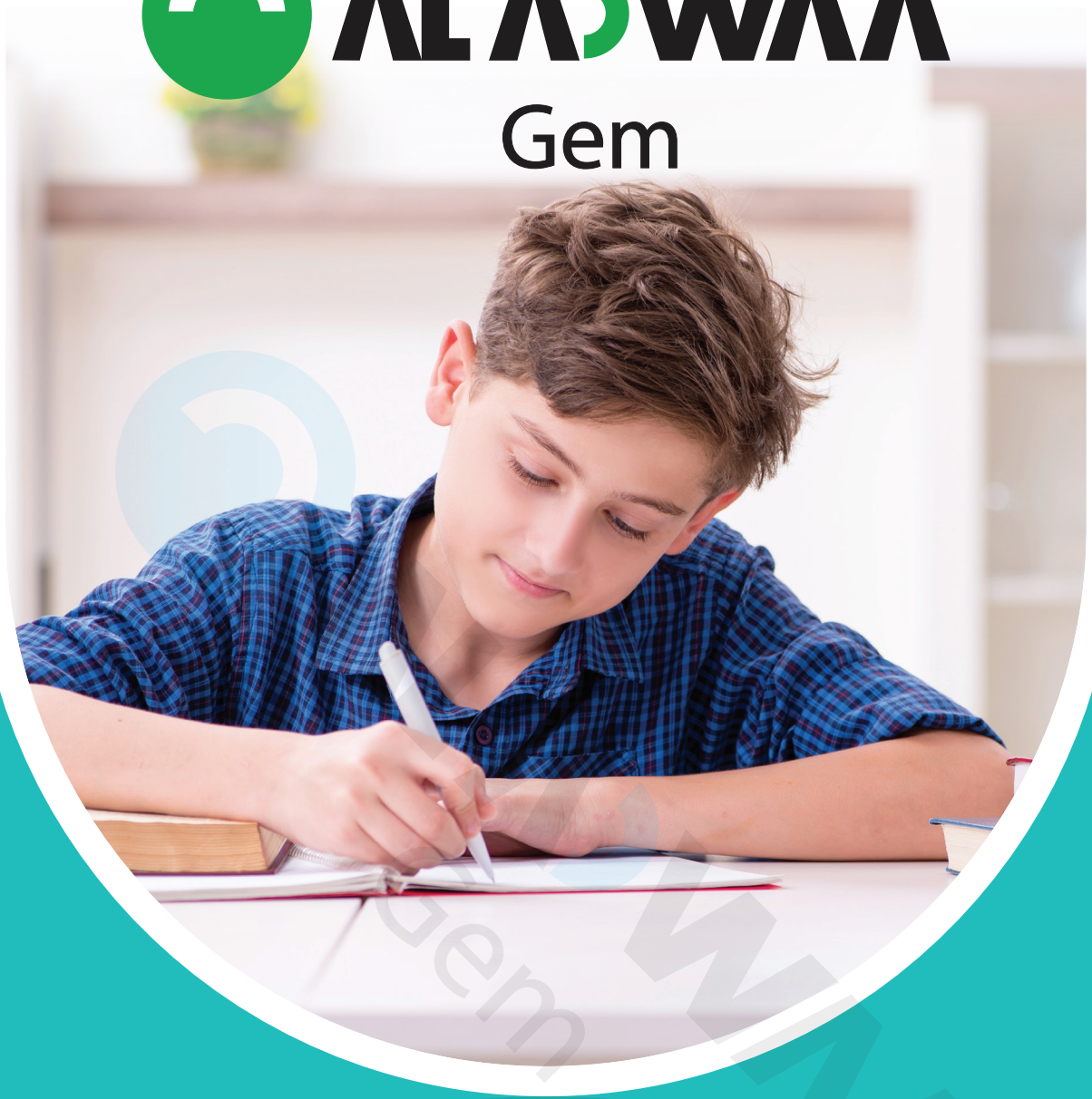
ALAWAA

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Science

الصف 3 الإعدادى

النماذج النهائية للفصل الدراسى الأول

العام الدراسى

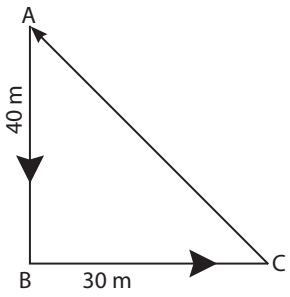
2024 - 2025

Model (1) Answer

20 Marks

1 (A) Choose the correct answer:

