

# [Chemical composition of the cell: questions and answers](https://assignbuster.com/chemical-composition-of-the-cell-questions-and-answers/)

### Chemical Composition Of The Cell

### Question:

### Which of the following are called second class proteins?

A. Plant proteins

B. Animal proteins

C. Food proteins

D. Milk proteins

Answer : A

### Reason:

Plant proteins are called secondary class proteins because they generally contain less of the essential amino acids

### Question:

### How proteins can be broken?

A. Enzymes   
B. Digestive enzymes

C. Amino acids

D. Diet

Answer : B

### Reason:

Proteins can be broken down by digestive enzymes into smaller polypeptides, dipeptides and the amino acids.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (603)

### Question :

Which of the following can found a keratin in it?

I. Hair

II. Nail

III. Feather

IV. Fibroin in silk

A. I and II only

B. I and III only

C. I, II and III   
D. I, II, III and IV

Answer : D

### Reason:

The secondary structure is the regular arrangement of the polypeptide chain to form a helix or pleated sheet maintained by hydrogen bonds. Example are keratin found in hair, nails, horn, feather and fibroin in silk.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (604)

### Question :

Where are lipids will insoluble?   
A. In water

B. Outside water

C. In organic solvents

D. Chloroform

Answer : A

### Reason:

Lipids are insoluble in water but soluble in organic solvents such as alcohol, either and chloroform.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (605)

### Question :

How many main groups of lipids?

A. 2

B. 3   
C. 4

D. 5

Answer : C

### Reason:

The main groups of lipids are four. There are:

i. Fats and oil (also know as triglycerides)

ii. Phospholipids

iii. Steroids

iv. Waxes

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (606)

### Question :

Which of the following are another name for “ bad cholesterol”?

A. DLD cholesterol   
B. LDL cholesterol

C. Glycero

D. Ester

Answer : B

### Reason:

A high intake of saturated fats and cholesterol would increase LDL cholesterol (“ bad” cholesterol) levels in the blood.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (607)

### Question :

Which of the following is a precursor of cholesterol?

I. Bile salts

II. Vitamin D

III. Steroids hormones

IV. Vitamin A

A. I and II only

B. I and III only   
C. I, II and III

D. I, II, III and IV

Answer : C

### Reason:

Cholesterol is a component of cell membrane. It is precursor of bile salts, vitamin D and steroid hormones such as oestrogen and testosterone.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (608)

### Question :

Which of the following are formed by a phospholipids molecule?

A. Condensation of glycerol molecule

B. Other lipids

C. Condensation of two glycerol   
D. Condensation of one glycerol

Answer : D

### Reason:

A phospholipid molecule is formed form condensation of one glycerol molecule with two fatty acid molecules and a phosphate group

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (609)

### Question :

Which of the following are true about the similarities between unsaturated fats and saturated fats?

I. Both are triglycerides

II. They are formed from condensation of glycerol and fatty acids with removal of water

III. Hydrolysis of triglycerides produces glycerol and fatty acids.

IV. They function as an energy store and act as a source of energy for cellular metabolism

A. I and II only

B. I and III only

C. I, II and III   
D. I, II, III and IV

Answer : D

### Reason:

The similarities between unsaturated fats and saturated fats are:

i. Both are triglycerides

ii. They are formed from condensation of glycerol and fatty acids with removal of water

iii. Hydrolysis of triglycerides produces glycerol and fatty acids.

iv. They function as an energy store and act as a source of energy for cellular metabolism.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (610)

### Question :

Which of the following are secreted by the sebaceous gland?   
A. Sebum

B. Cholesterol

C. Phospholipids

D. Lecithin

Answer : A

### Reason:

Sebum is a lipid secreted by the sebaceous gland

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (611)

### Question :

What are esters of fatty acids with long-chain alcohols?

A. Sebum   
B. Waxes

C. Phospholipids

D. Lecithin

Answer : B

### Reason:

Waxes are esters of fatty acids with long-chain alcohols

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (612)

### Question :

Which of the followings also know as triglycerides?

