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Parent's Signature

44

Full Name _____ Grade - 11 Section _____ 4th Quarter Final Exam

Subject – Biology Year: 2012 E.C Exam Room:

I. *Write true if the statement is correct while false for the incorrect statement.(1point each)*

1. C3plants can photosynthesize better in hot tropical region than C4 plants.
2. RNA molecule codes for many different proteins in the genes.
3. Large amount of enzyme is used to change small amount of its substrate.
4. Non-competitive inhibitors are molecules that bind with the allosteric site of enzyme to alter its conformation.
5. The production of genetically identical copies of organism by asexual reproduction is called cloning.
6. Food can be preserved when pH of the medium is acidic.
7. The study of cancer and tumors is known as Oncology.
8. Lipids synthesis(metabolism) takes place in rough endoplasmic reticulum(RER).
9. Ribosomes are responsible for the factory of protein synthesis.
10. Sun light cannot be used directly by plants to 'drive 'the synthesis of proteins.

II. *Match the describing statements in column A with the correct terms in column B (1point each)*

Column A **Column B**

11. A structure used to generate ATP molecules during chemiosmosis
    A. Cristae
12. Inner membrane of mitochondria where ETC occurs B. RuBP carboxylase
13. Fix CO_2 into phosphoenol pyruvate in C4 plants C. PEP carboxylase
14. Stack of thylakoid membranes where light reaction occurs
    D. ATP synthase

15. Fix CO_2 into ribulose bisphosphate in C3 plants

E. Stroma

16. Fluid filled area of chloroplast where Calvin cycle takes place

F. Grana

G. Carotenoid

H. Matrix

III. <u>Choose the best answer from the given alternatives (1point each)</u>

17. Theory is ...?

A. static. B. Dynamic C. Always true D. None of these

18. The statement made by a scientist,which may be the possible answer to the problem indicates:

A. Theory B. Deduction C. Hypothesis D. Law

19. Substances cross the cell membrane more easily when they are:

A. Lipid soluble B. Water soluble C. Protein soluble D. Alcohol soluble

20. The study of animal behaviour is known as:

A. Ethnology B. Ecology C. Entomology D. Ethology

21. Manipulation of genes inorder to improve the organism is termed as:

A. Gene cloning B. Genetic engineering C. Electrophoresis D. Genepool

22. The higest risk of transmission from an HIV-infected mother to her infant occurs:

A. Through breast feeding C. During the birth process

B. In utero D. Equal risk at each stage

23. Which one of the following is used to separate the various components of animal and plant cells?

A. Pacemaker B. Quadrat C. Ultra centrifuge D. Petridish

24. Four polypeptide chains take part in the formation of:

A. Hemoglobin B. Cellulose C. DNA. D.Silk

25. Which test is used to reduce Cu(II)ions(blue)to (Cu I) ions(Brick red)for reducing sugar?

A. The Benedict's test B. The Emulsion test C. The Iodine test D. The Buiret test

26. Which one of the following is a polyhydroxyalcohol that makes up part of triglycerides molecule?

A. Stero l B. Citrate C .Glycerol D. Glycogen

27. In EC 3.4.11.1, the fourth figure(the last number)indicates/stands for:

A. Sub -Class B. Serial number of the enzyme C. Dub-Sub class D. None of these

28. Which of these vest describe s how the substrate fits with the enzyme ?

A. The "induced fit"model hypothesis

B. The "Lock and key"hypothesis

C. The active sitee changes shape slightly to fit the substrate

D. It fits exactly into the active site

29. Which of these are advantages of lowering the activation energy?

A .It allows chemicals to react that otherwise wouldn't.

B. It allows reactions to proceed more quickly.

C. It changes the optimum pH of the enzyme .

D. It allows reactions to proceed at an acceptable temperature .

30. The view that active site of an enzyme is flexible and when a substrate combines with it, causes changes in enzyme structure is termed as:

A. Specificty model C. Lock and Key model

B. Sliding filament model D. Induce fit model

31. If enzyme concentration is continuously increased, what is the effect on the rate of reaction?

A. It Increases to a certain level after that it decreases.
B. It increases to a certain level after that it will remain constant.
C. There is no Increase in the rate of reaction.
D. It only increases continuously.

