



UNIVERSITY OF THE PUNJAB
B.S. 4 Years Program / Eighth Semester – 2019

Paper: Bacteriology
Course Code: ZOOL-429 Part – I (Compulsory)

Time: 15 Min. Marks: 10

Roll No. in Fig.

Roll No. in Words.

Signature of Supdt.:

ATTEMPT THIS PAPER ON THIS QUESTION SHEET ONLY.

Division of marks is given in front of each question.

This Paper will be collected back after expiry of time limit mentioned above.

Q.1. Encircle the correct option.

(10x1=10)

1. Which of the following structures contains genes for enzymes and antibiotic resistance?

- a) Plasmid b) Pilus c) Capsule d) Plasma Membrane

2. Which of the following is the most important structure related to microbial attachment to cells?

- a) Flagellum b) Plasmid c) Peptidoglycan d) Glycocalix

3. Lipopolysaccharide layers are found in:

- a) all organisms b) all microorganisms c) Gram +ive bacteria d) Gram -ive bacteria

4. Pasteur credited with discovery of

- a) Anthrax vaccine b) Rabies vaccine c) Autoclave d) all of the above

5. Bacterial capsules are best demonstrated by

- a) Methylene blue stain b) Grams-II stain c) Negative staining d) Impregnation technique

6. Following are true of Gram negative bacterial cell wall compared to Gram positive bacteria except :

- a) Presence of lipopolysaccharide b) Presence of Teichoic acid c) Presence of sulphur containing amino acids d) Thinner

7. Sporulation occurs in :

- a) Lag phase b) Log phase c) Stationary phase d) Decline phase

8. Which of the following enzyme is absent in anaerobes :

- a) Catalase b) Cytochrome peroxidase c) Pyruvate carboxylase d) All of the above

9. What is lyophilisation ?

- a) Means of destroying bacteria b) A method of sterilization c) Freeze drying of bacteria d) Powdering of bacteria

10. Following are sterilized by hot air oven except:

- a) Glassware b) Swabs c) Liquid paraffin d) Vaccines



ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Q.2. Give short answers of the following.

(10x2=20)

- i. Give the mode of action of iodine.
- ii. Differentiate between selective media and differential media.
- iii. Differentiate between disinfectant and antiseptic.
- iv. Give characteristics of ideal chemotherapeutical agent.
- v. What is meant by pathogenicity and virulence factor?
- vi. Describe the mode of action of Penicillin.
- vii. Define fractional sterilization.
- viii. How moist heat is more effective than dry heat.
- ix. What is meant by viable cell? How it count.
- x. What is meant by inoculum and mixed culture.

Long Questions (3 x 10 = 30)

- Q.3 a What is meant by microbial growth? How microbes control using low temperature?
b Discuss the methods of culture preservation.
- Q.4 a Write about the oxygen requirements for culturing.
b Discuss the growth curve in detail.
- Q.5 a Write the comprehensive note on development of drug resistance.
b How radiations are destructive to microorganism.