CAMEROON GENERAL CERTIFICATE OF EDUCATION BOARD

General Certifícate of Education Examination

0710 BIOLOGY 1

JUNE 2019 **ADVANCED LEVEL**

Centre Number	
Centre Name	
Candidate Identification Number	
Candidate Name	

Mobile phones are NOT allowed in the examination room.

MULTIPLE CHOICE QUESTION PAPER

One and a half hours

INSTRUCTIONS TO CANDIDATES

Read the following instructions carefully before you start answering the questions in this paper. Make sure you have a soft HB pencil and an eraser for this examination.

1. **USE A SOFT HB PENCIL THROUGHOUT THE EXAMINATION.**
2. **DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.**

Before the examination begins:

3. **Check that this question booklet is headed "0710 Biology 1 - ADVANCED LEVEL".**
4. **Fill in the information required in the spaces above.**
5. **Fill in the information required in the spaces provided on the answer sheet using your HB pencil: Candidate Name, Exam Session, Subject Code and Candidate Identification Number. Take care that you do not crease or fold the answer sheet or make any marks on it other than those asked for in these instructions.**

How to answer the questions in this examination

6. **Answer ALL the 50 questions in this Examination. All questions carry equal marks.**
7. **Each question has FOUR suggested answers: A, B, C and D. Decide which answer is appropriate. Find the number of the question on the Answer Sheet and draw a horizontal line across the letter to join the square brackets for the answer you have chosen.**

   For example, if C is your correct answer, mark C as shown below:

   [A] [B] [C] [D]

8. **Mark only one answer for each question. If you mark more than one answer, you will score a zero for that question. If you change your mind about an answer, erase the first mark carefully, then mark your new answer.**
9. **Avoid spending too much time on any one question. If you find that a question is difficult, move on to the next question. You can come back to this question later on.**
10. **Do all rough work in this booklet using the blank spaces in the question booklet.**
11. **At the end of the examination, the invigilator shall collect the answer sheet first and then the question booklet. DO NOT ATTEMPT TO LEAVE THE EXAMINATION HALL WITH IT.**

over

1 The transport of soluble end products of carbohydrate and protein digestion through the intestinal mucosa into the blood capillary of the villi is by:

A diffusion and osmosis.
B diffusion and active transport.
C endocytosis and exocytosis.
D endocytosis and pinocytosis.

2 The following are associated organs of the digestive system in a mammal:
A liver and pancreas:
B liver and spleen:
C pancreas and spleen:
D teeth and salivary gland:

3. The Phase at which gastrin is stimulated to release HCL in the stomach is the:
A gastric phase.
B intestinal phase.
C cephalic phase.
D conditioned phase.

4. The optimum pH for the functioning of the enzyme pepsin is:
A 7.0
B 2.0
C 5.0
D 8.0

5. Absence of this vitamin in the diet results in the deficiency disease known as scurvy.
A Vitamin A
B Vitamin B
C Vitamin C
D Vitamin D

6. Two organelles with a double membrane are:
A mitochondrion and golgi bodies.
B centriole and endoplasmic reticulum.
C chloroplast and Mitochondrion.
D nucleus and centriole.

7. This organelle can self-replicate:
A lysosome.
B centriole.
C microbody.
D chloroplast.

8. Bright colours in certain plant parts are made possible by the following organelle in the cells of that part:
A microbody.
B chloroplast.
C sap vacuole.
D plasmodesmata.

9. What is the water potential and subsequent pressure potential of a plant cell with solute potential of its sap vacuole at -1300KPa, when equili librated with pure water?
A 700 and 600KPa
B 0 and -1300KPa
C 0 and 1300KPa
D -1300 and 1300KP4

10. The function of the liver that results in the production of bile pigments is the:
A breakdown of hemoglobin.
B deamination of proteins.
C detoxification of cellular metabolism.
D break down of hormones and fats.

11. The simplest and vacuolar pathways make use of:
A the cellulose cell wall.
B the nucleus.
C the Golgi bodies.
D the plasmodesma.

12. The following thickening patterns in the cell wall of a young dicot branch favours increase in length when growing:
A pitted and scalariform.
B spiral and annular.
C reticulate and pitted.
D scalariform and annular.

13. The enzyme and vitamin necessary for blood clotting are:
A thrombokinase : vitamin K
B fibrinogen : vitamin A
C prothrombin : vitamin B_1
D albumin : vitamin C

14. The maximum volume of air an individual can force out of the lung after a normal expiration is called:
A tidal volume.
B residual volume.
C expiratory reserve volume.
D inspiratory reserve volume.

15. The respiratory surface of an insect is called:
A the trachea.
B the spiracle.
C the tracheole.
D the tracheal system

16. The protein part of a functional enzyme is called:
A holoenzyme
B apoenzyme
C allosteric enzyme
D co-enzyme

17. Which epithelial tissue lines the bladder and ensures that urine does not seep through?
A Columnar epithelium.
B Transitional epithelium.
C Cuboidal epithelium
D Pseudo stratified epithelium.

18. This organelle produces the enzyme catalase in most cells:
A golgi complex.
B centrioles.
C microbodies.
D ribosomes.

