

GOVERNMENT BILINGUAL HIGH SCHOOL YAOUNDE

BIOLOGY 1
MOCK 2021

ADVANCE LEVEL

SUBJECT TITLE	BIOLOGY
PAPER NUMBER	1
SUBJECT CODE NUMBER	0710

Mobile phones are NOT allowed in the examination room.

MULTIPLE CHOICE QUESTION PAPER

1:30MINS

INSTRUCTION TO CANDIDATES

1. Use soft HB pencil throughout this paper.
2. Do not open this paper until you are asked to do so.
3. Answer all 50 questions in this examination. All questions carry equal marks.
4. Non programmable calculators are allowed.
5. Each question has Four (4) suggested answers. Select the best answer in each case and draw a horizontal line on it. For example [A] [B] [C] [D]; if [D] is the correct answer
6. 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 carefully and then mark your new answer.
7. Avoid spending too much time on any one question. If you find a question difficult, move on to the next question. You can come back to that question later

1. Which of the following is the main function of collenchymas and sclerenchyma in plants
 - A) Storage.
 - B) Support.
 - C) Transport water.
 - D) Transport of food.
2. Above which temperature do human enzymes begin to denature?
 - A) 37°C
 - B) 40°C
 - C) 45°C
 - D) 50°C
3. The force that holds liquids in a continuous stream is called
 - A) Cohesion.
 - B) Adhesion
 - C) Transpiration pull
 - D) Root pressure.
4. Hydrolysis of lipid molecules will yield
 - A) Amino acids and glycerol.
 - B) Fatty acids and glycerol.
 - C) Glycerol and water.
 - D) Glucose and water
5. In angiosperms, double fertilization results in a diploid zygote and a
 - A) Triploid embryo.
 - B) Diploid zygote.
 - C) Triploid pericarp
 - D) Triploid endosperm
6. When glomerular filtrate is produced in the kidney tubule, it moves from
 - A) Proximal convoluted tubule to distal convoluted tubule.
 - B) Proximal convoluted tubule to collecting duct
 - C) Proximal convoluted tubule to loop of henle
 - D) Distal convoluted tubule proximal convoluted tubule.
7. Which of the following contains a code for protein?
 - A) DNA polymerase.
 - B) RNA polymerase.
 - C) tRNA
 - D) mRNA
8. The enzyme cholinesterase which hydrolyses acetylcholine to choline acts on the
 - A) Postsynaptic membrane.
 - B) Presynaptic membrane
 - C) Synaptic cleft.
 - D) Neuromuscular junction.
9. Competitive inhibition stops an enzyme from working by
 - A) Changing the shape of the enzyme.
 - B) Merging with the substrate instead.
 - C) Blocking the active site of the enzyme.
 - D) Combining with the product of the reaction.
10. DNA and RNA differ in
 - A) Sugar only.
 - B) Sugar and purine.
 - C) Sugar and pyrimidine.
 - D) Sugar and phosphate.
11. Depolarization of the post synaptic membrane is caused by
 - A) Fusion of the synaptic vesicles with the presynaptic membrane.
 - B) Rushing of calcium ions into the synaptic knob.
 - C) Opening of sodium gates in the post synaptic membrane.
 - D) Transmitter substance diffusing across the synaptic cleft

