



UNIVERSITY OF THE PUNJAB

Seventh Semester – 2019

Examination: B.S. 4 Years Program

Roll No. in Fig.

Roll No. in Words.

PAPER: Applied Microbiology

Course Code: ZOOI-417 Part-I (Compulsory)

MAX. TIME: 15 Min.

MAX. MARKS: 10

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. The susceptibility of a microbe to antibiotic and other chemotherapeutic agent can be determined by
 - A) Paper disk plate method
 - B) Tube dilution method
 - C) Streaking method
 - D) Both A and B
 - E) None of these
- ii. Which is most effective physical method to kill bacteria
 - A) Dry heat
 - B) Moist heat
 - C) Refrigeration
 - D) Both A & B
 - E) None of these
- iii. The process in which dewatered sludge undergoes decomposition, usually within the thermophilic temperature range is termed as
 - A) Composting
 - B) Sludge digestion
 - C) Acid digestion
 - D) None of these
- iv. During BIOFILM formation, specific adhesion is formed by means of:
 - A) Starch
 - B) Water channels
 - C) Lectins
 - D) Proteins
 - E) None of these
- v. _____ technique improves the recovery of metals from an ore
 - A) Adsorption
 - B) Commensalism
 - C) Bioremediation
 - D) Bioleaching
 - E) None of these
- vi. The term antibiosis was first defined by _____ in 1889
 - A) Vuillemin
 - B) Paul Ehrlich
 - C) Tyndall
 - D) None of these

P.T.O.

- vii. Low concentration of various dyes inhibit the growth of
- Gram negative bacteria
 - Gram positive bacteria
 - Both A and B
 - None of these
- viii. Penicillins are a class of _____ antibiotics
- Gamma lactam
 - Beta lactam
 - Alpha lactam
 - None of these
- ix. Pseudomonas falls in which biochemical type of microorganisms in milk
- Acid producers
 - Ropy fermentation
 - Gas producers
 - Proteolytic
 - None of these
- x. The process in which microorganism convert ammonia to nitrate is
- Denitrification
 - Ammonification
 - Fixation
 - Nitrification
 - None of these



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PAPER: Applied Microbiology
Course Code: ZOOL-417 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

- Write the name of bacteria involved in food and water born infection.
- What is meant by microbial spoilage of food? Briefly discuss
- Write general scheme for detection of microorganism of food.
- What is meant by antibiotic? Write the name of four antibiotics.
- Differentiate between endotoxin and exotoxin.
- Write briefly about antibodies.
- What is chemotherapeutic agent? Give examples.
- How alcohol kill the microorganism.
- Discuss rate of death of microorganism.
- Briefly write about human therapy.

Q.3 Write brief note on the following 4 x 5 = 20

- Role of microorganism in mining.
- Mode of action of formaline and heavy metals to control the microorganisms.
- Complementary system
- Drug resistance

Q.4 Write a detail note on types of hypersensitivity.