

Barkatullah University (Open Book) Examination Dec. 2020

M.Sc Second Semester(ATKT)

MICROBIOLOGY

MB – 201 (Paper – I) Molecular Biology and Genetic Engineering

Max. Marks – 5x17 = 85

Note:- Attempt all questions:

- a. Explain any one type of plasmid and its applications.
- b. Explain transgenic animals and their uses.
- c. Discuss different vectors used for genomic library construction.
- d. Describe Chemical method of DNA sequencing.
- e. Explain Agro bacterium mediated transformation and its application

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MB – 202 (Paper –II) MICROBIAL METABOLISM

Max. Marks – 5x17 = 85

Note:- Attempt all questions:

- a. Discuss the concept of free energy and entropy.
- b. Describe second law of thermodynamics.
- c. Write a detail note on Biosynthesis of lipids.
- d. Discuss Nitrogen assimilation pathway and its functions.
- e. Explain Nitrogenase complex and its functions.

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MB – 203 (Paper –III) FOOD MICROBIOLOGY

Max. Marks – 5x17 = 85

Note:- Attempt all questions:

- a. Discuss intrinsic parameters of food.
- b. Describe spoilage of Meat and Meat products.
- c. Explain Microscopic sampling technique for detection of food spoilage.
- d. Write a brief note on food preservations with chemicals.
- e. Explain with examples any two type of food borne diseases.

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MB – 204 (Paper –IV) INDUSTRIAL MICROBIOLOGY

Max. Marks – 5x17 = 85

Note:- Attempt all questions:

- a. Explain screening of industrially important strain from Eco-system.
- b. Explain industrial production of Amylase enzyme.
- c. Explain industrial production of vaccines.
- d. Write a note on analysis and quality control of industrial products.
- e. Discuss Intellectual Property Rights (IPR)