
SCIENCE

- 1 The first link in the food chain are green plants because they
- [A] Are more in number [B] Can prepare their own food
[C] Are eaten by all the animals [D] Cannot move from one place to another
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- 2 The part of earth comprising water is called
- [A] Lithosphere [B] Atmosphere
[C] Hydrosphere [D] None of the above
-
- 3 Which of the following is not necessary for the germination of a seed?
- [A] Sunlight [B] Water
[C] Air [D] Temperature
-
- 4 The heart pumps blood to the lungs. What waste product is removed from the blood by the lungs?
- [A] Oxygen [B] Acid
[C] Carbon dioxide [D] Urea
-
- 5 Which of the following is an air borne diseases
- [A] Tuberculosis [B] Influenza
[C] Diphtheria [D] All of the above
-
- 6 Epistomatous (stomata on the upper surface of the leaf) condition is usually found in
- [A] Terrestrial plant [B] Aquatic plant
[C] Aerial plant [D] Both (A) & (C)
-
- 7 Why is reproduction a necessary part of the life cycle?
- [A] If it did not reproduce, a species would become extinct
[B] Without reproduction, there would be too many of each species
[C] If it did not reproduce, there would not be any young animals to look after the older animals
[D] Without reproduction, animals would not continue to grow and develop
-
- 8 The energy that depends on the mass of a body but not on its speed is
- [A] Electrical energy [B] Solar energy
[C] Potential energy [D] Kinetic energy

9 Study the statements given below

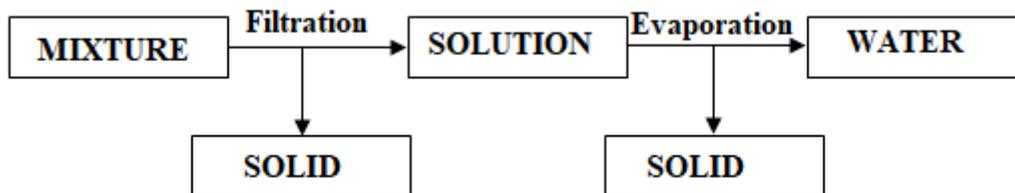
(i) In a night the shape of the moon does not change much

(ii) The moon moves from east to west in the sky

Which of the following is responsible for these?

- [A] The tilting of the Earth's axis [B] The revolution of Moon
[C] The rotation of Moon [D] The rotation of Earth

10 Arun conducted an activity to separate the constituents of a mixture. The flow chart of the activity is given below.

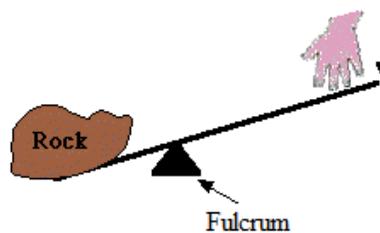


What could have been the mixture?

- [A] Water + Sand + Sugar [B] Oxygen + Sugar + Water
[C] Sand + Kerosene + Water [D] Stones + Rice + Water

11 The fulcrum of a lever acts as

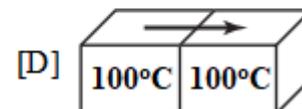
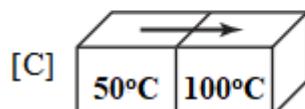
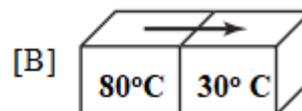
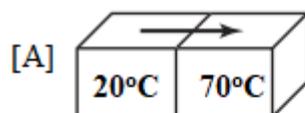
- [A] Support
[B] Load
[C] Effort
[D] All of these.



12 An inclined plane is an example of

- [A] A complex machine [B] A compound machine
[C] An easy machine [D] A simple machine

13 The pictures below show pairs of metal blocks and their temperatures. Which of these correctly shows the direction that heat energy will move?