1 In the opposite figure, a body starts its motion from point (A) to point (B), then point (C), then returned to point (A), so the distance covered equals ..... meter(s).



a) zero b) 50

c) 70 d) 120

2 The convex lens which has the greatest thickness from the following, its focal length is .....

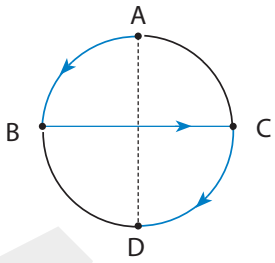
a) 4 cm b) 6 cm c) 8 cm d) 10 cm

3 Which of the following organs shows the right number of chromosomes?

Choice	a.	b.	c.	d.
The organ	skin	testis	uterus	ovaries
Its cells have (2n)	✓	✗	✗	✓
Produce cells (n)	✓	✓	✗	✓

(B) Answer the following questions:

1 In the opposite figure, a car moves in a circular path whose radius is 14 meters from point (A) to (D) passing through (B) and (C) in 10 seconds. The car movement changed as shown in the opposite figure. (If you know that the circumference of the circle = $2\pi r$, where $\pi = 3.14$)



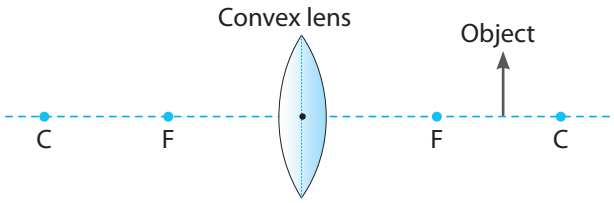
Calculate: - Average speed.

.....

.....

.....

2 In the opposite diagram, an object is placed 6 cm from a convex lens with a focal length of 4 cm. Determine the location of the formed image and its characteristics by drawing only two light rays.



.....

.....

(C) Give reasons for:

1 A moving car seems stable (at rest) to an observer who is moving at the same speed and in the same direction.

.....

2 The number of chromosomes is constant in the same species that reproduce sexually.

.....

.....

2 (A) Complete the following sentences:

1 The image formed is always equal to the real object and can't be formed on a screen in the ..... mirror.

2 The two gases that were present within the minutes of the Big Bang are ..... and .....

3 In the case of the ..... division of the cells, no changes in the genetic traits occur.

(B) Mention the uses of:

1 Speedometer: .....

2 Space telescope: .....

(C) What happens if ...?

1 A plane mirror is placed on the left side of the car driver.

.....

2 The centromere is not found in the cell.

.....

3 (A) Write the scientific term for each of the following:

1 It is the rate of change of displacement. (.....)

2 An eye disease that causes a difficulty of vision as a result of the darkness of the lens. (.....)

3 It is the continuous separation between the galaxies in the space as a result of their regular movement. (.....)

(B) Compare between each of the following:

1 Positive acceleration and negative acceleration. (According to the final speed)

Positive acceleration	Negative acceleration
.....	.....

2 The focus of the concave mirror and the focus of the convex mirror.

(According to the type and location of focus)

Focus of the concave mirror	Focus of the convex mirror
.....	.....
.....	.....

(C) Answer the following questions:

1 The following figures represent the correction of the vision defects:

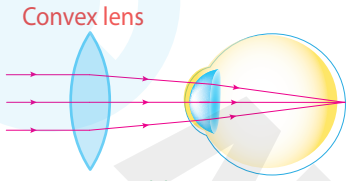


Fig. (a)

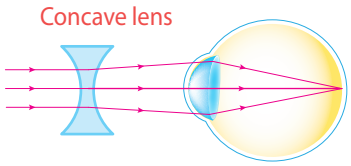


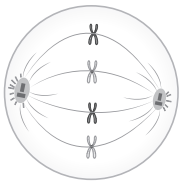
Fig. (b)

- Where was the image formed before using the lens in each case?