A. Steroids   
B. Fats and oils

C. Phospholipids

D. Lecithin

Answer : B

### Reason:

Fats and oils also knows as triglycerides

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (613)

### Question :

What is the ration the hydrogen to oxygen?

A. 1 : 2   
B. 2 : 1

C. 2 : 2

D. 3 : 1

Answer : B

### Reason:

Carbohydrates are organic compounds containing the elements carbon, hydrogen and oxygen. The hydrogen to oxygen ration is 2: 1.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (614)

### Question :

Which of the followings are the most common lipids?

I. Fats

II. Phospholipids

III. Oils

IV. Waxes

A. I and II only   
B. I and III only

C. I, II and III

D. I, II, III and IV

Answer : B

### Reason:

Fats and oils are the most common lipids

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (615)

### Question :

Which of the have a basic four interconnected ring hydrocarbon structure with different functional side chains?

A. Fats and oils

B. Phospholipids

C. Waxes   
D. Steroids

Answer : D

### Reason:

Steroids have a basic four interconnected ring hydrocarbon structure with different functional side chains.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (616)

### Question :

Which of the following statements regarding enzymes is true?

A. All enzymes in living organisms have an optimum temperature of 37°C.

B. Enzymes increase the activation energy for the reactions they catalyse.

C. Enzymes are denatured at 0°C.   
D. Enzymes function as organic catalysts

Answer : D

### Reason:

The optimum temperature is the temperature at which the rate of reaction is at a maximum, which is about 35 – 40OC. Above the optimum temperature, the increased kinetic energy cause the chemical bonds, which hold the enzyme molecule in shape, to brake. For many organisms, the rate of reactions stops at 60OC due to complete denaturation of body enzymes. Enzymes function as organic catalysts

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (617)

### Question :

The diagram shows the lock-and-key mechanism of enzyme action. Which of the following statements is correct?   
A. P is the key and Q is the lock

B. Q is the lock and P is the key

C. Q is the key and R is the lock

D. R is the lock and Q is the key

Answer : A

### Reason:

The diagram shows the lock-and-key hypothesis to explain mechanism of enzyme action. Substrate molecule P acts as the “ key” and enzyme molecule Q acts as the “ lock”.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (618)

### Question :

The graph shows the effect of increasing temperature on the rate of a chemical reaction controlled by enzyme catalase. Which is the correct line that continues the graph after 37ºC?

A. A

B. B

C. C

D. D

Answer : C

### Reason:

The graph shows the effect of increasing temperature on the rate of a chemical reaction controlled by enzyme catalase. For many organism, the rate of reaction stops at 60ºC due to complete denaturation of body enzyme

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (619)

### Question :

An experiment was carried out to show the effect of temperature on the action of pepsin. The table below shows the contents in test tubes M, N, O, P and the temperatures of the different solutions. The results obtained were then plotted as shown in the graph. The fixed variables are enzyme concentration, substrate concentration and volume of starch suspension.

Which of the following graphs I, II, III or IV shows the results of the experiment obtained after 10 minutes?

A. A

B. B

C. C   
D. D

Answer : D

### Reason:

An experiment was carried out to show the effect of temperature on the action of pepsin. The table below shows the contents in test tubes I, II, III, IV and the temperatures of the different solutions. The results obtained were then plotted as shown in the graph. The fixed variables are enzyme concentration, substrate concentration and volume of starch suspension. The results shows of the experiment obtained after 10 minutes

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (620)

### Question :

Where there is an excess of substrate, which graph represents the effect of increasing concentration of enzyme on the rate of reaction?

A. A

B. B

C. C   
D. D

Answer : D

### Reason:

Increasing enzyme concentration increases the number of active sites available to catalyse the chemical reaction. The rate reaction id directly proportional to the concentration of enzyme, as long as other factors (substrate, temperature and Ph) are not limiting. Where the substance concentration becomes the limiting factor (that is, substrate is in short supply), further increase in enzyme concentration will not increase the rate of reaction

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (621)

### Question :

According to the lock and key hypothesis, which is the lock and the key for enzyme rennin?

