## Reasoning

1. Select the correct mirror image of the fig $(X)$ if the mirror is placed along PQ.


(A)

(B)

(C)

(D)
A. A
B. B
C. C
D. D
2. Which of the following options can complete the pattern in Fig (X)?


Fig. (X)

(A)

(B)

(C)

(D)
A. A
B. B
C. C
D. D
3. Which of the following words cannot be formed from the letters of the given word?

SUBJECTIVE
A. SUITE
B. JUICER
C. JUSTICE
D. CUTIE
4. There are five friends Rohit, Amit, Sam, Neha and Riya. There all are of different ages. Riya is not the youngest. Amit is elder than Rohit. Neha is younger than Sam. Rohit is second oldest in the group. Arrange the five friends in the order of their ages from youngest to eldest.
(A) Riya, Neha, Sam, Rohit, Amit.
(A) Amit, Rohit, Riya, Sam,Neha.
(A) Neha, Sam, Rohit, Amit, Riya
(A) Neha, Sam, Riya, Rohit, Amit.
A. A
B. B
C. C
D. D
5. Amit has 8 places around him as shown in the figure. He is facing a place $X$ in the beginning. Then he first turns $90^{\circ}$ clockwise and then $225^{\circ}$ anticlockwise. He is now facing the Library. Which among the following options is $\mathbf{X}$ ?

A. Park
B. Theater
C. Lake
D. Bus stop
6. Some letters are numbered $1,2,3,4,5$ and 6 as shown. Find the combination of numbers which can be used to create a meaningful word?

| A | T | E | M | R | K |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 4 | 5 | 6 |

A. $4,5,2,1,3,6$
B. $2,1,5,6,3,4$
C. $4,1,5,6,3,2$
D. $5,1,4,6,3,2$
7. In the given letter series, if all vowels are removed which letter is sixth to the right of the letter which is fourth to the left of 'P'?
Q T O V J
C M E
H U Z P K A N Y S
A. K
B. N
C. V
D. H
8. Find the missing number if same rule is followed for all the three figures.

A. 26
B. 32
C. 18
D. 35
9. Sam drives 10 km East from a point. He then turns to South and drives 5 km . He then turns to West and drives 10 km . He then turns to to North and drives another 10 km to reach his final destination. In which direction is the starting point with respect to his final position?
A. North
B. South
C. East
D. Starting and end points are same
10. Which of the following figures is embeded in fig. (X)?


Fig. (X)

(A)

(B)

(C)

(D)
A. A
B. B
C. C
D. D
11. Which of the following figures does not have exactly 2 lines of symmetry?

(A)

(B)

(C)

(D)
A. A
B. B
C. C
D. D
12. Read the information carefully and answer the question.

1) There are 4 friends in a group : Sam, Tina, Riya and Ravi.
2) Ravi likes organge and banana.
3) Riya likes only apple
4) Sam likes apple and banana
5) Tina likes pineapple and orange

Ravi's mother is throwing a fruit party for the group and she wants to buy fruits such that the number of different types of fruits is minimum and everyone gets atleast one fruit he or she likes. What is the minimum number of different types of fruits does she need to buy?
A. 4
B. 5
C. 3
D. 2
13. In a certain code language KITTEN is written as 97 NNLM and BRICK is written as 56789 . How will CRICKET be written in that code language?
A. 86789 LM
B. 86789 LN
C. 87698 LN
D. 86789 LT
14. Mohit birthday is on 27 th day of a month. This year his birthday falls on Sunday. This year and next year are not leap years. On which day will his birthday fall next year?
A. Monday
B. Tuesday
C. Friday
D. Saturday
15. Which of the following figure will continue the same pattern series as shown in fig(X)?


Fig. (X)

(A)

(B)

(C)

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

## Science

16. Which of the following is not required for photosynthesis:
1) Air as plants has sufficient storage of carbon dioxide inside them
2) Water because water does not play any role in photosynthesis
3) Sunlight as plants can do photosynthesis even in dark
4) Chlorophyll as it only helps in absorption of sunlight.
A. 1 only
B. 2 only
C. 1, 2 and 3
D. None of these
17. Which of the following is not true :
A) Skeletal system gives shape and support to the body.
B) The skeletal system along with muscular system helps in movement.
C) The skeletal system helps in protecting critical organs like heart and brain.
D) Red blood cells, most white blood cells, and platelets are produced in the bone marrow, the soft fatty tissue inside bone cavities.
A. A
B. D
C. C
D. All are true.
18. Consider the following statements:
A) Pancreas is the largest gland in our body.
B) Pancreas secretes pepsin.
A. A is correct and B is incorrect
B. A is incorrect and B is correct
C. Both are correct
D. Both are incorrect
19. What are the causes of global warming?
A) Smoke emissions from cars and industries
B) Deforestation
C) Burning of fossil fuels
A. A
B. A and B
C. A and C
D. All of these
20. Which of the following is false?
A. Grafting is often used for fruit trees.
B. Jasmine and rubber plants can grow by layering.
C. Rose can be propogated by cutting and layering.
D. Sugarcane can be propogated by cutting.
A. A
B. B
C. C
D. D
21. Observe the two arrangements for material $P$ and $Q . Q$ is bigger than $P$ and is placed closed to $P$. What can be said with surity about the transparency of P and Q ?
A. P is transparent and Q is opaque
$B$. $P$ is opaque and $Q$ is transparent
C. $P$ is opaque and $Q$ is opaque
D. $Q$ is opaque and $P$ is translucent

