



'সমানো মন্ত্র: সমিতি: সমানী'

UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 4th Semester Examination, 2022

GE2-P2-MICROBIOLOGY (GE-3.1 & 4.1) (INSTRUCTION)

Time Allotted: 4 Hours

Full Marks: 20

INSTRUCTION TO THE EXAMINERS (Not for Students)

The question paper contains PAPER-3.1 & PAPER-4.1. The Candidates are required to answer any *one* from the *two* papers. Candidates should mention it clearly on the Answer Book.

PAPER-3.1: BACTERIOLOGY AND VIROLOGY

1. Each student should be provided with
 - (i) Bacterium (A), half of the students should be provided with gram negative culture and half of the students should be provided with gram positive culture.
 - (ii) Slides, spirit lamps, inoculation loops.
 - (iii) Gram Stains (Crystal Violet, Iodine, 95% alcohol, Safranin).
 - (iv) Microscopes.
2. Each student should be provided with
 - (i) Broth culture sample (B) of Bacterium.
 - (ii) One NA plate.
 - (iii) Inoculation loop and other essential things to carryout experiment in aseptic conditions. (Streak plate).
3. Laboratory records should be submitted by each student.
4. Viva-voce should be conducted on practical and theory paper studied in semester.

PAPER-4.1: MEDICAL MICROBIOLOGY AND IMMUNOLOGY

1. Each student should be provided with for Agar Cup diffusion method.
 - (i) Different concentration of antibiotics (0, 10, 25, 50, 100, 250, 500, 1000 µgm/ml of Ampicillin).
 - (ii) Cork borer Bacterial Culture (A).

- (iii) Sterile Swab, Forceps.
- (iv) 2 Mueller-Hinton agar plates / NA plate and other essential things to carryout experiment aseptically.

(Half of the students should get gram positive and other half should get gram negative Bacterium).

2. Each student should be provided with
- (i) 2 tubes of MRVP broth,
 - (ii) Bacterial Culture (B),
 - (iii) Methyl red indicator,
 - (iv) VP reagent (alpha naphthol and 40% Koh).

For Indole test

- (i) One tube containing tryptophan broth
- (ii) Bacterial Culture B
- (iii) Kovacs Reagent and other essential things to carryout experiment in aseptic condition.

Bacterial Culture B → Fecal / non-fecal Coliform broth Culture. Distribute half of the students with fecal Coliform Culture and other half with non-fecal Coliform Culture.

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