

**Yashwantrao chavan college of Science, Karad, B.Sc. (Part-I)**  
**( paper IV)**  
**BASICS OF MICROBIOLOGY**

**Question Bank**

**Q 1) Answer the following questions choosing the correct alternatives given below them**

1 ) -----is a basic stain

- a) congo red
- b) Methylene blue
- c) Nigrosine
- d) crystal violet

2) A vitamin solution can be sterilized by -----

- a) Moist heat
- b) Dry heat
- c) Filtration
- d) Chemicals

3) Acidic dye has ----- charge on its chromophore group.

- a) Positive
- b) Negative
- c) Neutral
- d) None of these

4) Nutrient agar is an example of -----medium.

- a) Enrichment
- b) semi synthetic
- c) selective
- d) diferencial

5 )In Gram staining gram's iodine is used as -----

- a) fixative
- b)mordant
- c) solubilizer
- d) stain

6) The organisms which obtain their energy from chemicals are detergent as -----

- a) Autotrophs
- b) prototrophs
- c) chemotrophs
- d) Organotrophs

7) -----is used as solidifying agent for culture media.

- a) Beef extracts
- b) peptone
- c) Agar
- d) yeast extract

8 )Peptone water and nutrient broth are -----media

- a ) selective
- b) basal



c) 0.5% aq. Basic fuchsin, 1% aq. Congo red      d) ZNCF

18) Acidity of Albert's stain is -----

- a) equal to that of volutin granules      b) more than volutin granules
- c) less than volutin granules      d) less than cytoplasm

19) ----- was the first widely used antiseptic and disinfectant.

- a) Chlorine      b) Phenol
- c) Iodine      d) Alcohol

20) ----- is most effective for sterilizing plastic petri plates.

- a) Ethylene oxide      b) Chlorine
- c) Ultraviolet radiation      d) Glutaraldehyde

## Q 2) Long Answer

- 1) Discuss in detail methods for isolation of pure culture.
- 2) What is sterilization? Discuss principles and methods of sterilization by moist heat
- 3) Write principle, procedure and mechanism of Simple Staining.
- 4) Define culture medium. Explain in detail types of culture media on the basis of application and function
- 5) What is nutrition? Explain in detail nutritional types of microorganisms on the basis of carbon and energy source.
- 6) Define stain and describe various types of stains
- 7) Define differential staining and explain procedure of Acid fast staining

## Q 3) Short Answer

- 1) Classification of stains
- 2) Nutritional types of microorganisms
- 3) Sterilization by Radiation
- 4) Difference between acidic and basic dyes
- 5) Sterilization by filtration

- 6) Negative staining
- 7) Application of Gram staining
- 8) Mechanism of Acid fast staining
- 9) Osmotic control of micro- organisms
- 10) Desiccation
- 11) Differential media
- 12) Macronutrients