



UNIVERSITY OF THE PUNJAB

B.S. 4 Years Program /Eighth Semester – 2019

Roll No. in Fig.

Roll No. in Words.

Paper: Microbiology

Course Code: BOT-415 Part – I (Compulsory)

Time: 15 Min. Marks: 10

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.

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Signature of Supdt.:

Q.1. Encircle the correct option.

(10x1=10)

1. The transmission of a double stranded piece of DNA from a donor bacterium to recipient through a tube is known
 - (a) Transformation
 - (b) Transduction
 - (c) Binary fission
 - (d) Conjugation
2. The virus that attack bacteria is called
 - a. Plant virus
 - b. Animal virus
 - c. Bacteriophage
 - d. None of these
3. A typical virus consists of
 - b. DNA
 - b. Protein
 - c. Lipid
 - d. Both a & b
4. TMV is usually caused by
 - a. Virus
 - b. Bacteria
 - c. Fungi
 - d. Mycoplasma
5.consists of two or more lenses in series. The image formed by the first lens is further magnified by another lens.
 - b. Simple Microscope
 - b. Phase contrast Microscope
 - c. Scanning Microscope
 - d. Compound Microscope
6. are bacteria that are cell wall deficient and do not possess a stable morphology.
 - b. Archea Bacteria
 - b. Bacilli
 - c. Mycoplasmas
 - d. Staphylococcus
7. Flagellin is present in
 - (a) Mitochondria
 - (b) Spore
 - (c) Filament
 - (d) Cysts
8. Round shaped bacteria are
 - a. Cocci
 - b. Bacilli
 - c. Spirilla
 - d. All of these
9. A bacterium with a single polar flagellum is called:
 - (a) Monotrichous
 - (b) Lophotrichous
 - (c) Peritrichous
 - (d) Amphitrichous
10. The concept that living organisms arise from nonliving material is called:
 - (a) Biogenesis
 - (b) cell theory
 - (c) Spontaneous generation
 - (d) Relativity



ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

SHORT QUESTIONS (20- Marks)

Q. 2. Answer the following questions briefly.

1. Explain the structure of TOBACCO MOSAIC VIRUS (TMV).
2. What are PLASMIDS? Give their significance.
3. Define Sterilization.
4. What is agar culture media.
5. What is pleomorphic shape of bacteria?
6. What is pure culture technique?
7. What is the difference between Gram positive and Gram negative cell wall of bacteria?
8. What is the effect of pH on the growth of bacteria?
9. What is binary fission?
10. What are three methods for transfer of DNA in bacteria?

Q. 3. Answer the following questions.

(30)

1. (a) Give an account on symptoms of Plant infection by viruses
(05 Marks)
(b) Draw labeled diagram of ultrafine structure of flagella **(05 Marks)**
2. (a) Write a short note the entry and multiplication of Bacteriophage.
(05 Marks)
(b). Write a note on photosynthesis of bacteria. **(05 Marks)**
3. Explain the metabolism of a bacterial cell with different cycles
(10 Marks)