32. What is the effect of the increase in the substrate concentration on the enzymatic reaction?

A. It increases the rate of reaction but up to a certain limit.

B. It decreases the rate of reaction.

C. It has no effect on the rate of reaction.

D. It increases the rate of reaction.

33. New ribosomes are assembled in the:

A. Mitochondria B. Nucleolus C. Golgi Apparatus D. Endo plasmic Reticulum

34. The most abundant chemical in living things could be:

A. Sugar B. Nucleic acid C. Water D. Protein

35. Glycolipids in plasma membrane are usually located at:

A. Inner leaflet of plasma membrane

B. Outer leaflet of plasma membrane

C. Cannot be predicted, it varies according to cell types

D. Evenly distributed in both inner and outer leaves of plasma membrane

36. The main role of carbohydrates in the cell membrane is..?

A. Reception B. Adhesion C. Recognition D. Locomotion

37. Lysosomes are known as the 'Suicidal bags ‘because of:

A. The catalytic activity C. The presence of food vacuole

B. The hydroltic activity. D. The parasitic activity

38. Which organelle requires intact membrane system for ATP synthesis?

A. Chloroplast C. Mitochondria

B. Endoplasmic Reticulum D. Chloroplast abd Mitochondria

39. Oxygen and Carbondioxide pass through the plasma membrane by:

A. Diffusion B. Active transport C. Transporter proteins D. Pinocytosis

40. Cellmembranes take take in materials by infolding through a process called ..?

A. Selective permitivity C. Endocytosis

B. Passive transport D. Exocytosis

41. Plasma membrane is chemically composed of:

A. Lipids and Carbohydrates C. Glycoproteins

B. Phospholipids only D. Lipids and protein

42. Ribosomes exist in two forms, either attached to Rough Endoplasmic Reticulum or freely dispersed in the...?

A. Golgi bodies B. Cytoplasm C. Lysosome D. Smooth Endoplasmic Reticulum

43. Which organelle is involved in the formation and decomposition of hydrogen peroxide?

A. Ribosomes B. Glyosome C. Peroxisome D. Lysosome

44. Which of the following is the major contributor to the turgor and to the rigidity of the leaves?

A. Vacuole B. Glyosome C. Cell wall D. Chromoplast

45. Oxygen that is released during the process of photosynthesis comes from

A. Carbon dioxide B. Chlorophyll C. Water D. Glucose

46. Which of the following stage of photosynthesis produces oxygen?

A. Calvin cycle C. The cyclic photophosphorylation

B. Krebs cycle D. The light reaction involving both PS II and PS I

47. Calvin cycle is **NOT** characterized by:
   A. It releases O_2 as byproduct
   B. It occurs within the stroma of chloroplast
   C. It is the second set of reaction in photosynthesis.
   D. It binds carbon atom from CO_2 source to organic compound.

48. The functional pigment groups of photosystem are found in the
   A. Mitochondria C. Membrane of thylakoid
   B. Stroma of the chloroplast D. In the fluid of vacuole

49. The light dependent reaction of photosynthesis **DOES NOT** include
   A. Oxygen liberation B. Photolysis C. Electron transport D. Photorespiration

50. How many total NADH and FADH2 molecules join the Electron transport chain(ETC)?
   A. 10NADH and 2 FADH2 C. 1NADH abd 3 FADH2
   B. 3 NADH and 6 FADH2 D. 6 NADH and 2 FADH2

IV. ***Fill in the blank spaces with appropriate biological terms.(1point each).***

51. The enzymes used to produce liqiud-center chocolates and to process (clarify) fruit juices are _____and _____respectively.

52. The reaction center molecule/pigment where light reaction starts during photosystem is called _____.

53. The _____ model of plasma membrane suggests that proteins are emvedded in lipid bilayer.

54. The diffusion of hydrogen ions through the ATP synthase yielding ATP molecules is known as _____.

55. The final electron carrier of photosystem II is called_____ _____.

V. ***Give short and precise answers for the following questions(1point each)***

56. Write at least 2 basic differences between C4 photosynthesis and CAM(Crassulacean Acid Metabolism) photosynthesis based on carbon fixation and their stomata briefly .

57. Write the main differences between photorespiration and oxidative phosphorylation

58. To which photosystem the electron flow is restricted during cyclic phosphorylation?

59. What kind of wave lengths is mostlly absorbed by chlorophyll?

60. Explain 1similarity and 1difference of respiration and photosynthesis with at least1 statement.

Similarities	Differences
1.	1.
2.	2.
3.	3.

Set by Sir Gidey Hadush
June1,2012E.C
Stay @home!Good Luck!