.....

.....

2 The opposite figure represents one of the cell division phases in an animal somatic cell.



a- What is this phase?

.....

b- What changes occur in this phase?

.....

4 (A) Put (✓) in front of the correct statement and (✗) in front of the wrong ones, then correct the wrong ones:

1 The focal length of the spherical mirror is the distance between the focus and the center of the mirror curvature. ( )

2 The solar system is located in the Milky Way galaxy. ( )

3 Nebula loses temperature gradually in Laplace's theory. ( )

(B) What is meant by...?

1 A car covers equal distances at equal periods of time.

.....

ALNOWAIR Gem

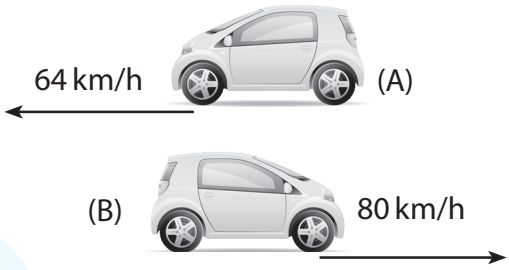
2 The focal lens of a convex lens is 15 cm.

.....

.....

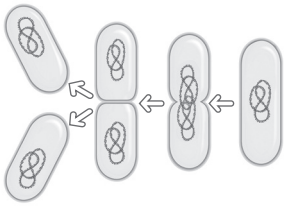
C) Answer the following questions:

1 Look at the following figure, then answer:



- The relative speed for the observer in car (A) is ..... .

2 The opposite figure represents asexual reproduction in a living organism.



a- Identify the type of the asexual reproduction, and this living organism.

.....

b- How does it occur?

.....

.....

ALAWWA Gem

Model (2) Answer

20 Marks

1 (A) Correct the underlined words:

1. The measuring unit of distance is m/sec^2. (.....)
2. The focal length of the spherical mirror is the distance between the focus and the center of the mirror curvature. (.....)
3. The chromosome chemically consists of DNA and lipids. (.....)

(B) What is meant by...?

1. Displacement equals the covered distance.

.....

2. The image formed by a concave lens is virtual.

.....

(C) What happens when ...?

1. A moving object takes twice the time to travel half the distance. (According to its speed)

.....

2. The Bulge is disconnected from the paternal cell in the yeast fungus after it is fully grown.

.....

2 (A) Complete the following sentences:

1. Real image can't be formed by ..... lens or ..... spherical mirror.
2. The solar system planets are kept in their orbits due to .....
3. If the nucleus of a pollen grain of a plant contains (10) chromosomes, then the nucleus of its leaves' cells contains (.....) pairs of chromosomes.

(B) Give reasons for:

1. The amount of fuel consumed during flying between two cities differs by the difference in the wind direction.

.....

2. In the plane mirror, the image can't be received on a screen.

.....

ALDWAA Gem

(C) Mention the function or the role of:

1. Hubble telescope: .....

.....

2. Vegetative reproduction: .....

.....

3 (A) Write the scientific term for each of the following:

1. It is the speed by which the object moves when it covers equal distances at equal periods of time.

(.....)

2. It is the point of collection of the extensions of the refracted light rays by a concave lens.

(.....)

3. A group of stars that rotate together in the space by the effect of gravity. (.....)

(B) Compare between each of the following:

1. Average speed and relative speed. (According to definition and measuring units)

Average speed	Relative speed
.....	.....
.....	.....
.....	.....
.....	.....

2. Short-sightedness and long-sightedness. (According to the type of lens which is used to treat each one)

Short-sightedness	Long-sightedness
.....	.....
.....	.....

(C) Answer the following questions:

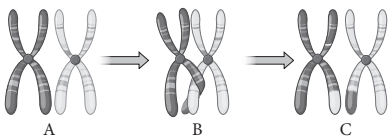
1. A convex lens has a 20 cm focal length. An object is placed at a distance of 40 cm from the lens. Show by drawing the path of the rays falling on the lens and reflected ones from it.