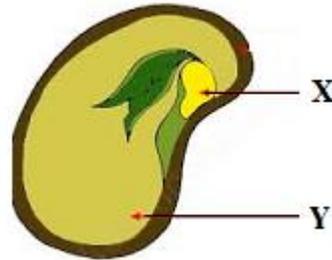


14 An electric fire should not be put off by using water since there is a danger of

- [A] Burning [B] Electrocutation
[C] Fracture [D] Spreading
-

15 Carefully observe the seed given below and select the correct option about the parts marked as X and Y.

- [A] Part X give rise to new plant
[B] Part Y gives nutrition to the young plant
[C] Part Y gives rise to new plant
[D] Both [A] and [B]



16 Which of the following is an example of sedimentary rock?

- [A] Marble [B] Granite
[C] Sandstone [D] Pumice
-

17 We produce electricity by different ways. Which of the methods of generating electricity shown below does NOT use alternative energy resources?



18 Animal **X** hatches from eggs at a place **P** and goes to **Q** to spend its life. When reproduction time comes, it goes back to **P**, lays eggs and then dies.

Select the correct option regarding **X**, **P** and **Q**

	X	P	Q
[A]	Penguin	South pole	North pole
[B]	Siberian crane	Western Siberia	India
[C]	Salmon	River	Ocean
[D]	Arctic tern	North pole	South pole

19 Arun was asked to write about some actions which are voluntary in nature. He has written some involuntary action too by mistake. Pick the involuntary actions written by Arun from the list given below

- (i) Chewing food (ii) Sitting upright on a table (iii) Digestion of food
(iv) Beating of heart (v) Singing a song (vi) Dancing
(vii) Breathing

- [A] (i), (iii) & (v) [B] (iii) (iv) & (vii)
[C] (ii) (iii) & (vi) [D] (v) & (vii)
-

20 What causes shadows?

- [A] Shadows are caused by the dark
[B] A shadow appears when light cannot pass through an object
[C] Shadows are only caused by the Sun going behind a cloud
[D] A shadow is formed when the light changes color to black
-

21 While brushing, Arun's gums bleed. He is also feeling wobbly teeth, is tired most the time and has pain in the joints.

Select the disease he is suffering from and its cause.

- [A] Rickets, deficiency of vitamin D [B] Anaemia, deficiency of vitamin A
[C] Scurvy, deficiency of vitamin C [D] Beri beri, deficiency of vitamin B
-

22 The seed shown below is most likely to be dispersed by

- [A] Water
[B] Wind
[C] Animal
[D] Cannot Say



23 An aquatic animal that breathes with its lungs is

- [A] Shark [B] Whale
[C] Jelly fish [D] Tadpole
-

24 Arun pushed the plunger of syringe completely and dipped its needle in water. Then he slowly pulled the plunger while its needle was still immersed in water. Select the correct option regarding this

- [A] Water will move in the syringe when he pushed the plunger down due to air pressure
[B] When he pushed the plunger down all the air moved out creating an empty space in syringe
[C] Air outside the syringe exerted pressure on water causing it to move in when the plunger is pulled up
[D] Both (B) & (C)

25 Tides are caused by

[A] Gravitational pull of Earth

[B] Movement of large ships

[C] Gravitational pull of Moon

[D] None of these

26 What does the following picture suggest?



[A] Poor sanitation

[B] Breeding ground for mosquitos and disease causing microbes

[C] Unhealthy living

[D] All of these

27 When something is thrown at us unexpectedly, we close our eyes. This action depends on our

[A] Muscular system

[B] Skeletal system

[C] Circulatory system

[D] Reflex action

28 When oxides of nitrogen and sulphur react with water vapour in the air, they cause

[A] Ozone depletion

[B] Acid rain

[C] Global warming

[D] Oil spill

29 Greenhouse gases cause global warming. Which of the following is a greenhouse gas?

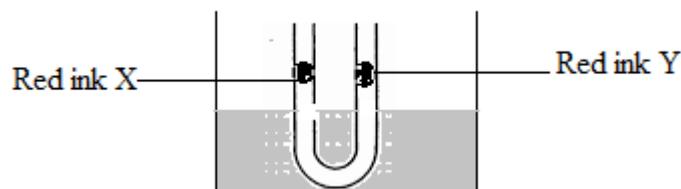
[A] Oxygen

[B] Nitrogen

[C] Carbon dioxide

[D] Magnesium oxide

30 The U tube shown below is immersed in ice water. X and Y are the red ink droplets present inside the tube.



What will you observe after some time?