A. A

B. B

C. C

D. D

Answer : D

### Reason:

The lock and key mechanism propose that the substrate molecule fits into the active site of the enzyme molecule in the same way that a key fits into a lock. The substrate represents the “ key” and the enzyme, the “ lock”. Rennin is used to coagulate milk proteins in cheese production.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (622)

### Question :

Fresh pineapple juice contains the enzyme protease. A petri dish containing lactose-free milk agar is prepared. Four wells are made in the milk agar. Each well is filled with a different solution as shown in the diagram. The petri dish is incubated in an oven at 37°C. Which wells are surrounded by a clear region after 3 hours?

A. 1 and 4   
B. 2 and 3

C. 3 and 4

D. 2, 3 and 4

Answer : B

### Reason:

Fresh pineapple juice contains the enzyme protease. A petri dish containing lactose-free milk agar is prepared. Four wells are made in the milk agar. Each well is filled with a different solution as shown in the diagram. The petri dish is incubated in an oven at 37°C. Wells 2 and 3 are surrounded by a clear region after 3 hours.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (623)

### Question :

Certain blue-green bacteria can live in hot springs because

A. they remain in the cyst form

B. the bacterial enzymes are denatured   
C. the bacterial enzymes have optimal temperatures of 70°C or higher

D. they have thick vesistant cell wall

Answer : C

### Reason:

Certain blue-green bacteria can live in hot springs because the bacterial enzymes have optimal temperatures of 70°C or higher

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (624)

### Question :

The diagram shows the mechanism of an enzyme-controlled reaction. Which of the molecules P, Q, R, or S represents the enzyme?

A. P

B. Q

C. R

D. S

Answer : B

### Reason:

The diagram shows the lock-and-key hypothesis to explain mechanism of enzyme action. Substrate molecule P acts as the “ key” and enzyme molecule Q acts as the “ lock”. Molecule Q is the enzyme molecule

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (625)

### Question :

The diagram shows the mechanism of enzyme action. Which property of enzyme is shown in the diagram?

A. Enzyme structure is denatured by extremes of pH.

B. Temperature affects the rate of enzyme reaction.

C. Enzyme reaction is non-specific.

D. Structure of enzyme remains unchanged at the end of the reaction.

Answer : D

### Reason:

More extreme changed in pH not affect enzyme activity temporarily and the unchanged. The diagram above that structure of enzyme remains unchanged at the end of the reaction

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (626)

### Question :

The active site of an enzyme is

A. identical to its substrate

B. identical to the active sites of other enzymes   
C. complementary to its substrate

D. denatured at the end of a chemical reaction

Answer : C

### Reason:

The enzyme name is derived by adding the suffix – ase at the end of the name of its substrate. Each enzyme has aprecise three – dimensional shape with a groove called the active site that is complementary to its substrate

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (627)

### Question :

Catalase is an enzyme that catalyses the breakdown of hydrogen peroxide to release oxygen and water.

2H2O2 –> 2H2O + O2

Hydrogen peroxide is toxic if allowed to accumulate in the tissues. Tissues that are metabolically active produce more catalase. An experiment is set up as shown in the diagram. In which test tube would gas bubbles be released most rapidly?

A. A   
B. B

C. C

D. D

Answer : B

### Reason:

In test tube B which have small chicken liver piece and 10cm3 hidrogen peroxide would gas bubbles be released most rapidly.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (628)

### Question :

How many chemical components of carbohydrates in the cells?   
A. 4

B. 5

C. 6

D. 7

Answer : A

### Reason:

Carbohydrates, proteins and lipids are important component in the cells. There are four types of carbohydrates which are glucose, starch, glycogen and cellulose.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (629)

### Question :

Which of the following are consequences of deficiency for cellulose?

I. Muscles cannot contract

II. Low levels of antibodies resulting in low immunity against diseases

III. No coordination of cellular activities

IV. Plasma membrane not formed   
A. I only

B. I and III only

C. I, II and III

D. I, II, III and IV

Answer : A

### Reason:

Carbohydrates, proteins and lipids are important component in the cells.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (630)

### Question :

Which of the following are type of chemical component that low rate of respiration?