12. Made up entirely of dead cells
- Parenchyma.
 - Collenchyma.
 - Xylem
 - Sclerenchyma.
13. Which gland of the body secretes Anti diuretic hormone?
- Hypothalamus.
 - Pituitary.
 - Kidney.
 - Thalamus.
14. The rate at which producers trap solar energy and store in organic molecules is referred to as
- Net primary productivity.
 - Gross primary productivity.
 - Net secondary productivity.
 - Gross secondary productivity
15. A collection of limiting factors that reduces the attainment of the maximum reproductive potential in a population
- Environmental resistance.
 - Carrying capacity.
 - Competitive exclusion.
 - Resource partitioning.
16. Freely movable joints are also called
- Fixed joints.
 - Synovial joints.
 - Cartilaginous joints.
 - Fibrous joints.
17. Plant cells contain the following not found in animal cells
- Plastids/ chlorophyll/ membrane.
 - Chloroplast/ cell wall/ golgi apparatus.
 - Plastids/ cell wall/ chlorophyll.
 - Mitochondria/ cell wall/ vacuole
18. An enzyme is generally named by adding the suffix.....to the end of the
- Ose, coenzyme.
 - Ase, cell in which its found
 - Ase, substrate.
 - Ose, substrate.
19. The oozing of water from the leaves of plants on a highly humid day is called
- Transpiration.
 - Translocation.
 - Diffusion.
 - Guttation
20. The amino acids in the tertiary structure of protein form
- A three dimensional arrangement of separate polypeptide chains.
 - A folded three dimensional shape.
 - Repeating helical coils of amino acids.
 - A linear sequence of amino acids
21. Desert animals excrete uric acids rather than ammonia because
- Uric acid is more poisonous than ammonia.
 - Ammonia is more poisonous than uric acid.
 - Less water is needed to excrete uric acid.
 - Uric acid is solid while ammonia is a liquid.
22. Lysosomes are
- Membrane enclosed digestive organelles that contain enzymes.
 - Membrane enclosed channels situated within the cytoplasm.
 - Membrane bounded organelle that carryout exocytosis.
 - Membrane bounded organelle that produces the energy needed by the cell.
23. If the diameter of the afferent arteriole is smaller than the diameter of efferent arteriole then

- A) Blood pressure in the glomerulus will decrease.
 B) Blood pressure in the glomerulus will increase
 C) More urine will be produced.
 D) The net filtration pressure will increase.
24. The carrying capacity of a population is
 A) The number of individuals in that population.
 B) Reached when mortality exceeds natality.
 C) Reached when natality exceeds mortality.
 D) The population size that can be supported by available resources for that species within the habitat.
25. Members of Monera are different from members of Protoctista because
 A) They lack a nucleus or nuclear membrane.
 B) They cannot carry out photosynthesis.
 C) They are microscopic.
 D) They are unicellular.
26. What of these structures is within the mammalian testis?
 A) Epididymis.
 B) Seminal vesicle.
 C) Seminiferous tubule.
 D) Ejaculating duct.
27. Some organisms such as maggots and woodlice feed on waste. Food chains whose starting point consists of waste are known as
 A) Parasitic food chain
 B) Producer food chain.
 C) Detrital food chain.
 D) Predatory food chain
28. The complementary messenger RNA triplet for the DNA triplet GAT would read
 A) CTA
 B) CUA
 C) CTG
 D) CTC.
29. One of the differences between C3 and C4 plants is that
 A) C3 plants have two types of chloroplast.
 B) C3 plants carry out double fixation of carbon dioxide.
 C) C3 plants carry out photorespiration
 D) Photosynthesis in C3 plants is very efficient.
30. Which cell organelle always contains enzymes
 A) Centrioles.
 B) Golgi apparatus.
 C) Mitochondria.
 D) Lysosome
31. Which of the following organelles is the site of rRNA synthesis
 A) Centriole.
 B) Nucleolus
 C) Ribosomes
 D) Golgi apparatus.
32. Of what importance is the dichotomous branching of the marine alga Fucus?
 A) To ease fragmentation.
 B) To enhance photosynthesis.
 C) To minimize resistance to the flow of water.
 D) To increase buoyancy.
33. Intracellular enzymes are produced inside the cell and control metabolic processes in the cell. An example of such an enzyme is
 A) Amylase.
 B) Lygase.
 C) RNA polymerase.
 D) Lipase.
34. Facilitated transport differs from diffusion in that facilitated transport

