Avinashilingam Institute for Home Science and Higher Education for Women
Coimbatore-641 043

Bachelor's Degree Examination – November 2017

V Semester

Class : III UG **Time :3 hours**
Major : Food Science and Nutrition **Max. Marks: 100**

15BFNC14 Food Biotechnology

Part-A **10 x 1=10**

Choose the correct answer

1. An enzyme that cleaves nucleotides from their 5' or 3' ends is called as
   a. Exonuclease b. excinuclease c.exon d. None of the above.

2. Enzymes catalyzing condensation reactions using th e energy of ATP or some other high energy compound is called as
   a.leucine b.leptotine c.ligase d. peptidase.

3. The organic mass that is useful as an energy source or for its constituent chemicals is
   a. biofuel b. biogas c. biomass d. biolistics.

4. A small extra chromosomal self replicating circular DNA molecule found in certain bacteria is
   a. plasmids b.phasmids c.cosmids d. bacteriophage.

5. --------- is a compound essential for a metabolic pathway.
   a.merodiploid b.meristem c.mericlinical d. metabolite.

6. This is a molecular electronic device that converts the concentration of a biological component into electronic signals through a transducer.
   a. biosensor b. biosphere
   c. bioreactor d. None of the above.

7. A dried mass of a pure sample of protein rich microorganism is called as
   a. single copy protein b. single cell protein
   c. single copy protein d. none of the above.

8. An organism containing DNA sequences that it normally does not have in its genome is called as
   a. transgene b. transient c. transgenic d. transformant.

9 .Micropropagation is used for ----- types of tissues.
   a. excised embroyos b.shoot tips c.bits of stems d. all of the above.

10. Molecular cloning is also called as ---- cloning.
   a. gene b. bio c. mono d. mutant.

Part B 5 X 6=30

Answer the following

Answer should not exceed 400 words or two pages

11.a. Explain the general structure of bioreactors.

(or)

11.b.Differentiate between exonucleases and endonucleases.

12.a. Write on Golden rice.

(or)

12.b. Write on Bt brinjal.

13.a. Explain safety assessment of transgenic crops.

(or)

13.b. Explain bacteriophage.

14.a. Write on bacterial growth curve.

(or)

b. What are the types of bioreactors?

15.a. Explain micropropagation.

(or)

b. How is citric acid produced?

Part C 5 x 12=60

Answer the following

Answer should not exceed 800 words or four pages

16.a. Discuss the basic concepts of downstream processing.

(or)

b. Explain the concepts of molecular cloning.

17.a.Write on the action of primary metabolites.

(or)

b. Discuss the action of secondary metabolites.

18.a. Explain the role of enzymes in food industry.

(or)

b. Explain the methods of immobilization of enzymes.

19.a.Explain the steps in genetic engineering.

(or)

b. Explain the applications of genetic engineering.

20.a. Explain biochips and its uses in detail.

(or)

b. Explain about synthesis of SCP.

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