FACULTY OF SCIENCE
B. Sc. I Year Practical Examination 2019-2020
Subject: MICROBIOLOGY (New Syllabus)
Paper: I (Introductory Microbiology)
Question Bank

Time: 2 Hours **Max. Marks: 50**

I Major Experiment Questions **(1X20=20 Marks)**

1. A light compound microscope, stage micrometer and ocular micrometer are provide to you. Calibrate the microscope for its measurement in 10 X (low power) and 45 X (high power). Report the calibrated values in each magnification.
2. A calibrated microscope arranged with ocular micrometer is provided to you. Prepare a slide of microscopic object (bacteria & fungal spores) and measure the size of object with the help of calibrated ocular micrometer in low power and high power. Report the result and demonstrate your observation.
   (Note: Internal examiner is required to pre-calibrate the microscope and give the calibrated values in consultation with co-examiner).
3. A bacterial pure culture is provided to you. Prepare the smear of same and stain by differential (Grams) staining method. Observe the microscopic characteristics of stained culture and report the morphology, arrangement and staining nature. Demonstrate your observation.
4. Stain the given bacterial culture by endospore staining and report your observation by demonstrating your observed field.
5. Stain the given bacterial culture by flagellar staining and report your observation by demonstrating your observed field.
6. An actively growing culture is provided to you. Prepare a smear and stain by capsule staining method and report your observation.

II. Minor Experiment Questions **(1X10=10 Marks)**

7. Demonstrate the preparation of agar plates and slants. Explain their applications
8. Demonstrate streak & spread plate technique for isolating pure cultures.
9. Demonstrate pour plate technique. Explain its advantages and disadvantages
10. Demonstrate serial 10 fold dilution method and explain.
11. A bacterial culture is provided to you. Identify the type of microorganism by its biochemical reactions.
12. Demonstrate the given bacterial motility by hanging drop method. Write the principle

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II. Specimen for spotting **(5X3=15 Marks)**

13. Microscope
14. Inoculation loop/needle
15. Nutrient agar plate
16. Nutrient agar slant
17. Agar deep tubes
18. Autoclave
19. Hot air oven
20. Filtration apparatus
21. Streak plate
22. Spread plate
23. Gram positive bacilli
24. Gram positive cocci
25. Gram negative bacilli
26. Nostoc
27. Spirulina
28. Aspergillus
29. Rhizopus
30. Saccharomyces
31. Pencillium
32. Electron Microscopic image of TMV
33. Electron Microscopic image of HIV
34. Indole test
35. Simmon's citrate slant

III. Record & Viva **(5 Marks)**

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Model Question Paper

Time: 3 Hours

Max..Marks: 50

I.	Major Experiment question	(1X20=20 Marks)
II.	Minor Experiment question	(1X10=10 Marks)
III.	Spotters	(5X3=15 Marks)
	A)	
	B)	
	C)	
	D)	
	E)	
IV.	Record & viva	(5 Marks)

04/11/19

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