A. A and C
B. A and B.
C. A, C and D
D. All of these
22. There are 4 water solution available in beaker $P, Q, R$ and $S$. Which of these solution will take least time to dissolve 1 spoon of sugar?

A. P
B. Q
C. R
D. S
23. Match the following:

| A. Shale | 1. Quartzite |
| :--- | :--- |
| B. Limestone | 2. Gneiss |
| C. Sandstone | 3. Marble |
| D. Granite | 4. Slate |

A. A-4, B-3, C-1, D-2
B. A-2, B-3, C-1, D-4
C. $A-4, B-3, C-2, D-1$
D. A-2, B-3, C-4, D-1
24. Which of the following are correct?
A. Jupiter has the shortest days among planets in solar system.
B.Venus has the longest days among planets in solar system.
C. Mercury takes lowest time to orbit around sun.
D. Jupiter is the slowest planet to orbit around Sun.
A. A
B. B
C. C
D. D
25. Which of the following is/are incorrect?
A. Force of buoyancy acts in liquid only.
B. Friction acts in opposite direction of motion.
C. Magnetic needle works because of gravity.
D. In case of pull force applied and movement are in opposite direction.
A. A and C
B. B and C
C. A, C and D
D. None of these
26. Satellites orbit Earth in $\qquad$
A. troposphere
B. stratosphere
C. mesosphere
D. exosphere
27. Match the following:

A. A-2, B-1, C-3, D-4
B. A-1, B-2, C-3, D-4
C. A-2, B-1, C-4, D-3
D. A-2, B-3, C-1, D-4
28. Who is correct?

Amit : A wedge is made up of two inclined planes.
Sumit : A screw is an inclined planed wrapped around a cylinder.
A. Amit
B. Sumit
C. Both of them
D. None of them
29. Animal "P" spend intial stages of its life in water. It breathes through skin and gills. When it grows up its gills vanish and it develops lungs. It still breathe through its moist skin and through lungs. It now spend most of its time on land. Which among the following can be animal "P"?
A. Snake
B. Newt
C. Dolphin
D. Penguin
30. Match the following:

| A. Vitamin A | 1. Strong bones |
| :--- | :--- |
| B. Vitamin C | 2. Clotting of blood |
| C. Vitamin D | 3. Good eyesight |
| D. Vitamin K | 4. Resists infections |

A. A-3, B-4, C-1, D-2
B. $\mathrm{A}-3, \mathrm{~B}-1, \mathrm{C}-4 \mathrm{D}-2$
C. A-3, B-4, C-2, D-1
D. A-3, B-2, C-1, D-4
31. Which of the following is not a jovian planet?
A. Mars
B. Jupiter
C. Neptune
D. Uranus
32. The volcano of Vesuvius has not erupted for more than 1800 years. It is considered as $\qquad$
A. active volcano
B. dormant volcano
C. extinct volcano
D. erupting volcano.
33. Which of the following are correct?
A. Insects breathe through spiracles, small holes in their bodies.
B. Earthworms breathe through moist skin.
C. Snakes breathe through scaly skin.
D. Tadpoles breathe through gills and skin.
A. A and B
B. A, B and C
C. A, B and D
D. All of these.
34. Which of the following are true?
A. Monarch butterflies migrate from northern and central America to south and west to avoid freezing winters.
B. Salmons migrate to fresh water site for spawning.
C. Arctic tern makes return journey from arctic to antartica within a year.
D. Humpback whales migrate to avoid freezing water and they are longest migrating mammals.
A. A and B
B. B and C
C. C and D
D. All of these
35. Which of the following is a not renewable source of energy?
A) Wind energy
B) Tidal
C) Biomass
D) Geothermal
A. B
B. C
C. D
D. All are renewable sources of energy
36. We eat all plant parts. $\qquad$ A is a flower, $\qquad$ B is a root, $\qquad$ are leaves and $\qquad$ D $\qquad$ is a stem that we eat.
A. A-Rose, B-Beetroot, C-

Cabbage, D-Radish
B. A-broccoli, B-Beetroot, CSpinach, D-Potato
C. A-wheat, B-potato, C-

