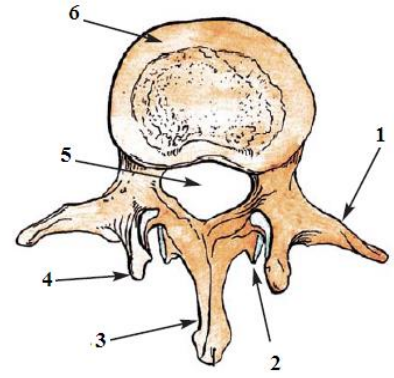


(C) Look at the opposite drawing, then Write the number in front of the appropriate statement:

- Centrum. ()
- The transverse processes. ()
- neural canal. ()
- Anterior articulating process. ()
- posterior articulating process. ()
- neural spine. ()



Question (٢):

(A) Write the scientific term (by putting the term number in front of the suitable sentence:

The statements:

- a- It is the transferring of pollen grains from the anther of a flower to the stigma of another flower of the same plant with the same species. ()
- b- A mass of small cells implanted in between the folds of endometrium at the end of the first week of pregnancy. ()
- c- Glandular pancreatic cells specialized for the secretion of hormones in the blood directly to regulate the ratio of the blood sugar. ()
- d- Cells secrete the hormones of the posterior lobe of the pituitary gland. ()
- e- A parasite that causes malaria disease. ()

The term:

- | | |
|--|--------------------------|
| ١- The nerve secreting cells in the hypothalamus | ٢- self pollination |
| ٣- morula | ٤- Islands of Langerhans |
| | ٥- Plasmodium |

B) Explain the location of each of the following glands (by placing the suitable letter in front of each statement.

- ١ - Pituitary gland. ()
- ٢ - Thymus gland. ()
- ٣ - Adrenal gland. ()
- ٤ - Thyroid gland. ()
- ٥ - Parathyroid glands. ()

Location:

- | | | |
|---------------------------------------|----------------------------|----------------------------------|
| a- Above the kidneys | b- below the brain | c- in the front part of the neck |
| d- On both sides of the thyroid gland | e- behind the sternum bone | |

(C) Correct the underlined words:**(put the number of the suitable concept in front of each statement of the following)****The statement:**

- a-The Protein produced by T suppressor cells (T_S) after destroying the microbes is called **Histamine**. ()
- b-The substances that cause inflammation and swelling of infected tissues called **Interferon**. ()
- c-The Proteins produced by the viral infected cells, which is not specialized called **Perforin**. ()
- d- The perforating proteins produced by killer T cells (TC) are called **Interleukins**. ()
- e- The Proteins produced by activated T helper cells (T_H) are called **lymphokines**. ()

The Correction:

١ - Histamine

٢ - Interferon

٣ - Perforin

٤ - Interlokines

٥ - Lymphokines

The third question:**A - Choose from column (B) what is suitable for column (A)**

Column (A)	Column (B)
١- A male gamete resulting from a mitotic division of gonads ()	a- the acrosome.
٢- A female gamete resulting from a mitotic division of gonads ()	b- gametophyte.
٣- A female gamete resulting from a meiotic division of gonads ()	c- sporophyte.
٤- A haploid stage in ferns. ()	d- ovum of honey bee queen.
٥- A diploid stage in ferns. ()	e- ovum of aphid insect.
	f- sperm of honey bee male.

(B) Mention the name of the hormone responsible for the following functions:

(Put the number in between brackets in front of the right statement)

The function:

- a- converts glycogen to glucose. ()
b- converts glucose to glycogen. ()
c- is secreted from the seminiferous tubules in the testis. ()
d- is secreted from the interstitial cells in the testis. ()
e- is secreted from the cells of the stomach wall in the blood. ()

The hormone

١- Gastrin ٢- Insulin ٣- Glucagon ٤- Sperms ٥- Androgens

(C) Underline the odd (anomaly) word in each set of the following:

- ١ - Mast cells - B cells - killer cells - T cells - Red blood cells.
٢ - Testes - Prostate gland - Uterus - Cowper's glands
٣ - The humerus - The radius - The ulna - The wrist - The patella.
٤ - Light chain - Heavy chain - The complement binding site - Hydrogen bond
- Antigen binding sites.
٥- corpus luteum - polar body - The ovum - acrosome - Graafian follicle.

Question Four

A- Put (√) or sign (x) in front of the following phrases

١. The scapula is a curved bone that is bent down and connected from the back by the centrum of the vertebra and its transvers process. ()
٢. The sternum is a flat bone pointed at its lower part which is cartilaginous that connects the ribs anteriorly. ()
٣. The floating ribs are a pair of ribs and do not reach the sternum. ()
٤ - The acetabulum cavity is a cavity that is located at the outer edge of the scapula bone in which the shoulder joint is settled. ()
٥- The glenoid cavity is a cavity where the hip joint move and located at the position of attachment of ilium and ischium bones. ()

B- Give reason for the following: (Put the letter of suitable answer in the front of the statement).

The statement:

1. The Presence of girdles at the connection of the animal's limbs with its axial skeleton.
- 2- Some plants have hypersensitive response when they infected with a microbe.
- 3- The corms and bulbs are pulled down words to a suitable level under the soil surface ()
4. Sporogony is considered as the best forms of asexual reproduction.
5. Usually the human beings refuge to plant breeding.

The reasons

1. Because of the presence of pulling roots.
2. Because it achieves several advantages such as quick production, tolerance to hard conditions and distribution to long distances.
3. To be articulated with the limbs to facilitate the movement.
- 4 - to obtain plant strains resistant to diseases and insects.
5. To prevent the spread of the microbe from infected tissues to the healthy tissues.

C) Mention the chromosomal number (N- 2N- 3N) for each of the following structures:

1. The endosperm tissue (.....)
- 2 - Sertoli cells (.....)
- 3 - Spermatids (.....)
- 4- Secondary oocyte (.....)
- 5- Spermatogonia (.....)

Question Five:

A. What is meant by each of the following: (put the suitable letter in front of the suitable phrase)

1. Bacterial transformation. ()
2. Chromosomal mutation. ()
3. DNA. ()
4. The genome. ()

o. Deoxyribose sugar. ()

The meaning

- a- A nucleic acid that carries the genetic information of most organisms.
- b- All genes and DNA that are present in the body cell.
- c- Pentose sugar get in the structure of the genetic material of the human.
- d- Mutations occur as a result of changing the number and structure of chromosomes.
- e- The phenomenon of change one of the bacterial strains into another strain.

B- Mention an example of each of the following: (put the suitable letter in front of each statement).

The statement:

- 1. An animal whose somatic cell contains amount of DNA 3 times more than that of the human cell. ()
- 2 - A plant reproduces by alternation of generations. ()
- 3 - Toxic chemical compounds act as plant protection materials in the form of non-protein amino acids. ()
- 4. Toxic chemicals that kill or inhibit the growth of pathogens when the plant is infected with the microbe. ()
- o- An animal reproduce asexually by regeneration. ()

The Examples:

A - Cephalosporin B - Sponge C – Salamander D – Polypodium E - Phenol

(C) What happens: (put the suitable letter in front of each statement).

The statement:

- 1 - Removing the thyroid glands of a baby. ()
- 2 – The tendril did not find a support. ()
- 3 - Shortage of oxygen in some muscles. ()
- 4 - The atrophy of the interstitial cells in the testis. ()
- o- The vascular system of the plant is exposed to cut. ()

What happens:

- A – leads to delay sexual maturity
- B - infected with cretinism.
- C - Formation of tyloses.
- D-die and another new will formed.
- E-fatigue occurs.