QUESTION BANK
CLASS XII
SUBJECT : BIOLOGY
(Session 2020-21)

SUBJECTIVE QUESTIONS

Ch. 2 Sexual reproduction in flowering plants

Q1. What is a seed, fruit and embryo?

Q2. Define artificial hybridisation. Why is it used? Mention its various steps

Q3. What are different outbreeding devices in flowering plants? Explain

Q5 Explain megasporogenesis with diagram.

Q6. Explain microsporogenesis.

Q7 Draw a labeled diagram of monocot and dicot seed.

Q8 Explain different types of pollination with example.

Q9. List post fertilization changes in angiosperms.

Q10. Define apomixis and polyembryony.

Ch-3 Human Reproduction

Q1.What are the constituents of seminal plasma?

Q2 Mention functions of different layers of uterus in human female.

Q3. Draw a labelled diagram of sectional view of seminiferous tubule.

Q4. Explain the process of oogenesis and spermatogenesis in humans.

Q5. Draw a labelled diagram of Human sperm.

Q6 Draw a labelled diagram of ovum in human female

Q7. Explain menstrual cycle in human females.

Q8. Explain events of fertilization in humans.

Q9. Define implantation and its events.

Q10. How does placenta work as an endocrine tissue?

Q11. Define colostrum and foetal ejection reflexes

Ch -4 Reproductive Health

Q 1. Define amniocentesis and lactational amenorrhea.

Q 2. Explain ART. Suggest some methods to assist infertile couples to have children.

Q3. Removal of gonads is not considered as a good contraceptive method. Why?

Q4. Differentiate between working of Cu-T and LNG-20

Q5. What is amniocentesis? Why is it banned?

Q6. What is RCH? What are its aims?

Q7. What is MTP? Mention its advantages and dis advantages.

Q8, Expand STDs. How can STDs be prevented?

Ch -5 Principles of Inheritance and variation

Q1. Explain Mendel's law of independent assortment with an example.

Q.2. Differentiate between.....incomplete dominance and codominance with example

Q3. Define Test cross, Polygenic inheritance and pleiotropy with example

Q4. Show inheritance pattern of one sex- linked dominant, sex- linked recessive and one autosomal Mendelien disorder.

Q5. Explain sex determination in birds and honeybee.

Q6, What do you mean by multiple alleles. Explain with example

Q7 Define law of dominance and law of Segregation. Also Explain with example

Q8. Why is Pedegree analysis important in Human beings. Explain various symbols used to study Pedegree analysis.

Q9. Explain chromosomal theory of inheritance.

Q10. Define Linkage and Crossing over. What did Morgan attribute in deviation of Mendelian ratio in F2 generation?

Q11, What is point mutation? Explain with example

Ch -6. Molecular basis of Inheritance

Q.1Draw a double stranded polynucleotide chain

Q2. What is central Dogma?

Q3. What is a nucleosome? Show its well labelled diagram and explain packaging of DNA.

Q4. Differentiate between Euchromatin and Heterochromatin.

Q5, What was the work of Harshy and Chase? What did they prove?

Q6. How is DNA proved to be a better genetic material?

Q7. What is Transcription? How is it different in Eukaryotes from prokaryotes?

Q8. Draw a labelled diagram of an adapter molecule.

Q9. Explain translation process of peptide formation

Q.10. Show a replicating fork with complete labelling.

Q.11. How does a Lac Operon work in the presence of inducer?

Q12. DNA replication is semi conservative. How was it proved?

Q13. What is HGP? Mention its goals.

Q14. What is DNA fingerprinting? How is it done?

Q15. Define , Polymorphism, Satellite DNA, Bioinformatics, splicing

Q16. Expand VNTR, SNPs, UTR, snRNA.

Q17. If a double stranded DNA has 20% of cytosine, Calculate the percentage of adenine in the DNA?

Ch -8.. Human Health and Diseases

Q1. How does plasmodium cause disease in humans? Show its complete life cycle.

Q2. What are retro virus? Explain attack of retrovirus on human cell and its effect?

Q3. Give cause and symptoms of following diseases....Ascariasis, Amoebiasis, Dengue, Pneumonia, ringworm

Q4. Name the plant source of cocaine and opium. How do these drugs affect human system?

