to Y, it also comes back from Y to X hence the change is reversible.
- A. 80. (4) Explanation:** Carrot is a root of the plant. It stores food.
- A. 81. (2) Explanation:** Strong wind, heavy rains and movement of stray animals cause soil erosion. The grass grown in the pastures reduces soil erosion.
- A. 82. (2) Explanation:** In winnowing, the lighter chaff gets away by current of air. Sand particles are smaller than wheat. They it can be removed by sifting.
- A. 83. (1) Explanation:** When an object is hung to the spring balance, the spring of the balance stretches. This increases potential energy of the spring.
- A. 84. (3) Explanation:** Jelly fish lives in water. So it is an aquatic animal. It does not have vertebral column. So it is an invertebrate.
- A. 85. (3) Explanation:** Garbage bins are provided for collecting garbage from homes. The garbage in the bins is collected and transported to designated places outside the town. The garbage is separated into wet and dry categories. Manure is prepared from wet garbage. Dry garbage is recycled.
- A. 86. (4) Explanation:** The requirement of food depends upon a person's age and type of work. If the person has any health problem there has to be some do's and don'ts in the diet. Dietician has to consider all these factors while suggesting a diet.

- A. 87. (4) **Explanation:** At present we use coal, petrol, diesel etc. as sources of energy. But deposits of these fuels are limited. Sun is the never-ending source of energy. We can get energy from the Sun, wind and waves again and again. i. e. these are everlasting sources of energy.
- A. 88. (1) **Explanation:** If insoluble substance gets mixed with a liquid, it can be separated by centrifuge method. Turmeric is insoluble in water.
- A. 89. (4) **Explanation:** Out of the given substances, charcoal is a brittle substance.
- A. 90. (3) **Explanation:** We have to use muscular force for running. The body uses physical energy to enable us to apply muscular force.
- A. 91. (2) **Explanation:** Xanthan gum is present in gel pen ink.
- A. 92. (4) **Explanation:** Liquid ammonia is used as a coolant in ice cream factories.
- A. 93. (4) **Explanation:** Crude oil is a mixture of liquids like petrol, diesel, gasoline etc. These liquids have different boiling points. They are separated from the crude oil by fractional distillation.
- A. 94. (1)
- A. 95. (3)
- A. 96. (3)
- A. 97. (4)
- A. 98. (2) **Explanation:** Construction of a dam by China on Brahmaputra river is considered to be a threat to India and Bangladesh.
- A. 99. (3) **Explanation:** Majority of laptop computers has LCD (Liquid crystal display) screen.
- A. 100. (3)