

- h) _____ is site of action of penicillin
- | | |
|-------------------|--|
| i) $\beta(1-4)$ | ii) peptide between NAM and tetrapeptide |
| iii) tetrapeptide | iv) <u>cross</u> links |

Q2. Attempt any two of the following . [16]

- Describe in detail the Carl Woese's Three Kingdom classification system.
- Write an essay on Gram Negative cell wall
- What are Plasmids and explain types of Plasmids.

Q 3. Attempt any four of the following. [16]

- Alexander Flemming
- Importance or useful aspects of bacteria
- Mesosomes
- Peptidoglycan
- Magnetosomes
- Viruses

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B.Sc. Microbiology (Part 1)
Preliminary Examination (Paper II)
Sub code-DSC 25A

Date : 12/01/2023 Day: ~~Wednesday~~ Thursday.

Time: 1:00pm to 3:00pm

Total marks-40

Instructions: 1) All questions are compulsory.

2) Figures to right indicate full marks.

3) Draw neat and labeled diagrams wherever necessary.

Q1. Fill in the blanks by choosing correct alternative .

[8]

1. In compound microscope the image of bacteria is observed when it is magnified _____ times.

- a) 1000 b) 100 c) 10 d) 10000

2. Alcohol is used as _____ in Gram staining.

- a) Mordant b) Decolourising agent
c) Counter stain d) Secondary stain

3. _____ is used for illumination in the light microscope.

- a) Visible light/U.V Light b) Electrons
c) Photons d) Neutrons

4. Glasswares are sterilized by

- a) Incineration b) Hot air oven
c) Filtration d) Dessication

5. _____ is used in sterilization of rooms.

- a) Beta-propiolactone b) Formaldehyde
c) Chlorine d) Ethylene oxide

6. The refractive index of air is _____

- a) 1.8 b) 0.1
c) 1 d) 1.5

7. _____ is counter stain in Gram staining

- a) Safranin
- b) Alcohol
- c) Crystal violet
- d) Gram's Iodine

8. _____ is example of neutral stain

- a) Methylene blue
- b) Giemsa's stain
- c) Congo red
- d) safranin

Q2. Write a short note on (any four)

[16]

- 1. Cell wall staining
- 2. Phenol and phenolic compounds
- 3. Pasteurization
- 4. Resolving power
- 5. Simple staining
- 6. Seitz filter

Q3. Attempt any two of the following

[16]

- 1. Describe in detail Radiations for sterilization.
- 2. Draw ray diagram and explain the principle and working of Compound Microscope.
- 3. Describe in detail mechanism of Gram staining.
- 4. What are stains, explain types of stains in detail.