



UNIVERSITY OF THE PUNJAB

Seventh Semester – 2019

Examination: B.S. 4 Years Program

Roll No. in Fig.

Roll No. in Words.

PAPER: General Microbiology
Course Code: ZOOL-415 Part-I (Compulsory)

MAX. TIME: 15 Min.

MAX. MARKS: 10

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Signature of Supdt.:

Attempt this Paper on this Question Sheet only.

Please encircle the correct option. 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 right answer, cutting and overwriting is not allowed. (1x10=10)

- i. _____ Bacteria require low level of oxygen for growth and cannot tolerate atmospheric oxygen level
- A) Aerobic
 - B) Anaerobic
 - C) Facultative
 - D) Microaerophilic
 - E) None of these
- ii. Numerical Taxonomy depends on
- A) % similarity index of strains to be compared
 - B) Intuitive method of classifying bacteria
 - C) Genetic relatedness
 - D) Predictability of a classification scheme
 - E) None of these
- iii. The descendants of a single isolation in pure culture are called as
- A) Species
 - B) Type species
 - C) strain
 - D) None of these
- iv. Endospores are heat resistant because it contains:
- A) Calcium-dipicolinic acid
 - B) Poly- β -hydroxybutyrate
 - C) Polyisoprenoid
 - D) Heteropolysaccharides
 - E) None of these
- v. Which microorganism cannot be grown on artificial media?
- A) Protozoa
 - B) Yeast
 - C) Algae
 - D) Virus
 - E) None of these
- vi. Viable bacterial cells can be counted by:
- A) Turbidimetric method
 - B) Direct microscopic count
 - C) Membrane filter count
 - D) Electronic enumeration of cells
 - E) None of these

P.T.O.

- vii. Application of ionizing radiations to sterilize biological materials is
- Incineration
 - Cold sterilization
 - Fractional sterilization
 - Desiccation
 - None of these
- viii. Pellicle is present in _____:
- Bacteriophage
 - Protozoa
 - Algae
 - Fungi
 - None of these
- ix. _____ was the first person to recognize significance of bacterial and other microbes in disease:
- Robert Hooke
 - Roger Bacon
 - Leeuwenhoek
 - Anton Von Plenciz
 - None of these
- x. During this phase, the microbial cells divide steadily at a constant rate and log of the number of cells plotted against time results in a straight line
- Lag phase
 - Exponential phase
 - Stationary Phase
 - None of these



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PAPER: General Microbiology
Course Code: ZOOL-415 Part – II

MAX. TIME: 2 Hrs. 45 Min.
MAX. MARKS: 50

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

- Q.2** Give short answer of the following 2x10=20
- Sulphur dependent archeobacteria
 - Distinctive characters of algae
 - Type strain
 - Genetic relatedness and taxonomy
 - Distinguish between lithotrophs and organotrophs
 - Oxygen toxicity for microbes
 - Nosocomial infections
 - Membrane filter count
 - Chemical composition of bacterial cell wall.
 - Animalcules
- Q.3** Write brief note on the following 4 x 5 = 20
- Principal gases that affect bacterial growth.
 - Preservation by overlaying cultures with mineral oil
 - Arrangements of bacterial flagella.
 - Procedure for isolating pure culture.
- Q.4** Discuss comprehensively about colony characteristics with the help of labeled diagrams. 10