19. Where is cornified epithelium found in a Mammal?
A The buccal cavity.
B The skin surface.
C The vagina lining.
D The oesophagus,

20. In man iodized salts in the food of children prevent:
A gigantism.
B cretinism.
C acromegaly.
D constipation.

For questions 21 to 28, one or more of the responses is/are correct. Choose:
A If (i) , (ii) and (iii) are correct.
B If (i) and (iii) are correct
C If (ii) and (iv) are correct
D If only (iv) is correct

21. Enzymes perform their functions because of the following characteristic(s):
(i) globular proteins..
(ii) specific in action.
(iii) lower activation energy.
(iv) affected by oxygen.

22 In humans the respiratory center:
(i) is stimulated by chemoreceptor in the carotid bodies.
(ii) is located in the medulla oblongata.
(iii) controls the rate of breathing.
(iv) is under voluntary control.

23. A pair of genes linked on a single pair of chromosome
(i) do not assort independently.
(ii) produce thé 9:3:3:1 ratio in the f2.
(iii) produce the 3:1 ratio in the f2.
(iv) are transmitted singly in gametes.

24. Which of the following is or are correct of C4 plants?
(i) Yield is affected by the concentration of oxygen in the atmosphere.
(ii) Has two kinds of chloroplasts.
(iii) Requires high concentrations of carbon dioxide.
(iv) Most have Kranz anatomy.

25. In the eye defect myopia or short sightedness:
(i) the eye ball is large.
(ii) image is produced after the retina.
(iii) a blurred image is produced.
(iv) correction is by convex lenses.

26. Which of the following has a cell wall?
(i) Plant cell.
(ii) Animal cell.
(iii) Bacterial cell.
(iv) Cheek cell.

27. Which of the following occur(s) in both mitosis and meiosis I?
(i) Chromosomes form sister chromatids.
(ii) Nuclear DNA is duplicated during interphase.
(iii) Chromosomes condense and the nuclear membrane disappears.
(iv) Chromosomes separate synapse into tetrads.

28. Lateral meristem(s) is (are):
(i) apical meristem.
(ii) cork cambium.
(iii) leaf primodium.
(iv) vascular cambium.

29. The type of growth which shows equal change, in size accompanied by change in shape of an organism is:
A allometric growth.
B isometric growth.
C intermittent growth.
D primary growth.

30. Which of these glands in a mammal is both endocrine and exocrine?
A Pancreas.
B Ovary.
C Pituitary gland.
D Sebaceous gland.

31. Heamophilia is inherited as a sex-linked recessive trait. What is the probability that a woman with a normal father who marries a normal man will have children with this trait? –
A 100%
B 25%
C 50%
D 75%

32. Which of the following links in a food chain involves the lowest efficient energy transfer?
A Tilapia feeds on small crustaceans.
B Eagle feeds on tilapia.
C Shark feeds on Dolphins.
D Small crustaceans feed on dead mangrove leaves.

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33. Resting potential is maintained by:
    A active transport and osmosis.
    B active transport and facilitated diffusion.
    C facilitated diffusion and osmosis.
    D active transport and voltage gated ion channels.

34. A woman with blood group O can never have a child with:
    A blood group A.
    B blood group B.
    C blood group AB.
    D blood group O.

35. In the biotechnical process, the step requiring the search and possible genetic engineering of a suitable organism is called:
    A cloning.
    B scaling up.
    C downstream processing.
    D screening.

36. In ferns, the gametophyte generation consist of:
    A fronds and son.
    B fronds and prothallus.
    C prothallus and rhizoids.
    D fronds and rhizome.

37. In human females, the first polar body:
    A is not produced until fertilization occurs.
    B divides to give the second polar body. is
    C formed at ovulation. is formed only if
    D fertilization occurs.

38. An anti microbial substance produced by some bacteria is called:
    A toxins.
    B antibiotics.
    C pathogens.
    D carcinogens.

39. Natural selection is also known as:
    A Adaptive radiation.
    B Convergent evolution.
    C Speciation.
    D Survival of the fittest.

40. Which gland in mammals produces cortisol?
    A Parathyroid gland.
    B Thyroid gland.
    C Adrenal gland.
    D Pituitary gland.

41. What are autosomes?
    A Somatic chromosomes.
    B Chromosomes found only in the mitochondria.
    C Chromosome abnormalities that result in genetic defects.
    D Chromosomes found in the nucleus.

For questions 42 to 50 there are two statements. Read through the statements and then choose:

A if both statements are true and the second explains the first.
B if both statements are true but the second does not explain the first
C if the first statement is true and the second is false
D if the first statement is false and the second is true.

	First Statement	Second Statement
42	Ventilation in mammals is initiated by the concentration of carbon dioxide in bipod.	Ventilation in mammals end up with gaseous exchange at the alveoli.
43	Enzymes are said to be specific in their biochemical reactions.	Enzymes are globular proteins with specific conformational 3D structures.
44	Photosystem II harvest more light energy than photosystem I during photosynthesis.	Photosystem II is found in the grana of chloroplast.
45.	Carbon monoxide is a powerful respiratory poison.	Carbon monoxide is odourless.
46	Saliva is a powerful antimicrobial agent	Saliva contains the enzyme lysozyme.
47	The stratified epithelium of the skin is cornified.	The stratified epithelium is lying on a basement membrane.
48	Testosterone stimulates spermatogenesis in human males during puberty.	Testosterone is produced by the seminiferous tubules in the teStes.
49	Mammals give birth to their young alive .	Mammals are oviparous.
50	In mosses the sporophyte generation is dominant.	The sporophyte generation of moss consist of capsule, seta and foot.

STOP

GO BACK AND CHECK YOUR WORK

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