

BIOLOGY

BOOKS - SUPER COMPANION 5 IN 1

IPUC ANNUAL EXAMINATION-2016

Part A

1. Define metabolism.



2. What is placentation?



3. What are goblet cells?



4. Gram negative bacteria do not take stain-Give reason.



5. Name the monomers of protein molecule.



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6. Define imbibation.



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7. What is 'critical concentration' of essential elements?



8. Name the flat bone on Ventral midline of Thorax of Human body.



9. Define Hormone.



10. What are Polyribosomes?



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11. Name the famous botanical garden of England.



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12. What is gamopetalous corolla?



13. Name the site of production of blood cells.



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14. Mitochondria are called powerhouses of a cell. Give reason.



15. Name the most abundant animal protein in the world.



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16. What are Porins?



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17. What is chlorosis?



18. Mention the main cause for 'Gout' disease.



19. Which part of the ovary secretes progesterone.



20. What are metacentric chromosomes.



Part B

1. Define species. Write the biological names of any two plants.



2. Write any four characters of virus.



3. Enumerate four salient features of Pteridophytes.



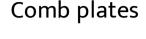
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4. Mention the function of following organs.

Malpighian tubules



5. Mention the function of following organs.





6. Classify the chromosomes based on the position of centromere.



7. What is Respiratory Quotient? Mention R.Q. value of proteins.



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8. Distinguish between Dedifferentiation and Redifferentiation



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9. Name any four types of Synovial joints.



10. What are Plasmogamy and Karyogamy.



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11. State any two universal rules of binomial nomenclature.



12. Distinguish between microsporophyll and megasporophyll of gymnosperms.



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13. What is a pseudocoelom? Give an example.



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14. Mention any four functions of plasmamembrane.

15. Define glycolysis. Mention any two intermediate 3 carbon compounds produced during glycolysis.



16. Removal of shoot tips, make the hedge in tea plantations. Give reasons.



17. Mention four functional properties of muscle tissue.



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Part C

1. Pigments are the basis of classification of Algae - Justify the statement.



2. Give the meaning of the following with an example each.

Parallel venation



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3. Give the meaning of the following with an example each.

Opposite Phyllotaxy



4. Give the meaning of the following with an example each.

Trimerous flower



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5. Mention any six secondary metabolites of plants.



6. Mention the phases of growth.



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7. Briefly explain the digestion of carbohydrates in small intestine.



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8. Summarise the mechanism of transport of oxygen in blood.

9. Mention any three disorders of human excretory system.



10. Describe the Diplontic life cycle pattern of plant kingdom.



11. Classify the flowers based on the position of thalamus giving an example each.



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12. Explain the steps involved in catalytic cycle of an Enzyme action.



13. What is fermentation? Name any two enzymes involved in this process.



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14. List out any three physiological role of Gibberellins in plant growth.



15. Mention the importance of the following with reference to Human Digestive System.

Epiglottis



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16. Mention the importance of the following with reference to Human Digestive System.

Villi



17. Mention the importance of the following with reference to Human Digestive System.

Saliva



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18. Describe the mechanism of gaseous exchange in alveolous and pulmonary capillary.



19. Name any three excretory structures in invertebrates.



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Part D

1. Draw a neat labelled diagram of T.S. of Dorsiventral leaf.



2. Explain the structure of chloroplast with a neat labelled diagram.



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3. Write any five differences between Mitosis and Meiosis.



4. Explain Joseph-Priestly's experiments on photosynthesis using candle and a plant.



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5. Mention any one Hormone secreted by the following glands.

Adrenal gland'



6. Mention any one Hormone secreted by the following glands.

Thymus gland



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7. Mention any one Hormone secreted by the following glands.

Pineal gland



8. Mention any one Hormone secreted by the following glands.

Ovary



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9. Mention any one Hormone secreted by the following glands.

Testes



10. Mention the function of following organs.

Forewings of Cockroach



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11. Mention the function of following organs.

Crop in alimentary canal of Corkcroach



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12. Mention the function of following organs.

Typhlosole in alimentary canal of Earthworm'



13. Mention the function of following organs.

Setae in Earthworm



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14. Mention the function of following organs.

Spiracles of Cockroach.



15. Describe the structure of stomatal apparatus in Dicot plants.



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16. Write the schematic representation of a Nitrogen cycle.



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17. Name the formed elements of Blood.



18. Write a note on Erythroblastosis foetalis.



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19. List out any five salient features of phylum echinodermata.



20. Draw a neat labelled diagram of T.S. of Dicot Root.



21. Describe the structure of nucleus with a neat labelled diagram.



22. Describe the events in phases of cell cycle.



23. Name any five hormones secreted by pituitary gland.



24. Comment on the following:

Symplastic pathway



25. Comment on the following: Guttation **Watch Video Solution** 26. What is plasmolysis > **Watch Video Solution**

27. Comment on the following :

Transpiration



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28. Describe the process of nodule formation in soyabean with diagrams.



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29. Draw a neat labelled diagram of neuron.

