



BIOLOGY

BOOKS - SUNSTAR BIOLOGY

(KANNADA ENGLISH)

II PUC BIOLOGY (P.U. BOARD LATEST

MODEL QUESTION PAPER - 3)

Part A

1. Why pollen grains are very well preserved as fossils?



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2. Replication in the region of euchromatin would be faster. Justify.



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3. With reference to Human Genome Project, what do SNPS refer to?



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4. Define genetic equilibrium.



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5. How does the administration of α -interferons help cancer patients?



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6. Write the scientific name of the microbe which is used in the manufacture of citric acid.



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7. Mention the principle on which ELISA is based.



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8. Logistic growth model is more realistic than exponential growth model. Why?



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9. Why is the pyramid of biomass in sea generally inverted?



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10. What is the disadvantage of lead in petrol which is used as a fuel in modern automobiles?



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Part B

1. Why is water hyacinth called "the terror of Bengal"?



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2. What do you understand by pericarp and perisperm?



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3. Differentiate spermiogenesis and spermiation.



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4. How is ZIFT different from ICSI?



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5. Define pleiotropy. Mention an example.



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6. Write the scientific name of the plant from which cocaine is obtained. What is the effect of cocaine in humans?



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7. Why is the introduction of genetically engineered lymphocytes into a ADA deficiency patient not a permanent cure? Suggest a possible permanent cure.



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8. Justify with the help of two examples where a deliberate attempt by humans has led to the

extinction of a particular species on earth.



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Part C

1. What is asexual reproduction? Explain encystation and sporulation in Amoeba.



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2. Name the hormonal composition of the oral contraceptive used by human females, How does it help in contraception?



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3. Explain sex determination mechanism in honey bees.



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4. Explain why DNA is a better genetic material than RNA.



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5. What is divergent evolution? Explain this with reference to the forelimbs of Cheetah and whales.



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6. What is biofortification? Mention four examples for biofortified crops.



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7. What is Bt toxin? How does this toxin kill cotton boll worms?



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8. Biodiversity plays a major role in providing many ecosystem services. Explain.



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Part D Section I

1. Explain the structure of megasporangium.



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2. Draw a labelled diagram of human sperm.



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3. With the help of suitable diagrams, explain the process of transcription in bacteria.



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4. Write the schematic diagram of the life cycle of Plasmodium.



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5. What is polymerase chain reaction? Name the bacterium from which the polymerase enzyme used in this technique is obtained. Write the schematic representation of this technique.



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6. What is cultural eutrophication? Explain the stages involved in eutrophication.



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7. Explain thalassemia as an example for Mendelian disorder.



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8. How is the herd size increased by Multiple Ovulation and Embryo Transfer (MOET) technology?



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9. Differentiate out-crossing and cross breeding.



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10. Explain the various stages in the secondary treatment of sewage.



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11. 'Parasitic mode of life ensures free lodging and free meals'. Justify listing the special adaptations developed by parasites.



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12. Describe the various steps involved in the process of decomposition of detritus.



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