

Mock Exam No. (8) for the General Secondary Certificate Examination

Biology

Choose the correct answer

Questions (1-32) One point for each question:

1- The largest articulating vertebra in the human spine are vertebra No.

- A - 7. B - 19. C - 24. D - 25.**

2- The number of bones in the human hand is

- A - 27. B - 24. C - 29. D - 13.**

3- The occurrence of muscle fatigue when tired is due to the accumulation of ..

- A - Carbon dioxide B - Alcohol. C - Lactic acid. D - Amino acids.**

4- The tendril withers and dies if

- A - it twines around the support.
B - the remaining part of it gets shorter after twining.
C - the support was a solid object.
D - it did not find a support to twine around to.**

5 - Which of the following hormones does not work on the internal balance of the body?

- A - Calcitonin and parathormone. B - Aldosterone.
C - Glucagon and insulin. D - Thyroxine.**

6 - When you drink a quantity of water, this leads to

- A - Increased secretion of TSH hormone.
B - Increased secretion of antidiuretic hormone.
C - Decreased secretion of TSH hormone.
D - Decreased secretion of vasopressin hormone.**

7- Which of the following is responsible for the secretion of oxytocin?

- A - The anterior lobe of the pituitary gland.** **B - The parathyroid glands.**
C - The posterior lobe of the pituitary gland. **D - The ovaries.**

8- What is the distinguishing character of asexual reproduction?

- A- The ability to produce new offspring quickly.**
B- The presence of diversity in generations.
C- It takes more time and energy.
D- It involves more than one individual.

9- Which of the following reproduces by budding under suitable conditions?

- A- Yeast.** **B- Bacteria.** **C- Amoeba.** **D- Paramecium.**

10- The organism that consumes the least time and energy in parental care is

- A- Lion.** **B- Shark.** **C- Blue whale.** **D- Head louse in humans.**

11- Which of the four floral whorls consists of leaves or leaflets?

- A- The calyx only.** **B- The calyx and corolla.**
C- The pollen and pistil. **D- The four floral whorls.**

12- When does the generative nucleus inside the pollen grain divide into two male nuclei?

- A- When the pollen grain touches the stigma of the carpel.**
B- When the tip of the pollen tube reaches the micropyle.
C- After germination of the pollen grain.
D- Before germination of the pollen grain.

13- What type of cell is found inside an immature Graafian follicle?

A- Primary oocyte.

B- Oogonium.

C- Secondary oocyte.

D- Primary germ cell.

14- Antibodies have the same chemical composition ascell(s) receptors.

A- Plasma.

B- B.

C- Helper T.

D- T and B.

15- One of the plant defences that arises only during infection with a pathogen is

A- tyloses.

B- cutin layer.

C- thorns.

D- cellulose wall.

16- Which of the following is not a granulocyte?

A- Basophil.

B- Macrophage.

C- Eosinophil.

D- Mast cell.

17- The type of lymphocytes that produce antibodies iscells

A- T.

B- B and T.

C- B.

D- Plasma.

18- Which of the following does not contain DNA?

A- Nucleolus.

B- Histone.

C- Chromatin.

D- Plasmid.

19- Which of the following applies to chromosomal proteins?

A- All of them are histone proteins.

B- Histones and structural non-histone proteins.

C- All of them are non-histone proteins.

D- Histone and non-histone proteins.

20- It is known that if the DNA in one of the cells of the human body is unwound, it will reach a length of approximately two meters.

How is this DNA found inside the nucleus despite of its length?

A - It is condensed into a structure called chromatid.

B - It wraps around amino acids to fit the size of the nucleus.

C - It wraps around the nucleolus tightly to fit the size of the nucleus.

D - It wraps around the centromere to fit the size of the nucleus.

21- Which of the main parts in the structure of mRNA molecules is not copied from the DNA strand?

A- Start codon.

B- Stop codon.

C- Poly-adenine tail.

D- Ribosome-binding site.

22- Which of the following cells is preferable to use to obtain the insulin gene in an easier way?

A- Beta cells in the pancreas.

B- All cells of the islets of Langerhans.

C- All cells of the pancreas.

D- All cells of the body.

23- Which of the following substances is injected into the host cell with the poliovirus genome?

A- DNA polymerase enzyme.

B- RNA polymerase enzyme.

C- DNA replication enzyme.

D- Reverse transcriptase enzyme.

24 - Which of the following distinguishes basalt from andesite?

a. The place of crystallization of the rock.

b. The texture of the igneous rock.

c. Is being found in the form of a volcanic eruption.

d. Olivine enters into its composition.

