

**Question (1):A- Complete the following**

1. .... physical quantity can be determined by magnitude and direction
2. A car moves with a uniform speed equals (20 m/s) for time of 5 sec so, the acceleration through this period equals .....
3. Hydra reproduce asexually by .....
4. If the angle between the incident light ray and the reflecting surface equals 140 so the angle of incidence equals .....

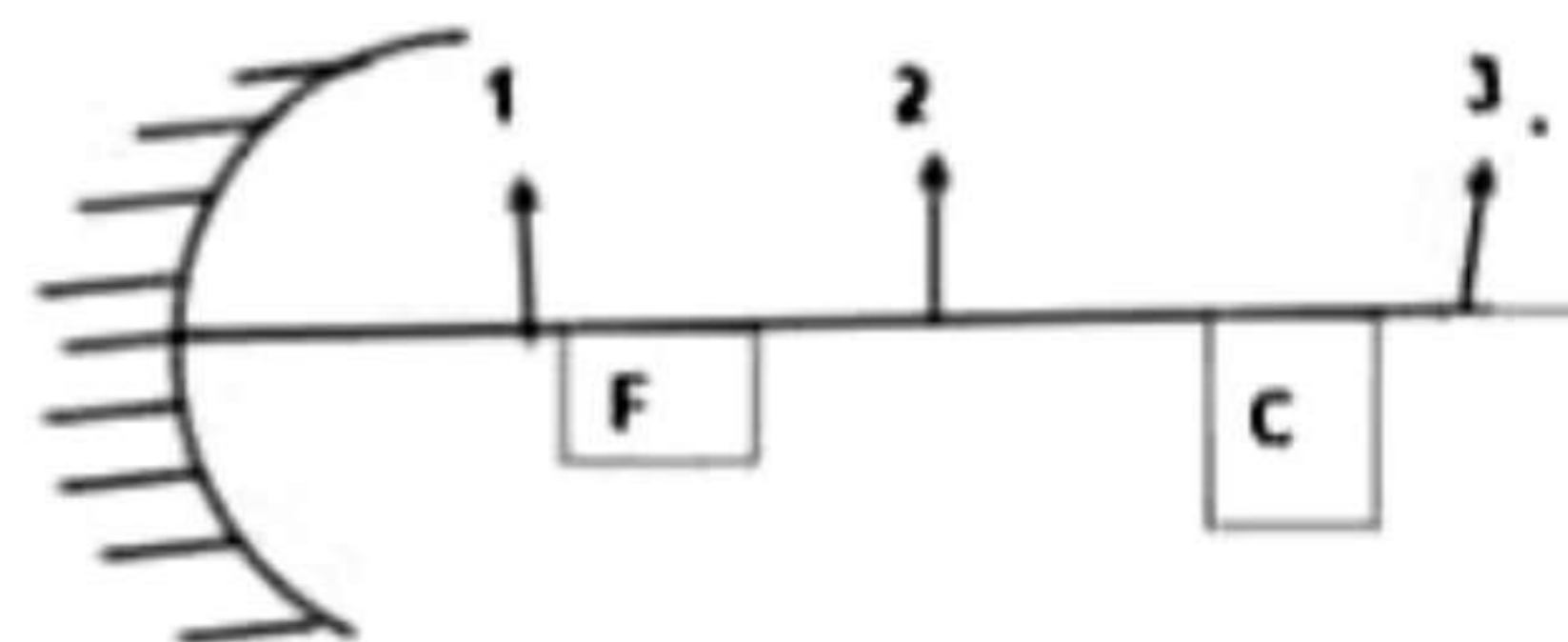
**B- Write the scientific term:**

1. The ability of some animals to compensate their missing parts (.....)
2. A phase in which the cell prepare itself for division by making some biological processes (.....)
3. An imaginary point inside the lens that locates on the principle axis in the mid distance between its two faces. (.....)
4. The length of the shortest straight line between starting and ending point. (.....)

**C- An object is placed in front of a concave mirror as shown**

**in this figure:**

**in which position the object must be placed to form a virtual, upright, and magnified image?**



**Question (2):A- Put (✓) or (X)**

1. Big bang theory depends on some thing look like clouds or nebula in the space
2. If two cars move by a speed equals 60 km/h in the same direction so the relative speed of one car relative to the other equals zero
3. The male gamete contains a number of chromosomes equals the same in the zygote
4. In the concave mirror the falling light ray parallel to the principle axis refract passing through the focus

**B- Choose the correct answer.**

1. A body moves by a uniform speed when it .....  
(moves by zero acceleration - moves by uniform acceleration - moves by positive acceleration - moves by negative acceleration )
2. The spindle fibers appear during the cell division in ..... phase.  
(interphase – metaphase – anaphase - prophase)
3. When an object is palced infront of a convex mirror its length equals 10 cm so the length of the image wil equal ..... (15 cm – 12 cm – 5 cm – 10 cm)
4. If a acar moves a distance equals 270 km in 3 hours so the car speed equals .....  
(150 Km/h – 810 km/h – 90 m/s – 25 m/s)

**C- an object its length 4 cm is placed at a distance 5 cm in front of a covex length**

**Show by drawing the path of incident and refracted light rays**

**Mention properties of the formed image**

**Question (3):A- Choose the odd word out then write the scientific term of the rest**

1. Sponge – paramecium – bacteria – simple algae
2. Shortsightedness – more convexity of eye lens - less convexity of eye lens – increasing eyeball diameter
3. Distance – displacement – acceleration- force
4. Distance –time – acceleration – speed

**B- Match:**

A	B
1.an optic piece is put on the left side of a driver	a. concave mirror
2. Melosis division	b. responsible for growth of living organisms
3. solar ovens are used in	c. Convex mirror
4.Mitotic division	d. responsible for sexual reproduction

1. .... 2..... 3. .... 4. ....