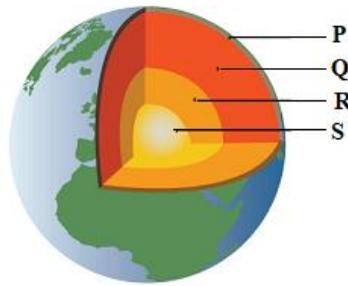
[A] X will move downward and Y will move upward

[B] X will move upward and Y will move downward

[C] X and Y will move upward

[D] X and Y will move downward

-
- 31 The following figure shows the inner parts of the earth. Carefully observe the following figure and select the correct option.



- [A] S is the molten part made up of nickel and iron
[B] Q is the hottest part of earth which is solid
[C] R is connected to surface with the help of volcanoes
[D] Minerals and oil deposits are found in the part P

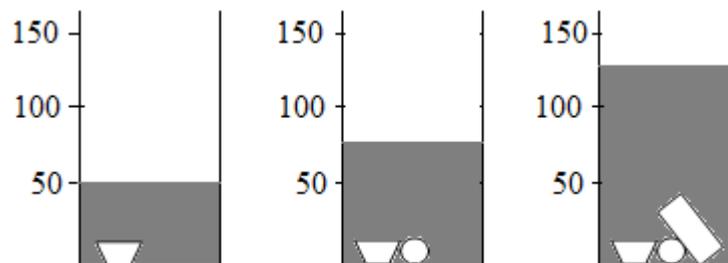
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- 32 Which of the following is a fact about asteroids?

- [A] Asteroids do not revolve around the Sun the way planets do.
[B] The asteroid belt is between Venus and Jupiter
[C] Asteroids are planet like objects, but smaller and often irregularly shaped
[D] Asteroids cannot be classified into groups

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- 33 Select the activity that is an example of physical change.

- [A] Melting of ice cream [B] Rusting of iron
[C] Making curd from milk [D] All of these

-
- 34 Arun has three objects **X**, **Y** and **Z**. He put X into a measuring cylinder with 30ml of water. Then he put Y and Z one by one into the same measuring cylinder as shown in the figure below.



Which of these objects has/have a volume less than 30ml?

- [A] X only [B] Y only
[C] X and Y only [D] X, Y and Z

35 A student is looking for evidence that Earth is always rotating on its axis. Which of the following would provide the best evidence?

- [A] The different amount of rain that falls each day
- [B] The appearance of shadows changing throughout the day
- [C] The presence of other planets in the night sky
- [D] The different phases of the moon in a month

36 A list of various action is given below

- (i) Terrace farming
- (ii) Deforestation
- (iii) Making dam
- (iv) Setting up new residential areas
- (v) Volcanic eruption
- (vi) Coal mining

Which of these actions do not lead to global warming?

- [A] (i) only
- [B] (i) & (ii) only
- [C] (ii), (iii), (iv) and (vi) only
- [D] (iii), (iv) and (v) only

Questions 37 to 40: Read the following passage and answer the questions that follow.

When you look at the night sky, you see many stars that are like our Sun. But they are at least million times further away from us. Astronomers are interested in studying colour, brightness and other properties of the stars in relation with their size and distance from the Earth. By knowing how bright and how hot a star is, astronomers can calculate the distance and size of a star. Very large stars are called giants or super giants, whereas small stars like Sun are called dwarfs. Stars like Sirius, look bright because they are relatively close to us. Its temperature is around $10,000^{\circ}\text{C}$. Beltegeuse, a massive red supergiant is the tenth brightest star in the sky. It is at least 5000 times brighter than the Sun. The blue supergiant Rigel in Orion galaxy is about 1, 40,000 times brighter than the Sun.

The surface temperature of a star decides its colour. Red stars are the coolest and blue stars are the hottest. Yellow stars like Sun are around 6000°C hot, whereas white stars are as hot as 10000°C .