- A) Moves molecules from high to low concentration.
 B) Moves molecules down their concentration gradient.
 C) Involves the use of carrier protein
 D) Involves the use of ATP molecules.
35. When you bend your arm, the bulge seen at your elbow is part of the
 A) Humerus.
 B) Ulna.
 C) Elbow.
 D) Carpel.
36. Which of these groups of organisms are heteromorphous and possess septate hyphae?
 A) Fungi.
 B) Ascomycota.
 C) Basidiomycota.
 D) Zygomycota.
37. Which of the following plant tissues has isodimetric shaped cells that helps as a packing and support?
 A) Collenchyma.
 B) Epidermis.
 C) Parenchyma.
 D) Sclerenchyma.
38. Which of these is a characteristic of hormones?
 A) Needed in large quantities to produce a desired effect.
 B) Produced in tissues that they affect.
 C) Small quantities can produce effects.
 D) They work independently from other hormones.
39. The role of accessory pigments is to
 A) Provide additional photosystem to generate more ATP.
 B) Capture additional light and transfer to the chlorophyll reactional center.
 C) Allow photosynthesis to occur in the dark.
 D) Donate electrons to chlorophyll reactional center.
40. Which of these structures is within the mammalian testis?
 A) Epididymis.
 B) Seminal vesicle.
 C) Seminiferous tubule.
 D) Ejaculating duct.
- For questions 41 to 45, one or more responses is/are correct. Choose**
- A) If (i), (ii) and (iii) are correct.
 B) If (i) and (ii) are correct
 C) If (ii) and (iv) are correct
 D) If only (iv) is correct
41. Which of the following does DNA replication require?
 (i) DNA polymerase.
 (ii) Deoxyribonucleotides.
 (iii) DNA helicase.
 (iv) RNA polymerase.
42. In enzyme activity, the molecule NADP can be considered as
 (i) An apoenzyme.
 (ii) A cofactor
 (iii) An activator
 (iv) A coenzyme.
43. During photosynthesis, the light dependent reactions will
 (i) Take place in the stroma.
 (ii) Occur in a cycle divided in phases.
 (iii) Uses ATP and NADP
 (iv) Not need enzymes for proper functioning.
44. Why is PEP carboxylase a much more efficient enzyme in catalyzing CO_2 fixation than RUBR carboxylase?
 (i) PEP Carboxylase has a higher affinity for CO_2 than RUBP carboxylase.

- (ii) PEP Carboxylase is found in C4 plants while RUBP carboxylase is found in C3 plants.
- (iii) PEP Carboxylase is not competitively inhibited by oxygen as in RUBP carboxylase.
- (iv) PEP Carboxylase is involved in double fixation while RUBP carboxylase is involved in single fixation.

45. Which of the following is correct of glycolysis
- (i) It takes place in the mitochondrion.
 - (ii) Produces much of the ATP in tissue respiration.
 - (iii) It does not occur in bacteria cells.
 - (iv) It is the main process producing energy in yeast fermentation.

For questions 46 to 50, decide whether the first statement is true or false and whether the second statement is true or false then choose

- A. If both statements are **TRUE** and the second statement is a **correct explanation** of the first statement
- B. If both statements are **TRUE** and the second statement is **NOT a correct explanation** of the first statement.
- C. If the first statement is **TRUE** but the second statement is **FALSE**.
- D. If the first statement is **FALSE** and the second statement is **TRUE**

	FIRST STATEMENT	SECOND STATEMENT	LETTER
46	The light dependent stage of photosynthesis determines the rate of the light independent stage.	NADPH and ATP from the light independent stage catalyse reactions of the light dependent stage.	
47	All mammals are viviparous	All mammals have hairs on their body	
48	Swallowing is primarily an involuntary process	Once food gets into the oesophagus, its movement through the gut is by peristalsis	
49	As opposed to pyramid of numbers, pyramid of energy is never inverted	Only about 10% of energy flows from a lower to a higher trophic level	
50	Ruminants chew their cud or ruminate	The diastema helps ruminants chew grass by keeping grass freshly cropped from that being chewed.	