



UNIVERSITY OF THE PUNJAB

B.S. 4 Years Program / Eighth Semester – 2020

Paper: Microbiology

Course Code: BOT-415 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. Why a bacterium is called a prokaryotic organism?
 - a) A bacterium is a one-cell organism that does not have a distinct nucleus.
 - b) A bacterium is a one-cell organism that has a distinct nucleus.
 - c) A bacterium is a multicell organism that does not have a distinct nucleus.
 - d) A bacterium is a multicell organism that has a distinct nucleus.
2. When flagella are located around the entire bacterial cell, the arrangement is called
 - a) polar
 - b) random
 - c) bipolar
 - d) peritrichous
3. The optimum temperature for an organism is the one at which
 - a. it grows with the shortest generation time
 - b. it has the longest time between cell divisions
 - c. it is near one extreme of its range of tolerated temperatures
 - d. its enzymes begin to denature
4. Which of the following contains polysaccharide?
 - a. Gram negative cell wall
 - b. pili
 - c. flagella
 - d. plasmids
5. Which of the following contains DNA?
 - a. Gram positive cell wall
 - b. capsule
 - c. pili
 - d. plasmids
6. Which capsid symmetry is exhibited by most of the phages?
 - (a) Helical
 - (b) Icosahedral
 - (b) Complex
 - (d) None

7. What was the first successful solid medium for colony purification of bacteria?

- a) Agar
- b) Potato
- c) Gelatin
- d) Meat

8. Who first suggested using the thickening agent most commonly used for colony purification today?

- a) Louis Pasteur
- b) Robert Koch
- c) Fannie Hesse
- d) Richard Petri

9. What was the first virus shown to cause disease?

- a) Polio
- b) Hepatitis
- c) Tobacco mosaic virus
- d) Potato blight

10. The microorganism which obtain their energy from chemicals are

- a) Phototrophs
- b) Chemotroph
- c) Organotrophs
- d) Autotrophs



ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Q.2. Answer the following questions briefly. (10x2=20)

1. Write down the definition of Methenogenic bacteria..
2. What are Cyanobacteria?
3. How many types of fermentation occur in Bacteria?
4. How many basic groups of bacteria present?
5. What effects are caused by virus on metabolism of a plant?
6. How a bacterial genetic material can be transfer?
7. How many types of flagella are found on a bacterial cell wall?
8. Differentiate between log and decline phase of bacterial growth?
9. Define Organtrophic bacteria.
10. Give some common symptoms of virus infected plants?

Q.3. Answer the following questions. (3x10=30)

- (i) Describe different types of bacteria on the basis of nutrition
(10 Marks)
- (ii) a. Write down the effects of pH and Temperature on bacterial growth. (05 Marks)
b. How can a microorganism degrade pollutants
(05 Marks)
- (iii) a. Describe life cycle of a Bacteriophage? (05 Marks)
b. Write a note on virus transmission. (05 Marks)