37 Which one of the following is a member of Orion galaxy?

- [A] Sun
- [B] Rigel
- [C] Sirius
- [D] Beltegeuse

38 Which would be a possible surface temperature of the red giant Beltegeuse?

- [A] $3,000^{\circ}\text{C}$
- [B] $6,000^{\circ}\text{C}$
- [C] $10,000^{\circ}\text{C}$
- [D] $30,000^{\circ}\text{C}$

39 What is the correct increasing order of brightness of stars in the sky?

- [A] Rigel < Beltegeuse < Sun
- [B] Beltegeuse < Rigel < Sun
- [C] Rigel < Sun < Beltegeuse
- [D] Sun < Beltegeuse < Rigel

40 What is the colour of the star Sirius?

[A] red

[B] yellow

[C] white

[D] blue

LOGICAL REASONING

41 Which word does NOT belong with the others?

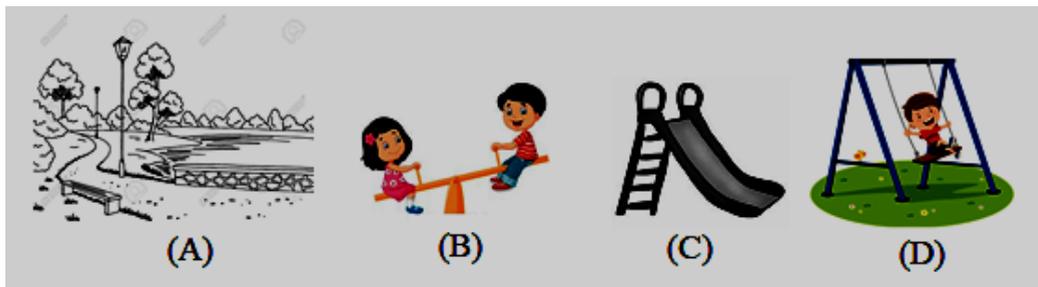
[A] Tyre

[B] Steering

[C] Engine

[D] Car

42 Which of the one of the following does not belong to the group?



43 Shilpa fell asleep at 10:47 P.M. She slept for only 3 hours and 45 minutes. At what time did she wake up?

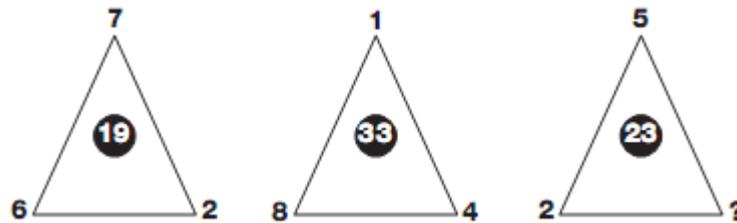
[A] 11:57 P.M.

[B] 1 45 AM

[C] 2:32 A.M.

[D] 3:32 A.M.

44 Which number will replace question mark (?) in the following?



[A] 6

[B] 9

[C] 4

[D] 7

45 Replace the question mark



[A] ◇

[B] □

[C] ○

[D] △

46 A car driver is noticed that at the time of sunrise sun rays are falling on him left side. Towards which direction is the car going?

[A] South

[B] North

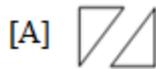
[C] West

[D] East

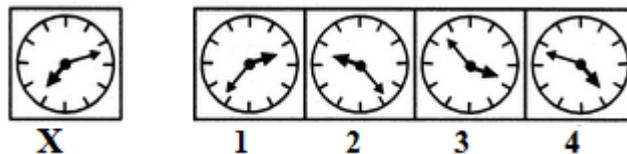
47 Observe the pattern:



Which two shapes are missing in this pattern?



48 Choose the correct mirror image of the given figure (X) from amongst the four alternatives.



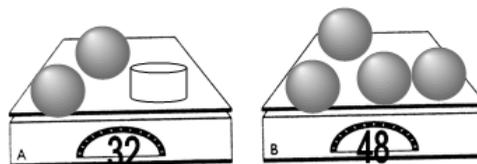
[A] 1

[B] 2

[C] 3

[D] 4

49 Observe the following:



How much does weigh?

[A] 16

[B] 12

[C] 8

[D] 4

50

What rule is being used in the chart below?

In	Out
6	18
3	9
10	30
15	45
25	75

[A] Add 12

[B] Divide by 6

[C] Subtract 12

[D] Multiply by 3

SPACE FOR ROUGH WORK