I. Glucose

II. Starch

III. Glycogen

IV. Cellulose   
A. I only

B. I and III only

C. I, II and III

D. I, II, III and IV

Answer : A

### Reason:

Carbohydrates, proteins and lipids are important component in the cells.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (631)

### Question :

Which of the following cannot transport oxygen by red blood cells?

A. Proteins   
B. Haemoglobin

C. Membrane proteins

D. Enzymes

Answer : B

### Reason:

Carbohydrates, proteins and lipids are important component in the cells.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (632)

### Question :

Which of the following will decrease the respiratory rate in carbohydrates?

A. Water

B. Intercellular

C. Energy   
D. Deficiency

Answer : D

### Reason:

Deficiency in carbohydrates will decrease the respiratory rate and insufficient energy is produces for cellular activities.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (633)

### Question :

Which of the following are biochemical reactions in the cells proceeding at a rate?   
A. Lack of enzyme results

B. Extracellular enzyme

C. Intercellular enzymes

D. Enzyme – catalysed

Answer : A

### Reason:

Lack of enzymes results in biochemical reaction in the cells proceeding at a rate too slow to sustain life action.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (634)

### Question :

Which of the following formation of plasma membranes?

A. Deficiency in enzyme

B. Deficiency in proteins   
C. Deficiency in lipids

D. Deficiency in carbohydrates

Answer : C

### Reason:

Deficiency in lipids prevents formation of plasma membranes and absorption of vitamins A, D, E and K.

Form : Form 4

Topic : Chemical Composition Of The Cell

Bil : (635)

### Question :

Which of the following will cause stunted growth?

A. Deficiency in enzyme   
B. Deficiency in proteins

C. Deficiency in lipids

D. Deficiency in carbohydrates

Answer : B

### Reason:

Deficiency in proteins will cause stunted growth

Form : Form 4

Topic : Cell Division

Bil : (636)

### Question :

Which of the following are the correct sequences of stages in interphase?

A. G1 phase –> G2 phase –> S phase   
B. G1 phase –> S phase –> G2 phase

C. S phase –> G1 phase –> G2 phase

D. S phase –> G2 phase –> G1 phase

Answer : B

### Reason:

Interphase occurs before mitosis. The chromosomes are elongated, thin threads called chromatin. They are difficult to see under the light microscope. Interphase can be divided into 3 phases: G1 phase –> S phase –> G2 phase

Form : Form 4

Topic : Cell Division

Bil : (637)

### Question :

o The cell grows rapidly in size

o There is high metabolic rate, synthesis of proteins and cellular organelles

The processes above occur in which stage of interphase?

A. M phase

B. S phase

C. G2 phase   
D. G1 phase   
Answer : D

### Reason:

Interphase occurs before mitosis. The chromosomes are elongated, thin threads called chromatin. They are difficult to see under the light microscope. Interphase can be divided into 3 phases: G1 phase, S phase and G2 phase. G1 phase also known as growth phase I. G1 cells have high metabolic rate and synthesis of proteins and cellular organelles occurs. The G1 phase cell growth rapidly in size.

Form : Form 4

Topic : Cell Division

Bil : (638)

### Question :

Which of the following is not true about cancer?

A. It is caused by uncontrolled mitosis

B. It may be caused by a mutation in a gene or genes   
C. It is a class of diseases characterised by benign tumours

D. Exposure to ultraviolet light and X-rays may increase the risk of contracting cancer

Answer : C

### Reason:

Cancer is caused by uncontrolled mitosis. It may be caused by a mutation in a gene or genes. Benign tumours usually grow slowly and are not cancerous. They are localized lumps of cells and generally do not invade adjacent tissues or spread to other side. Exposure to ultraviolet light, ionizing radiation and X-rays may increase the risk of contracting cancer.

Form : Form 4

Topic : Cell Division

Bil : (639)

### Question :

Which of the following statements is not true?

A. Mitosis produces daughter cells genetically identical to each other   
B. Cytokinesis is the synthesis of new cytoplasm

C. Clones are genetically identical cells

D. Meiosis occurs during the formation of gametes

Answer : B

### Reason:

Form : Form 4

Topic : Cell Division

Bil : (640)

### Question :

How many cells are produced by a zygote which undergoes a series of six mitotic divisions?