.....

.....

.....

2. The phenomenon shown in the opposite figure is called crossing over and occurs at the end of the prophase I.



4 (A) Put (✓) in front of the correct statement and (✗) in front of the wrong ones, then correct the wrong ones:

1. If you put an object at a distance of 17 cm from a concave mirror with a focal length of 20 cm, the image will be formed behind the mirror. ( )
2. The solar system is found on one of the oval arms of the Milky Way galaxy. ( )
3. Pollination is the combination of a male gamete with a female gamete to form a zygote. ( )

(B) Answer the following questions:

1. A runner covered 50 meters northward within 30 seconds, 100 meters eastward within 60 seconds, then 50 meters southwards within 10 seconds, calculate its average speed.

.....

2. Determine the type of the optical piece (mirror - lens), then mention its type (convex – concave – plane).

- The optical piece forms a virtual, upright, enlarged image on the other side of the object only if the object is placed at a distance less that its focal lens.

.....

.....

(C) Answer the following questions:

1. An object moves with a uniform acceleration over a period of 15 seconds, where its speed reaches 72 km/h after 5 seconds. Then, after the next 10 seconds, its speed decreases to 54 km/h.

a- Calculate the acceleration of the moving object.

.....

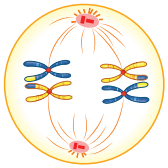
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b- What is the type of acceleration? And why?

.....

2. Look at the opposite figure which represents a meiotic division, then draw the phase following it.



.....

.....

Model (3) Answer

20 Marks

1 (A) Choose the correct answer:

1. When a train moves with a relative speed equals 70 km/h. What does this mean?
   a) The train's speed is constant.
   b) The train is moving at 70 km/h regardless the observer's position.
   c) The speed of the train relative to an observer equals 70 km/h.
   d) The train always has zero acceleration.
2. If a light ray is incident at an angle of 60° on a plane mirror, what is the expected angle of reflection?
   a) 30° b) 45° c) 60° d) 90°
3. How many cells are produced when an amoeba cell undergoes three mitotic divisions?
   a) 4 cells b) 6 cells c) 8 cells d) 10 cells

(B) What is meant by…?

1. A car moves at 20 m/sec. and after 5 seconds, its speed becomes 15 m/sec.

   .....

2. Meiosis division is a reduction division.

   .....

   .....

(C) What happens when ...?

1. An object returns to its primary position of its movement (regarding its displacement).

   .....

2. A starfish loses one of its arms that contains a part of the central disk.

   .....

2 (A) Complete the following sentences:

1. ..... passes by the optical center of the lens, except the principal axis.
2. Scientist Laplace is the founder of the ..... Theory that explains the formation of the solar system.
3. In mitotic division, the changes that occur in the ..... are called adverse changes.

(B) When the following values equal zero:

1. The acceleration of a moving body.

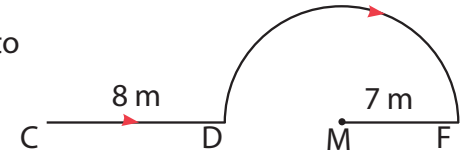
   .....

2. The angle of reflection of a light ray from the reflecting surface of a plane mirror.

   .....

(C) Answer the following questions:

1. In the opposite figure, an object is moving from point (C) to point (M) passing by two points (D, F) in 5 seconds.



Find:

a- The covered distance.

.....

.....

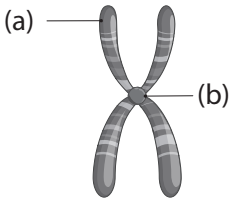
b- The velocity

.....

.....

2. What happens to structure (b) during anaphase?

.....



3 (A) Write the scientific term for each of the following:

1. It is the change of an object's location as time passes according to the position of another fixed object. (.....)
2. Any line that passes by the optical center of the lens, except the principal axis.

(.....)

3. Groups of galaxies that rotate together in cosmic space by the effect of gravity.

(.....)