Q5. What is cancer? What are its types?

Q6. How can we diagnose Cancer and what are the treatment techniques used?

Q7.. What is primary and secondary lymphoid organs?

Q8, What are Auto immune disorders? Explain with example

Q9. List the harmful effects caused by alcohol and Drug abuse. What are the reasons you think, youth get attracted to these things? Explain any three factors

Q10. Expand....NACO, MALT, CMI, ELISA, AIDS.

Ch-10 Microbes in Human Welfare

Q1.. Explain the working of Sewage treatment plant.

Q.2. Explain use of microbes in household products

Q3. Give two –two examples ofalcoholic drinks prepared by distillation and without distillation method

Q4. Name the microbes from which cyclosporine- A and Statins are obtained. Also mention their uses.

Q5. What are properties of an antibiotic?

Q6. What is the use *of Aspergillus niger, Acetobactor aceti* and *Clostridium butylicum*?

Q7. Draw a will labelled diagram of a Biogas plant.

Q8. Give few examples of microbes used as biofertilizers.

Q9. What is Bt? Why and how is it used in agricultural practices?

Q10. Give a short note on Baculovirus.

Ch-11 Biotechnology-Principles and Procedures &

Ch- 12 Biotechnology and its Applications

Q1. Give uses of r-DNA technology in medical and agriculture field

Q.2 What is selectable marker in Plasmid PBR-322.?

Q3. Mention the role of Restriction enzymes, Gel-electrophoresis and PCR in biotechnology.

Q4. Draw a well labelled diagram of plasmid PBR-322.

Q5. Write the role of 'Ori' in plasmid.

Q6. Draw a bioreactor with labelling.

Q7. Explain the process of RNA interference.

Q8. How is genetically engineered insulin formed?

Q9. What is gene therapy procedure for ADA deficient person?

Q10. What is Bt? How is it used in agriculture?

Q11. Explain the process of forming a r-DNA .

Q12. What is a Palindromic sequence? Frame 4 Different palindromic sequences.

Q13. What are GMOs? How have GM plants been useful?

Q14. What are Transgenic animals? How are they useful to mankind?

Q15. Draw a well labelled diagram of Plasmid PBR322.

Q16. What are bioreactors? Draw a well labelled diagram of Stirred tank Bioreactor.

Q17. Explain briefly....PCR, Chitinase, Downstreaming process

Q18. State the principle used in ELISA.

Q19 What are two core techniques used in modern biotechnology?

Q20. What are Restriction Enzymes? How are they named? Explain with suitable example.

Ch- 13 Organism and Its population

Q1. Explain various types of interactions in a population with example.

Q2. Differentiate between Hibernation and Aestivation

Q3. Describe different Age pyramids. How does the study of these pyramids help policy makers?

Q4. What is sexual deceit? Explain with example.

Q5. Give a short note on adaptation in plants and animals of different habitats.

Q6. Predators help in maintaining species diversity in a community. Explain with example Q7.Define..Allen rule, conformers, regulators and population density

Q8. Explain the factors that affect the increase or decrease of population in an area.

Q9. What are various population attributes? Explain any four

Q10. What is the ecological principle behind the biological control method of managing with pest insects?

Ch- 15. Biodiversity and Conservation

Q1. What is the significance of slope of regression in an area-species relationship?

Q2. What are sacred grooves? What is their role in conservation?

Q3. What were the findings of David Tilman? Enlist the factors important for a stable biological community

Q4. Explain the Evil Quartet of biodiversity loss.

Q5. Explain biodiversity at various levels if biological organisation. Which level diversity rice and mango belongs to?

Q6. How do we conserve biodiversity *in situ* and *ex situ*? Explain with suitable examples

Q7. State the reasons that tropics account greater biological diversity.

Q8. Explain the theory given by Paul Ehrlich.

Q9. There were total five episodes of Mass Extinction of species since the origin of life on earth. The sixth Extinction is presently in progress. How is it different from the previous episodes? Explian

Q10. Introduction of Alien species in an area may cause decline or extinction of indigenous species. Explain with example.

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