



# AJEENKYA

## D Y PATIL UNIVERSITY

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### End Term Examinations (December 2018)

**School :** Engineering

**Program:** B.tech Biotechnology

**Course:** Fundamentals of Biotechnology & Biology    **Course Code:** BTE201

**Semester:** III

**Max Marks:** 50

**Duration (mins) :** 120

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Note : 1. Figures to the right indicates full marks.

Answer any Ten (10) questions.

Q1. What are restriction enzymes ? Give examples. What is blunt end and sticky end ? (5)

Q2. Define a plasmid. What are R plasmid, F Plasmid, col Plasmid? (5)

Q3. Discuss the historical development of Biotechnology. (5)

Q4. How can you use spectrophotometry to measure bacterial growth? Explain. (5)

Q5. Answer true or False. (5)

A) Healthcare biotechnology is termed as Red Biotechnology.

B) Agriculture biotechnology is called White Biotechnology.

C) Wine is made from Barley.

D) Aspartame is an artificial sweetener.

E) All enzymes are proteins.

Q6. Fill in the blanks (5)

A) Citric acid is made by fermentation using a fungus called .....

B) Xanthan is produced by a microorganism named.....

C) Glutamic acid is made by a bacterium called.....

D) An example of SCP is.....

E) To produce Idli a bacterium .....is used.

Q7. Define antibiotics. Discuss the utility of antibiotics. (5)

Q8. What are the uses of monoclonal antibodies? Describe. (5)

Q9. Write a short note on Hematopoietic growth factors and Insulin. (5)

- Q10. Write a note on Autoclave and heat sterilization. (5)
- Q11. Define the Classes of microorganisms according to pathogenicity. (5)
- Q12. Write the differences between Light and Electron Microscope. (5)
- Q13. What is the principle of Gram staining? Explain with a diagram. (5)
- Q14. Define the terms \_ Sterilization, Disinfection, Antisepsis, Chemotherapy, Sanitization. (5)
- Q15. Describe briefly the steps of Beer production from malting to finishing. (5)
- Q16. Discuss the method and utility of recombinant chymosin production in cheese industry. (5)
- Q17. Define Defined Media, Complex Media, Enriched Media, Selective media. (5)
- Q18. What is Somatic Cell Nuclear Transfer? How is it useful to make a transgenic animal? Discuss. (5)
- Q19. Write a note on Bt toxins and its utility in making a transgenic plant. (5)
- Q20. Enlist the improvement in crop characteristics undergoing genetic modification. (5)
- Q21. Enlist the strength and weaknesses of microbial bioremediation of oil spills. (5)
- Q22. How can biotechnology help in waste water treatment? Comment. (5)
- Q23. Write a note on selection of producer strains and enzyme production with examples. (5)
- Q24. "Industrial applications of enzymes are many" – elaborate this statement. (5)