(B) Compare between each of the following:

1. Sponge and starfish. (According to the type of reproduction)

Sponge	Starfish
....	....

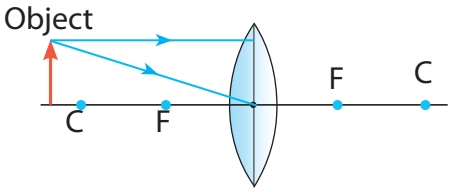
2. Virtual image and real image. (According to its property, inverted or upright)

Virtual image	Real image
....	....

(C) Answer the following questions:

1. Look at the opposite figure, then answer:

a - Complete the drawing.



Gem

b- Mention the properties of the formed image.

.....

2 State the importance of Nano-molecules of gold particles in the medical field.

.....

4 (A) Put (✓) in front of the correct statement and (✗) in front of the wrong ones, then correct the wrong ones:

1 Contact lenses are placed directly on the eye retina and can be easily removed. ( )

2 The light year is the distance covered by light is one year. ( )

3 Molten established the modern theory that explains the origin of the solar system. ( )

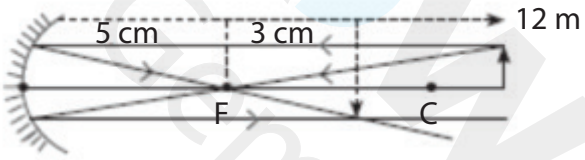
(B) Answer the following questions:

1 A train moves with a speed of 20 m/sec and when using the brakes it moves with deceleration 4m/sec^2. Calculate the time required to stop the train.

.....

.....

2 Look at the following figure, then answer:



a- The object must move ..... cm towards the mirror so that an inverted, equal, real image is formed for the object.

b- The object must move ..... cm towards the mirror so that the rays are reflected parallel.

(C) Give reasons for:

1 (Distance - Time) graph of an object that moves at a uniform speed is a straight line passing through the origin point.

.....

.....

2 A donor for a part of the liver suffers no harm and can survive.

.....

Model (4) Answer

20 Marks

1 (A) Correct the underlined words:

1. When an object covers double the distance in the same time, so its speed decreases to quarter. (.....)
2. The angle between the incident light ray and the reflected one is 40°, so the angle of incidence is 40°. (.....)
3. The number of chromosomes in a sperm is twice the number of chromosomes in a female egg of the same species. (.....)

(B) Answer the following questions:

1. Calculate the real speed of a car whose relative speed is 130 km/h relative to an observer moving in the opposite direction at a speed 50 km/h.

.....

.....

.....

2. Explain by drawing the formed image by convex lens, when the body is at a distance less than the focal lens (before the focus), then write the properties of the formed image.

.....

.....

The image is .....

(C) What is meant by...?

1. The distance covered in a fixed direction is 100 m.

.....

2. Crossing over phenomenon.

.....

Gen

2 (A) Choose the correct answer:

1. The mirror that its reflecting surface is a part of the inner surface of a hollow sphere is a ..... mirror.

a) convex b) divergent c) converging d) plane

2. ..... established the crossing star theory.

a) Laplace b) Alfred Hale c) Hubble d) Chamberlin

3. Which of the following represents a complete meiotic division? .....

a) 2N < N, N b) N + N ⟶ 2N c) 2N < 2N, 2N d) 2N < (N < N, N) , (N < N, N)

(B) Give reasons for:

1. The body which moves at acceleration can't move at a regular speed.

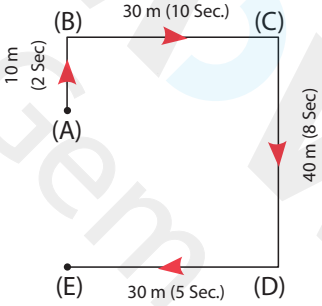
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2. Vision defects occur.

.....

(C) Answer the following questions:

1. A person moves in the path (a, b, c, d, e) as shown in the figure, he covered a distance northward in 2 seconds, then covered 30 meters eastward in 10 seconds, and followed by 40 meters southward in 8 seconds, finally 30 meters westward in 5 seconds.



a. Calculate his displacement from the start to the end of the motion.