Cabbage, D-Mint
D. A-Corriander-Beetroot, C-

Cabbage, D-Cumin
37. Which of the following are correct?
a. Fat stored in our body can be used for energy needs when required by the body.
b. Fat is essential for absorption of vitamins like $A, D, E$ and $K$.
c. Unsaturated fats are good for the heart.
d. Excessive consumption of saturated fats and trans fats is not good for health.
A. $a$ and b
B. b and c
C. a and d
D. All of these
38. Match the following:

| A. Wool | 1. Brittle, hard and transparent |
| :--- | :--- |
| B. Glass | 2. Light, Lustrous, Warm in winters, cool in summers |
| C. Silk | 3. Wrinkle proof, durable, warm |
| D. Paper | 4. Light, foldable |

A. A-3, B-4, C-2, D-1
B. A-3, B-1, C-2, D-4
C. A-4, B-1, C-2, D-3
D. A-3, B-2, C-1, D-4
39. Following table is showing adaptations by " X " type of plants. Which of the following can be " X "?

| Stomata are present on both sides of a leaf. |
| :--- |
| Stomata are always open. |
| Waxy layer of leaves is absent or very thin. |
| Stem is not very strong and rigid. |

A. Desert plants
B. Arid plants
C. Aquatic plants
D. Coastal plants
40. Which of the following are disadvantages of deforestation?
A. Global warming
B. Natural habitat destruction
C. Soil erosion
D. Water pollution
A. A and C
B. C only
C. A, B and C
D. All of these
41. Which of the following is not a physical change?
A. Boiling of water.
B. Boiling of egg.
C. Melting of icecream.
D. Drying of clothes.
A. A
B. B
C. C
D. D
42. Which of the following can help in improving the digestive system directly?
A. Eat fibre-rich diet.
B. Include probiotics in food.
C. Eat balanced diet.
D. Drink lots of water.
A. A and D
B. A and C
C. A, B and D
D. All of these
43. Match the following.

| A. Faucet | 1. Pulley |
| :--- | :--- |
| B. Window blinds | 2. Lever |
| C. Bottle opener | 3. Screw |
| D. Staple | 4. Wedge |

A. A-4, B-1, C-2, D-3
B. $A-3, B-2, C-1, D-4$
C. A-2, B-1, C-3, D-4
D. A-3, B-1, C-2, D-4
44. Match the following.

| A. Good vision | 1. Snake |
| :--- | :--- |
| B. Good smelling <br> power | 2. Kite |
| C. Flexible jaws | 3. Bat |
| D. Use sound to <br> navigate | 4. Mosquito |

A. $A-2, B-4, C-1, D-3$
B. $A-3, B-4, C-1, D-2$
C. $\mathrm{A}-2, \mathrm{~B}-1, \mathrm{C}-4, \mathrm{D}-3$
D. A-1, B-4, C-2, D-3
45. Sam performed an experiment. He weighed an empty balloon. He then blew the balloon and measured the weight of fully blown balloon. What is his observation?
A. Empty balloon will be heavier
B. Fully blown balloon will be heavier
C. Both will have same weight
D. don't know

## Achievers Section

46. Consider the venn diagram shown below. Identify which of the following statement is true regarding $P, Q, R, S$ and $T$ ?
A. $Q$ is tadpole.
B. R is earthworm.
C. $S$ is frog.
D. T is dolphin.

A. A
B. B
C. C
D. D
47. Consider the statements given below.

Statement A: When there is summer in northern hemisphere there is winter in southern hemisphere.
Statement B: The two hemispheres have opposite seasons because one of the hemisphere is more exposed to Sun than other because of Earth's tilted axis.
A. Only A is correct
B. Only B is correct
C. Both are correct but B does not explains A
D. Both are correct and B explains A
48. Shyam has grouped some plants on the basis of their seed dispersal methods and agents. He wants to put cocklebur in one of the group. Which group will be best suited for cocklebur?

| P | Q | R | S |
| :---: | :---: | :---: | :---: |
| dandelions, <br> swan plants, <br> cottonwood, <br> maple | peas, beans, <br> ladyfingers | Black berry, <br> cherries, <br> apple | Water lily, <br> palm, <br> mangroves |

A. $P$
B. Q
C. R
D. S
49. Arrange the following moon phases in order.

A. $C->B->D->A$
B. $\mathrm{A}->\mathrm{C}->\mathrm{B}->\mathrm{D}$
C. $\mathrm{A}->\mathrm{B}->\mathrm{C}->\mathrm{D}$
D. $\mathrm{D}->\mathrm{B}->\mathrm{C}->\mathrm{A}$
50. Observe the flowchart shown below. $X$ can be $\qquad$
A. Graphite
B. Mercury
C. Silver
D. Diamond

A. A
B. B
C. B and C
D. A and D