**C-Problem:** when the driver press the brake it move with an acceleration equals  $4 \text{ m/s}^2$  then it stops after 5 sec calculate the speed before pressing the brake

**Question (4):A- Correct the underline words**

1. Nucleolus and nuclear membrane disappear in Telophase
2. Focus is a straight line passing through center of curvature of the mirror
3. The average speed depends on the observer
4. The universe is formed from combination of atomic particles to form nitrogen & oxygen

**B- Write the number that indicates the following:**

1. The number of galaxies in the universe is ..... galaxy
2. The number of chromosomes in the fertilized ovum is 10 pairs so the number of chromosomes in the liver cells is .....
3. A spherical mirror its diameter = 40 cm so its focal length = ..... cm
4. An object is placed in front of a plan mirror at a distance = 3m so the distance between the body and the mirror equals ..... M

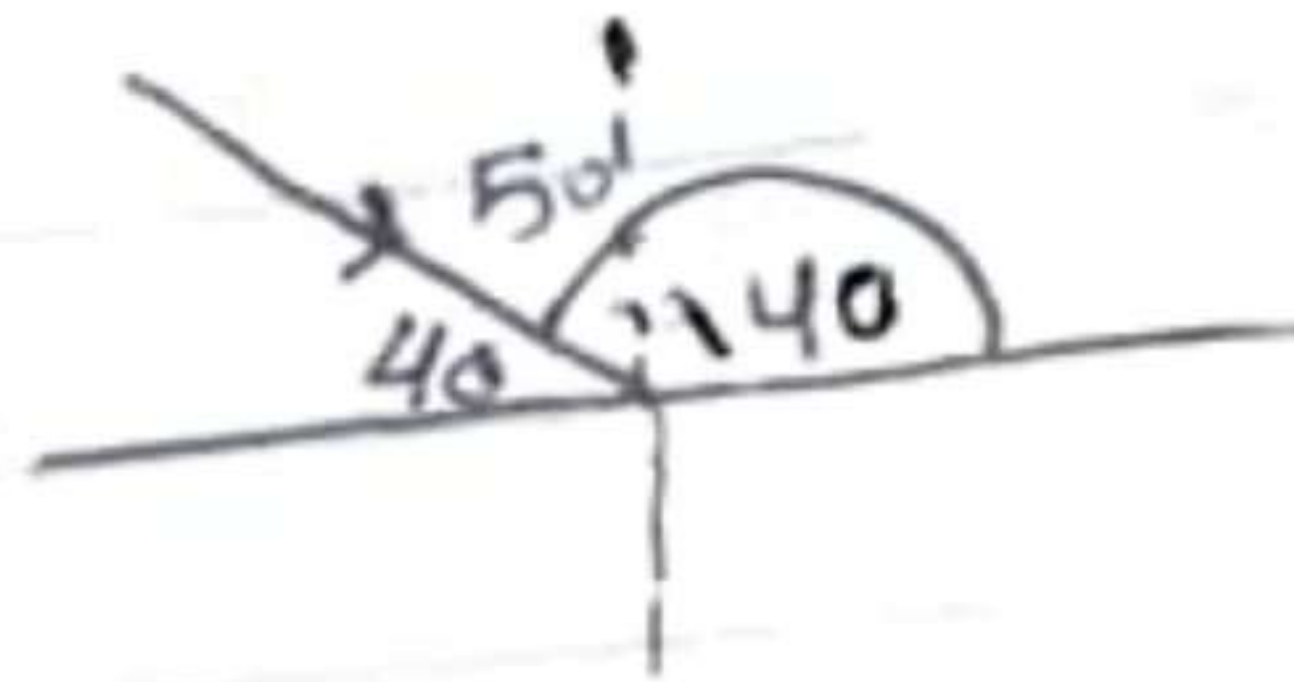
**C: What happens when :**

**Putting a yeast fungus in a sugary solution**

Question 1

A - Complete

1. Vector
2. Zero
3. Budding
4.  $50^\circ$



B - Scientific term

1. Regeneration
2. interphase
3. optical centre
4. amount of displacement

C. 1 less than focal length.

Question 2

A.  $\leftarrow$  or X

- ① X
- ②  $\leftarrow$
- ③ X half
- ④ X reflect not refract  $\leftarrow$  لا ينكسر

B. choose

- ① moves by zero acceleration
- ② prophase
- ③ 5cm « diminished »
- ④ 25m/s

## Question 3

A. odd one

① Sponge

The rest (Binary fission)

② less Convexity " (short sightedness defect)

③ Distance " (vector)

④ acceleration " (scalar)

## B. Match

① c    ② d    ③ a    ④ b

## C. Problem

$$\begin{aligned}
 v_1 &= v_2 - (a \times t) \\
 &= 0 - (-4 \times 5) \\
 &= 0 + 20 \\
 &= 20 \text{ m/sec}^2
 \end{aligned}$$

$$\left. \begin{aligned}
 a &= -4 \text{ m/s}^2 \\
 v_2 &= 0 \\
 \Delta t &= 5 \text{ sec} \\
 v_1 &= ?
 \end{aligned} \right\}$$

Question 4

A. Correct

- ① Prophase
- ② Principle axis
- ③ Relative
- ④ Helium and hydrogen.

B. write the number

- ① 100 000 million.
- ② 10 Pairs.
- ③
- ④ 3 m.

Fertilized ovum = Zygote

تخلي بالث

C what happens when.

A bud emerges as a lateral bulge then the nucleus divides mitotically into two nuclei, one remains in the parent cell and the other migrates to the bud that grows and when it is fully grown it will remain connected to the parent cell forming colony or will be separated forming new fungus.