.....

d. In which part his speed was the least?

.....

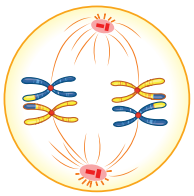
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2. Look at the opposite figure, then answer:

- Describe what happens in this phase.

.....

.....



KUTUBYNA Gem

3 (A) Complete the following sentences:

1. The distance of an object to the plane mirror ..... the distance of its image to the mirror, and the straight line that connects between the object and its image is ..... on the surface of the mirror.
2. The reflecting surface of the convex mirror is a part of the ..... surface of the sphere.
3. Earliest life forms began to appear on the Earth after about ..... years from the Big Bang.

(B) What are the results of the following ...?

1. The initial speed of a moving object is greater than its final speed.

.....

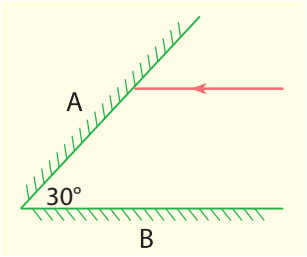
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2. Falling of parallel beam of light parallel to the principal axis of a convex lens.

.....

(C) Answer the following questions:

1. If a light ray falls on mirror (A) such that it is parallel to mirror (B) as in the opposite figure. Trace the path of the ray until its reflection on mirror (B), then calculate the angle of reflection of the light ray on mirror (B).



.....

.....

.....

2. Look at the following figures, then answer:

Figure (1)	Figure (2)
	
This living organism is ....., and reproduces by	This living organism is ....., and reproduces by .....

4 (A) Put (✓) in front of the correct statement and (✗) in front of wrong the ones, then correct the wrong ones:

1. Converging mirrors are used in dentists' clinics to form a magnified image of the teeth. ( )
2. The universe is in a state of continuous expansion. ( )
3. Sudden violent chemical reactions occur within the star which led to its explosion. ( )

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(B) Answer the following:

1 Compare between acceleration, and deceleration by graph.

Acceleration	Deceleration
.....	.....
.....	.....
.....	.....
.....	.....

2 Mention the properties of the image formed by concave mirror when the object is located between the focus and the center of curvature, explain by drawing.

.....

.....

(C) Answer the following questions:

1 The following table shows the relation between the speed of a moving object and the time taken.

The speed (m/sec)	5	10	20	30	35	40
Time (sec)	1	2	4	6	7	8

a. Draw the graphical relation between (V) on Y-axis and (T) on X-axis.

.....

.....

b. From the graph, find the acceleration of the body.

.....

2 Mention the structure of the chromosome, then show your answer with drawing and label it.

.....

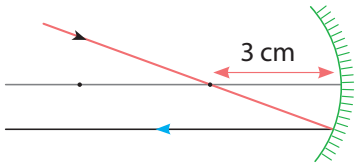
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Model (5) Answer

20 Marks

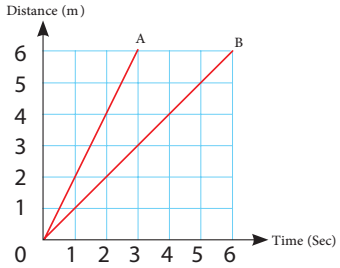
1 (A) Complete the following sentences:



1. Velocity differs from displacement in .....
2. In the opposite figure, the radius of mirror curvature = ... cm.
3. Somatic cells are divided by ....., while reproductive cells are divided by .....

(B) Answer the following questions:

1. The opposite graph represents the (distance – time) graph of the movement of two bodies (A) and (B).



a. What is the kind of speed of the two bodies?

.....

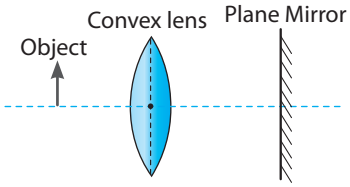
b. Calculate the ratio between the speed of body (A) and that of body (B).

.....

.....

.....

2. Why no image is formed for the object inside the mirror in the opposite figure.



.....

(C) What happens in the following cases ...?

