SRI Y.N. COLLEGE (Autonomous)

(Affiliated to Adikavi Nannaya University) Trice accredited by NAAC with 'A' Grade
Recognized by UGC as College with Potential for Excellence
NARASAPUR – 534 275

Syllabus – II Year PARA MEDICAL TECHNOLOGY

Semester – III

MICROBIOLOGY – 1 (Theory) – Paper - 3

UNIT – 1

HISTORY OF MICROBIOLOGICAL SCIENTISTS :-

History of Medicine, Antony von, Leeuwenhoek, Robert Koch, Edward Jenner, Joseph Lister, Louis Pasteur.

UNIT - 2

MICROSCOPY & STERILISATION :-

Principle, working and maintenance of compound Microscope, Principle of fluorescent microscope and Dark field microscope. Classification of sterilisation.

UNIT - 3

PROCESSING OF CLINICAL SPECIMEN :-

Preparation of Direct smear and staining, Different techniques of Inoculation, Hanging drop preparation and its use, Preparation and Inoculation of various media.

UNIT - 4

BACTERIA:-

Introduction, Morphology and classification of Bacteria, Anaerobic methods of cultivation of Bacteria.

UNIT - 5

VIROLOGY :-

Classification, general properties and cultivation of imp. Pathogenic viruses such as polio, Hepatitis, Rabies, HIV and Dengue.

PRACTICALS

1. Microscopes – Types and Operation.
2. Staining of Blood Smear.
3. Morphology and lab diagnosis of E.Coli.
4. Fungal examination by Wet preparation.
5. Viral disease research laboratory (VDRL) test.
6. WIDAL Test.
7. ELISA Test.
8. Collection of Specimen.

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Semester – III

II YEAR PARAMEDICAL TECHNOLOGY

MICROBIOLOGY – 1 - PAPER - 3

NOTE: Question Bank: Examiners are requested to choose questions from Question Bank.

SHORT ANSWER TYPE QUESTIONS :-

1. Contributions of Edward Jenner and Joseph luster in Microbiology.
2. Contributions of Robert Koch and Antony Van Leeuwenhoek.
3. Mention an two contributions of Louis Pasteur.
4. Principle of compound microscope.
5. Principle of Dark field microscope.
6. Principle of Fluorescent microscope.
7. Care and maintenance of compound microscope.
8. Sterilisation.
9. Chemical disinfections.
10. Preparation of Direct Smear.
11. Hanging drop preparation.
12. Different techniques of inoculation.
13. Inoculation of various media.
14. Structure of Bacterial cell.
15. Classification of Bacteria.
16. Write a note on Hepatitis virus.
17. Write a note on Rabies virus.

ESSAY QUESTIONS :-

1. Explain about the contributions of following scientists in Microbiology.

   a) Robert Koch b) Edward Jenner c) Louis Pasteur.

2. Write the contributions of following scientists in Microbiology.

   a) Antony Van Leeuwenhoek. b)Louis Pasteur c) Joseph luster

3. Write briefly about the contributions of all scientist in the field of Microbiology.
4. Draw the neat diagram of compound microscope and locate the various parts of
5. Write the construction, care and maintenance of compound microscope.
6. Write about the fluroscent microscope.
7. Define sterilisation and mention the classification of sterilisation.
8. Write the classification of sterilisation and describe the heat sterilisation.
9. Define chemical disinfections and explain briefly about the various disinfect used in sterilisation.
10. Write about the preparation of direct smear and staining.
11. Write about the different techniques of inoculation for isolation of bacteria.
12. Write about the hanging drop preparation and its use.
13. Describe the morphological classification of bacteria.
14. Draw the neat diagram of bacteria and mark the different parts of it.
15. Write about the following.

    a) Nucleus b) Mesosomes c) Cell wall.

16. Write about physical, chemical anaerobic culture methods of cultivation.
17. Briefly explain about the morphology and lab diagnosis of HIV?
18. Briefly explain about the morphology and lab diagnosis of Hepatitis – B Vir
19. Define virology? Write the classification of Virus?

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II YEAR PARAMEDICAL TECHNOLOGY

Semester – III

Microbiology – 1 Paper – 3

Time : 3 Hrs. Max. Marks : 75

PART - I

Answer any Five of the following.
Draw a neat labeled diagram whenever necessary. **5 x 5 = 25M**

1. Contributions of Robert Koch and Antony Van Leeuwenlock.
2. Mention any two contributions of Louis Pasteur..
3. Care and maintenance of Compound microscope..
4. Principle of Fluroscent microscope .
5. Sterilisation.
6. Chemical disinfectants.
7. Structure of Bacterial cell.
8. Different techniques of Inoculation.

PART – II

Answer Five Questions choosing at least TWO Question from each section A&B.
Draw a neat labeled diagram whenever necessary. **5 x 10 = 50M**

SECTION - A

9. Explain about the contributions of following scientists in Microbiology.

   a) Robert Koch b) Edward Jenner c) Louis Pasteur
10. Write briefly about the contributions of all scientist in the field of microbiology.
11. Write the construction, care and maintenance of compound microscope.
12. Draw the neat diagram of compound microscope and locate the various parts of it.
13. Define sterilisation and mention the classification of sterilisation.

SECTION - B

14. Write the classification of sterilisation and describe the heat sterilisation.
15. Draw the neat diagram of bacteria and mark the different parts of it.
16. Describe the morphological classification of bacteria.
17. Briefly explain about the morphology and lab diagnosis of HIV.
18. Define virology? Write the classification of virus.

BLUE PRINT :

PAPER 3 BLUE PRINT FOR QUESTION PAPER SETTERS

Unit No. & Name	Essay Questions 10 Marks	Short Answers 5 Marks	Marks allo the ur
UNIT – 1 History of Microbiological Scientists	02	01	25
UNIT – 2 Microscopy & Sterilisation	02	02	30
UNIT – 3 Processing of Clinical specimen	02	01	25
UNIT – 4 Bacteria	02	01	25
UNIT – 5 Virology	02	01	25