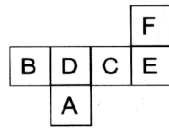
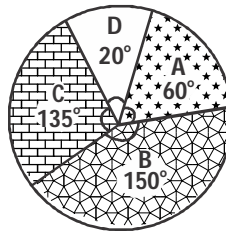


- 1 → Which one of the following cubes can be formed by the net given ?



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

- 2 → The table shows the frequency distribution of grades obtained by 120 students. The data is represented in the following pie chart.

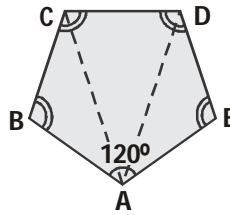


| Grade | A | B | C | D |
|-----------|----|----|----|---|
| Frequency | 20 | 50 | 45 | 5 |

Which sector is labelled incorrectly ?

- (A) A (B) B
(C) C (D) D
- 3 → What is the value of 'x' if $\frac{a^x}{a^y} = a^{10}$ and $(a^y)^3 = a^x$ for $a > 1$?
- (A) 25 (B) 5 (C) 20 (D) 15

- 4 Four of the angles of a pentagon are of equal size. The remaining angle is 120° .



Find the value of each of the equal angles.

- (A) 210° (B) 110° (C) 540° (D) 105°
- 5 If x and y are positive integers with $x > y$ and $x + xy = 391$, what is the value of $x + y$?
- (A) 392 (B) 39 (C) 31 (D) 40

- 6 Friction is NOT useful at all between the
- (A) tyres on cars and the ground.
 (B) sports shoes and the ground.
 (C) parts in a machine.
 (D) brakes and the wheels on cars.
- 7 A ball is cut into two halves. On the outer surface of one half of the ball, a shiny aluminium foil is pasted. A candle placed in front of this shiny surface forms an image which is
- (A) virtual and smaller in size.
 (B) real and smaller in size.
 (C) virtual and bigger in size.
 (D) real and bigger in size.

8 An object is negatively charged because it contains

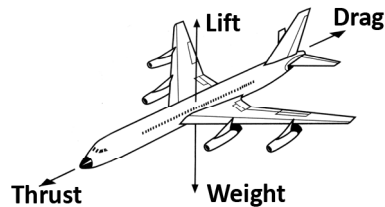
- (A) only electrons.
- (B) only protons.
- (C) more electrons than protons.
- (D) more protons than electrons.

9 Which of these are forces ?

- | | |
|-------------|--------------|
| 1. Friction | 2. Magnetism |
| 3. Mass | 4. Weight |

- (A) 1, 2 and 3 only
- (B) 1, 2 and 4 only
- (C) 2, 3 and 4 only
- (D) 1, 2, 3 and 4

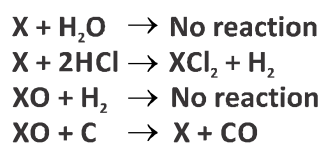
10 When an airplane flies at a constant speed and height above the ground, which statement is true about the forces acting on the airplane ?



- (A) The thrust is equal to the drag.
- (B) The lift is equal to the weight.
- (C) The lift is more than the weight.
- (D) Both (A) and (B)



The reaction of metal X and its compounds are as follows.

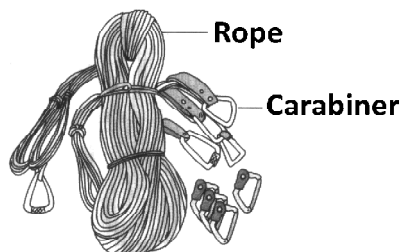


Identify metal X.

- (A) Zn (B) Mg
(C) Pb (D) Cu



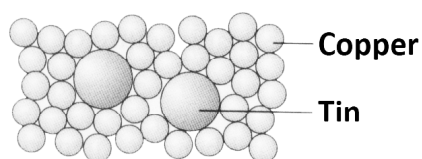
The figure given below shows some of the gear used by rock climbers.



Identify the most suitable properties required in the making of the rope and carabiner.

| | Rope | Carabiner |
|-----|---------------------|--------------------|
| (A) | Soft and flexible | Hard and light |
| (B) | Strong and flexible | Hard and strong |
| (C) | Hard and waterproof | Light and strong |
| (D) | Hard and strong | Light and flexible |

- 13 Styrofoam cup is used to serve hot tea or coffee because it is
- (A) a good conductor of heat.
 - (B) a poor conductor of heat.
 - (C) very flexible in nature.
 - (D) easy to clean.
- 14 Different varieties of coal differ in their
- (A) moisture.
 - (B) volatile nature.
 - (C) carbon content.
 - (D) number of hydrogen atoms.
- 15 The figure given below shows the structure of a material.

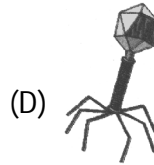
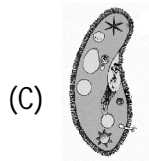
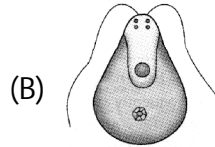
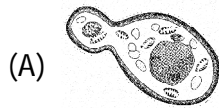


The material shown is

- (A) bronze.
- (B) pewter.
- (C) brass.
- (D) duralumin.

- 16 Which set represents the composition of female destined zygote in human beings ?
- (A) $22 + X$.
 - (B) $44 + XY$.
 - (C) $33 + Y$.
 - (D) $44 + XX$.

17 Choose an aquatic photosynthetic organism.



18 Which of the following match is correct ?


| | Disease | Pathogen |
|-----|-------------------|------------|
| (A) | Typhoid | Fungi |
| (B) | Malaria | Plasmodium |
| (C) | Sleeping sickness | Bacteria |
| (D) | Cholera | Virus |

19 Sandy soil is not good for plants because it

- (A) cannot hold water.
- (B) has poor aeration.
- (C) contain more minerals.
- (D) has poor drainage.

20 Which of the following sequence is in the correct order ?

- (A) Zygote → Embryo → Foetus → Baby
- (B) Zygote → Embryo → Baby → Foetus
- (C) Embryo → Zygote → Baby → Foetus
- (D) Foetus → Zygote → Embryo → Baby

- 21 **What protects earth from the Ultraviolet radiation ?**
(A) Ozone layer (B) Atmosphere
(C) Oxygen (D) Sun
- 22 **The given logo belongs to which company ?**
- 
- (A) Intel (B) Volvo
(C) Airtel (D) Vodafone
- 23 **Who invented Radio ?**
(A) Guglielmo Marconi (B) Graham Bell
(C) J.L. Baird (D) Benjamin Franklin
- 24 **What does the acronym KFC stand for ?**
(A) Kansas Fried Chicken (B) Kentucky Fried Chicken
(C) Kansas Food Court (D) Kentucky Food & Chicken
- 25 **Where is the headquarter of International Olympic committee located ?**
(A) French (B) Switzerland
(C) USA (D) England

