

RAJA RAVI VARMA GIRLS HIGHER SECONDARY SCHOOL , KILIMANOOR
FIRST YEAR HIGHER SECONDARY PRE MODEL EXAM 2023

BOTANY

Maximum : 30 Scores

Time: 1 Hours

RRV GIRLS KILIMANOOR

Part I

Answer any three questions from 1 to 5. Each carries 1 Score. (1 x 3= 3)

Choose the correct answer

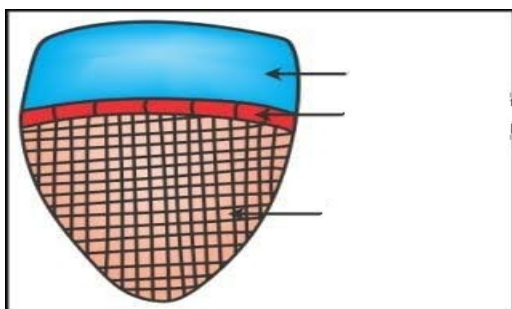
- Crossing over occurs in ----- sub stage of Prophase 1
 - Leptotene
 - Zygotene
 - Diplotene
 - Pachytene
- Floridean starch is a stored food found in an algal class known as _____
- Name a fungus from which an antibiotic is extracted
- The terminal electron acceptor in ETS is _____
- Which pigment molecule forms the reaction centre of photosystems ?

Part II

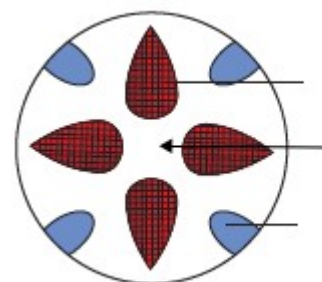
Answer any 9 questions from 6 to 16. Each carries 2 score (2 x 9 = 18)

- Who proposed five kingdom classification. What are the main criteria for classification.
- Differentiate hypogynous flower with epigynous flower.
- Most pteridophytes are homosporous but there are exceptions. Identify two heterosporous genera.
- Observe the figure. Identify the type of vascular bundles.

A



B



10. The internal anatomy of dicot and monocot root shows many differences. Mention any two differences between them..

11. Both growth and differentiation in higher plants are open. Comment.

12. Photorespiration occurs only in C_3 plants. How does RuBisCO involve in photorespiration.

13. Classify the chromosome based on the position of centromere.

14. Write two agricultural application of auxins.

15. Match the following

A	B
(a) Cristae	(a) plasmamembrane
(b) Cisternae	(b) Chloroplast
(c) Thylakoids	(c) Mitochondria
(d) Mesosomes	(d) Golgiapparatus

16. Breakdown of glucose to pyruvic acid is glycolysis. Write the steps in which A.T.P is used during glycolysis

Part III

Answer any three questions from 17 to 20. Each carries 3 scores. (3x3 = 9)

17. Describe the features of androecium and gynoecium of flower belongs to the family solanaceae. Use technical terms.

18. A.T.P synthesis is linked to development of proton gradient across a membrane. Write three ways for developing the proton gradient across the thylakoid membrane.

19. Metaphase, Anaphase and Telophase are the stages of karyokinesis. List the key events in these phases.

20. The TCA cycle start with the condensation of acetyl group with OAA and water to yield citric acid.

a) Name the enzyme that catalyses the reaction.

b) How many $NADH+H$ and $FADH_2$ molecules are produced in complete oxidation of pyruvic acid by TCA cycle ?

c) Who invented TCA cycle ?

Prepared By:

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