Holiday Home Work

CLASS: - XII

SUBJECT – BIOLOGY

Make an investigatory project on the topics as discussed in the class . Some are given as a sample.

a) Effect of detergents on the growth of plants.

b) Effect of manures and fertilizers on the growth of plant

c) To study the breaking of seed dormancy by (i) Cytokinins (ii) Ethylene (iii) Water (iv) KNO_3.

Make a project file should have the following contents (a) title page (b) Index (c) Introduction (d) Methodology (e) Experiment and observation (f) Result and Conclusion (g) Bibliography

Answer the following questions ---

CH 8 : Human Health and Diseases --

1 What are lifestyle disease? How are they caused? Name any two such diseases.

2 If there are two pathogenic viruses one with DNA and other with RNA, which would mutate faster ?

3 Many secondary metabolites of plants have medicinal properties . But their misuse carry problems . Justify the statement with example .

4 Why do adolescents start taking drugs ? How can this be avoided ?

5 In your locality , if a person is addicted to alcohol, what kind of behaviourial changes do you observe in that person ? Suggest measure to overcome the problem .

6 What are recombinant DNA vaccines ? Give two examples of such vaccines and their advantages .

7 What are interferons ? How do they help in controlling the disease ?

8 Morphine is said to be an abused drug . Discriminate the term 'use' and 'abuse' of drugs based on this example.

9 Write the events that take place when a vaccine is introduced into the human body.

10 Why is a person with cuts and bruises following an accident given tetanus antitoxin ?

11 Mention one application for each of the following ---

(a) Passive immunization (b) Antihistamine (c) colostrum (d) Cytikinin-barrier

12 Name the type of immunity the colostrum provides to a newborn baby . Write giving an example where this type of immunity should be provided to a person .

13 Write causal organisms, symptoms , prevention and cure for the following----

Elephantiasis , Ascariasis , Amoebiasis, , malaria .

14 Explain the following--

(a) properties of acquired immunity (b) Activation of adaptive immunity

(c) autoimmune disease (d) A B O blood groups (e)AIDS

15 Name the various species of plasmodium that cause malaria in humans.

16 Describe the various types of antibodies.

17 Name various psychedelic substances obtained from cannabis.

18 Discuss heroin as addictive drug.

19 What are hallucinogens?

20 How is alcohol metabolized in the body?

21 What is the effect of carbon monoxide present in the tobacco smoke?

22 How does vaccination protect a PERSON FROM A DISEASE?

23 Define auto immune diseases. Give two examples.

24 Differentiate between –(a)anti body and antigen(b)benign and malignant tumours (c)sarcoma and carcinoma (d)B-cells and T-cells of the immune system (e)active and passive immunity.

25 What is cancer ? Explain three main types of cancer. Name at least two dangerous signals of cancer.

26 Describe the effect of alcohol on liver and nervous system.

27(a) Name the two types of lymphocytes involved in the specific immune system.

(b)Mention the two types of specific immunity they generate.

(c)Why is specific immunity considered to be unique in its function? Write any three special features to it.

28 What are opiates? How are they abused ?Give functions , adverse effects, withdrawal system and methods of deaddiction.

29 Discuss the measure of public hygiene.

30 Describe the short term effects of alcohol.

CH 9 - Strategies for enhancement in food production

31 Explain the following and discuss their importance for human welfare-

(a)hybridization (b)germplasm (c)nutritional quality (d)disease resistant varieties

(e)single cell protein (f)callus and suspension cultures (g)meristem culture (h) anther culture

(i) embryo culture (j)somatic hybridization (k) totipotency

32 How is section carried out in self pollinated and cross pollinated crops?

33 How are somaclonesproduced ? how are they different from somatic hybrids.

34 List any four objectives that you would recommend biofortification.

35 Expand MOET. Explain the procedure? Give an example?

CH 10: Microbes in Human Welfare

1 Explain the process of sewage water treatment in detail .

2 What are methanogens ? Explain the biogas formation in a biogas plant.

3 What are harmful effects of the chemicals such as insectisides and pesticides .

4 What are biofertilisers ? Give at least two examples .

5 How do mycorrhizal fungi help the plants harbouring them .

6 What roles do enzyme play in detergents that we use for washing clothes ? Are these enzymes produced from some unique microorganisms ?

7 Explain the different steps involved during primary treatment phase of sewage .

8 Explain the function of “anaerobic sludge digester” in a sewage treatment plant .

9 What is a bioreactor ? Draw a labeled sketch of sparged-stirred-tank bioreactor. Write its application and its functioning.

10 How does addition of a small amount of curd to fresh milk help formation of curd ? Mention a nutritional quality that gets added to the curd .

11 How is Bt cotton produced ? Explain the mechanism by which the plant is able to resist the infestation by cotton ballworm .

12 Bottled fruit juices bought from the market are clearer as compared to those made at home . Why?

13 Why large holes are present in “Swiss cheese” ?

14 How is primary effluent is treated in a sewage treatment plant before it can safely be released into rivers or streams ?

15 Explain “single cell proteins” .

16 During the secondary treatment of the primary effluent how does a significant decrease in BOD occur ?

17 Which bacterium has been used as a clot buster ? What is the mode of action ?