1. A moving body returns back to its starting point concerning its displacement.

.....

2. Reproductive cells don't divide by meiosis.

.....

2 (A) Cross out the odd word:

1. The properties of a concave lens image: Virtual / Magnified / Erect / Diminished. (.....)
2. Crossing star Theory / Nebula Theory / Big Bang Theory / Modern Theory. (.....)
3. Simple algae / Bacteria / Paramecium / Sponge. (.....)

(B) What is meant by...?

1. Velocity: .....
2. Optical center: .....

(C) Answer the following questions:

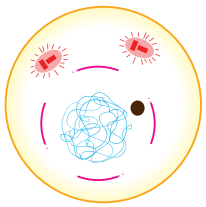
1. Calculate the actual speed to the car whose relative speed is 130 Km/h relative to an observer moving in the same direction at speed of 50 Km/h.

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2 Look at the opposite figure, then answer:

- Why does the cell pass through this phase?

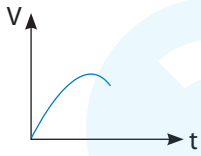


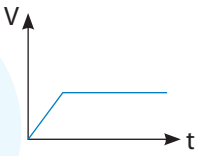
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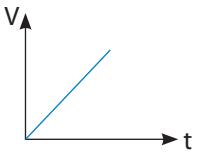
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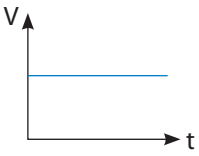
3 (A) Choose the correct answer:

1 Which of the following graphical relations represents a body moving by a uniform acceleration?

a) 

b) 

c) 

d) 

2 If you put an object in front of a plane mirror, the ratio between the length of the image and the length of the object is ..... .

a) more than one b) not equal one c) less than one d) equal to one

3 The nucleolus and the nuclear membrane disappear in ..... .

a) metaphase b) telophase c) prophase d) interphase

(B) Compare between each of the following:

1

Crossing star theory	Modern theory
Origin of the solar system:	Origin of the solar system: .....

2

Focus of mirror	Focus of lens
.....	.....
.....	.....

(C) Give reasons for:

1 To obtain a suitable image of an object, it should be placed at a distance less than the focal length of the concave mirror.

.....

2 The reproduction by spores is one of the forms of asexual reproduction.

.....

Gem

4 (A) Write the scientific term for each of the following:

1. A spherical mirror its shinning surface is a part of the outer surface of the sphere.

(.....)

2. A gaseous sphere revolving around itself, from which the solar system assumed to be originated.

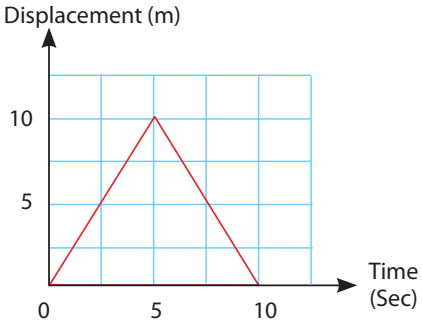
(.....)

3. The theory that assumed that an explosion results in all forms of energy, matter, space, and time.

(.....)

(B) Answer the following questions:

1. From the opposite figure, calculate:

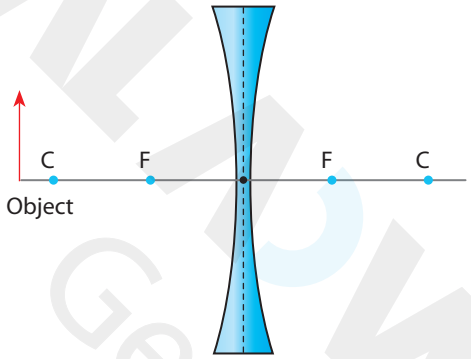


a. Total distance = ...

b. Displacement = ...

c. Velocity after 5 seconds = ...

2. Determine the position and the properties of the formed image by drawing two light rays only.



- The image position: .....
- The image properties: .....

(C) Answer the following questions:

1. Mention the first law of light reflection: .....
2. Mention the role or the importance of DNA: .....

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