A. 6

B. 12

C. 32   
D. 64

Answer : D

### Reason:

The mitotic phase (M phase) includes mitosis and cytokinesis. During mitosis, the nucleus, containing the duplicated chromosomes, divided to form two daughter nuclei. During crytokinesis the cell crytoplasm divides into two. Cell division occurs that is, the parent cell divides into two daughter cells. Each daughter cell then enters into interphase. 64 cells are produced by a zygote which undergoes a series of six mitotic divisions

Form : Form 4

Topic : Cell Division

Bil : (641)

### Question :

An animal somatic cell has a diploid number of 24 chromosomes. What is the number of chromosomes in a sperm and a liver cell of the same animal?

A. A   
B. B

C. C

D. D

Answer : B

### Reason:

An animal somatic cell has a diploid number of 24 chromosomes. In a sperm have 12 chromosomes and a 24 liver cell of the same animal

Form : Form 4

Topic : Cell Division

Bil : (642)

### Question :

The bar chart shows the amount of DNA present in a somatic cell of an animal at different stages of mitosis. How many DNA units would be present in the nucleus of one cell of this animal at the end of the first meiotic division?

A. 0

B. 2

C. 4

D. 8

Answer : B

### Reason:

Mitosis is a continuous process. However, for purpose of discussion, it usually divided into four main stages. There are prophase, metaphase, anaphase and telophase. Telophase are the two sets of chromosomes have separated and have reached the opposite poles of the cell. So, the bar chart shows the amount of DNA present in a somatic cell of an animal at different stages of mitosis. Two DNA units would be present in the nucleus of one cell of this animal at the end of the first meiotic division

Form : Form 4

Topic : Cell Division

Bil : (643)

### Question :

The diagram represents the life cycle of a flowering plant. At which stage does mitosis occur?

A. A

B. B

C. C

D. D

Answer : D

### Reason:

The diagram represents the life cycle of a flowering plant. Mitosis occur from zygote to flowering plants.

Form : Form 4

Topic : Cell Division

Bil : (644)

### Question :

The diagram shows movements within a cell during mitosis. What do the three curves represent?

A. A   
B. B

C. C

D. D

Answer : B

### Reason:

In the metaphase in plant cell, the centromeres of most plants do not have a pair of centrioles poles of the spindle fibre. The centromeres of the chromosomes and the poles of the spindle fibres. Each chromosomes consisting of two sister chromatids is attracted by the centromere to a spindle fibre. At the end of metaphase, each centromere divides into two.

Form : Form 4

Topic : Cell Division

Bil : (645)

### Question :

Which of the following are the similarities between mitosis and cytokinesis in animal cells and plant cells?

I. the cells go through prophase, metaphase, anaphase and telophase

II. have a pair of centrioles within their centrosomes

III. Occurs in certain types

IV. centrosomes of most do not have a pair of centrioles   
A. I only

B. I and III only

C. I, II and III

D. I, III and IV

Answer : A

### Reason:

The similarities between mitosis and cytokinesis in animal cells and plant cells are:

i. Both animal and plant cells go through prophase, metaphase, anaphase and telophase

ii. Each parent cell divides once to produce two daughter

iii. The daughter cells have the same number of chromosomes and are genetically identical to the parent cell.

Form : Form 4

Topic : Cell Division

Bil : (646)

### Question :

The diagram shows a chromosome after DNA replication. Which of the following are consist of it?

I. two sister chromatids

II. centromere

III. one chromatid

IV. Chromatin

A. I only

B. I and III only   
C. I, II and III

D. I, II, III and IV

Answer : C

### Reason:

The diagram shows a chromosome after DNA replication seen during prophase. It is seen to consist of two sister chromatids joined at the centromere. Sister chromatids and centromere are in one chromatid

Form : Form 4

Topic : Cell Division

Bil : (647)

### Question :

Which of the following is not a difference between Meiosis I and Meiosis II?