25 - All of the following are native minerals except

- a- gold b- graphite c- diamond d- coal.

26 – From the bases on which faults are classified is

- a - fault components.
b - direction of displacement of fault walls.
c - economic importance of faults.
d – the forces affecting faults.

27 – The lava containing large amounts of silica and the elements of sodium and potassium may cool to formrocks

- a- Peridotite b- Basalt c- Andesite d- Rhyolite

28 - Which mineral splits in more than one direction and of salty taste?

- a- calcite. b- galena. c- halite. d- graphite.

29 - If the angles in a monoclinic crystal changed to 90, then it becomes.....

- a - cubic b – tetragonal c - orthorhombic d-triclinic

30 - A mineral found in all rocks except ultrabasic ones is

- a- Olivine b- Amphibole
c- Pyroxene d- Sodium plagioclase feldspar

31- The chemical sedimentary rocks that are the most poorly soluble in water

- a- limestone b- gypsum c- table salt d- anhydrite

32- A metamorphic rock, its mineral is used in the cement industry and is scratched by the copper coin is the

a- quartzite

b- gneiss

c - marble

d- granite

Questions (33-44) 2 marks for each question:

33- What are the stages of the pull movement in climbing plants?

A- Rotation in the air/ Twines around the solid body/ The rest of the tendril coils/ The tendril thickens.

B- The tendril thickens/ Twines around the solid body/ Rotation in the air/ The rest of the tendril coils.

C- The rest of the tendril coils/ The tendril thickens/ Twines around the solid body/ Rotates in the air.

D- Rotates in the air/ The rest of the tendril coils/ Twines around the solid body/ The tendril thickens.

34- What is the main function of growth hormone?

A- Stimulates the secretion of steroid hormones.

B- Inhibits cell division and multiplication.

C- Stimulates the secretion of milk from the mammary glands after birth.

D- Regulates the growth of muscles and bones.

35- What is the effect of surgical sterilization on the human male?

A- Inability to mate.

B- Failure to ejaculate semen during mating.

C- Failure of sperm to reach the vagina.

D- Inflammations in the epididymis.

36- Which of the following is considered asexual reproduction resulting from meiotic division?

A- Parthenogenesis in bees.

B- Parthenogenesis in male aphids.

C- Spore formation in ferns.

D- Spore formation in plasmodium.

37- Which of the following characteristics distinguish Siamese twins attached at the head?

- A- One embryo sac and two placentas.**
- B- Two embryo sacs and one placenta.**
- C- One embryo sac and one umbilical cord.**
- D- One placenta and one embryo sac.**

38- Which of the following lymphoid organs is anatomically present in the digestive system?

- A- Tonsils only.**
- B- Peyer's patches only.**
- C- Peyer's patches and appendix.**
- D- Appendix, spleen and Peyer's patches.**

39- What are the immune cells that are activated by interleukins?

- A- B cells only.**
- B- B cells and helper T cells.**
- C- T cells and B cells.**
- D- Helper and toxic T cells.**

40 - The protein synthesis reaction is considered areaction

- A- Oxidation.**
- B- Reduction.**
- C- Hydrolysis.**
- D- Dehydration.**

41- How many nitrogenous bases make up the mRNA strand that is used to build a polypeptide chain consisting of 500 amino acids?

- A- 500**
- B- 503**
- C- 1500**
- D- 1503**

42- How many purine bases are present in one turn of a DNA molecule containing 3 thymine bases?

- A- 3**
- B- 7**
- C- 10**
- D- 14**

43- Which of the following led to a mutation in the Penicillium fungus that caused an increase in its production of the antibiotic penicillin?

A- Cosmic rays.

B- The aqueous medium of the cell.

C- Indole acetic acid.

D- Gamma rays.

44- The hardest mineral at all is characterized by beingmineral

A- Silicate.

B- Carbonate.

C- Carbon.

D- Clay.

Essay questions (two marks for each question):

45 - A - What is the main purpose of sexual reproduction in monocotyledonous plants?

- Production of seeds

B - Mention three factors that are considered stimuli for hormone secretion?

Secretion of another hormone, change in the level of a substance in the blood such as sugar or water, a nerve impulse, or a physical stimulus (such as the arrival of food to the duodenum).

46 - A - What happens if magma is cooled in two stages?

- Formation of an igneous rock with a porphyritic texture.

B - What does the dark color of the igneous rock and its high density indicate to?

- It indicates that it is rich in iron and magnesium. Or (it is an ultrabasic or basic rock).

End of questions