A. A

B. B

C. C

D. D

Answer : A

Reason : 3

Form : Form 4

Topic : Cell Division

Bil : (648)

### Question :

A dye commonly used to stain chromosomes in cells of onion root meristems is

A. eosin   
B. aceto-orcein

C. iodine

D. methylene blue

Answer : B

### Reason:

A dye commonly used to stain chromosomes in cells of onion root meristems is aceto-orcein

Form : Form 4

Topic : Cell Division

Bil : (649)

### Question :

The diagram shows a chromosome at Prophase I, meiosis. What are structures P and Q?

A. A

B. B

C. C

D. D

Answer : A

### Reason:

The diagram shows a chromosome at Prophase I in meiosis It is seen to consist of two sister chromatids joined at the centromere.

Form : Form 4

Topic : Cell Division

Bil : (650)

### Question :

The diagram shows the longitudinal section of a flower. Where does meiosis occur in the flower?

A. 1 and 2 only

B. 2 and 3 only

C. 2 and 4 only

D. 3 and 4 only

Answer : C

### Reason:

The diagram shows the longitudinal section of a flower. Meiosis occur in the flower are at pollen mother cells and embryo sac mother cell. Pollen mother cells in the another undergo meiosis to produce microspores that develop into pollen grains. The embryo sac mother cell in the ovule undergoes meiosis to produce four megaspore, one of which is the origin of the egg cell

Form : Form 4

Topic : Cell Division

Bil : (651)

### Question :

Which of the following is not a difference between mitosis and meiosis?   
A. A

B. B

C. C

D. D

Answer : A

### Reason:

Form : Form 4

Topic : Cell Division

Bil : (652)

### Question :

Which of the following are true about interphase?

I. occurs before Meiosis I

II. cell size is increases

III. replication of DNA occurs

IV. the centrioles replicate

A. I only

B. I and III only

C. I, II and III   
D. I, II, III and IV

Answer : D

### Reason:

Interphase are:

i. Occurs before Meiosis I

ii. The cell increase in size

iii. Replication of DNA occurs. There is duplication of chromosomes

iv. The centrioles replicate

Form : Form 4

Topic : Cell Division

Bil : (653)

### Question :

What is an example of polyploidy?

A. Fertilisation

B. Meiosis   
C. The tetraploid condition

D. Mitosis

Answer : C

### Reason:

The tetraploid condition is an example of polyploidy. Polyploidy is the condition where organisms have more than a diploid number of chromosomes

Form : Form 4

Topic : Cell Division

Bil : (654)

### Question :

Which of the following are rare in animal?

A. Polypoidy   
B. Polyploidy

C. Haploid

D. Mitosis

Answer : B

### Reason:

Polyploidy cannot be sustained and is rare in animal. Offspring are usually not viable and are aborted. Hence, it is very important to maintain the diploid chromosomal number from generation to generation to support life.

Form : Form 4

Topic : Cell Division

Bil : (655)

### Question :

Which of the following are types of cells undergo meiosis?

I. In the human testis

II. In the human ovary

III. In flowering plant

IV. In fruit plant

A. I only

B. I and III only   
C. I, II and III

D. I, II, III and IV

Answer : C

### Reason:

There are three types of cells undergo meiosis. There are in the human testis (the male reproductive organ that produce sperm), in the human ovary (the female reproductive organ that produce ova) and in flowering plants

Form : Form 4

Topic : Cell Division

Bil : (656)

### Question :

How many haploids sets of chromosomes are created?

A. 1   
B. 2

C. 3

D. 4

Answer : B

### Reason:

Chromosomes arrive at the poles, elongate and become long, thin chromaytin threads again. Two haploids sets of chromosomes are created

Form : Form 4

Topic : Cell Division

Bil : (657)

### Question :

Which of the following is as chiasmata?

A. Meiosis occurs

B. Mitosis occurs   
C. Crossing-over occurs

D. Polyploidy occurs

Answer : C

### Reason:

Crossing-over occurs. There is exchange of segments of genetic material between non – sister chromatids within a pair of homologous chromosomes. Crossing-over at site knows as chiasmata

Form : Form 4

Topic : Cell Division

Bil : (658)

### Question :

Which of the following are called a tetrad?