



DAC-003-1012016

Seat No. _____

B. Sc. (Sem. II) (CBCS) (W.E.F. 2016) Examination

April - 2022

MB - 201 : Microbial Chemistry & Microbial Control
(Old Course)

Faculty Code : 003

Subject Code : 1012016

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (1) Answer any five out ten questions.
(2) Figures on right side indicates marks.
(3) Draw the figure wherever necessary.

- 1 (a) Objective type questions : 4
(1) Define: Matter.
(2) The smallest Unit of an element which participates in the chemical combination with other elements called _____.
(3) Give Full Name of : FAD.
(4) Neutrons Possess _____ Change.
- (b) Answer in brief : 2
What is Element ? Give Example of it.
- (c) Answer in detail : 3
Write a note on covalent bond.
- (d) Write a note on : 5
Discuss scope of biochemistry.
- 2 (a) Objective type questions : 4
(1) Define : Atom.
(2) What is proton ?
(3) Give an example of stable isotopes. (any two)
(4) Full Name : NAD.
- (b) Answer in brief : 2
What is atomic Weight ?
- (c) Answer in detail : 3
Give an idea about hydrogen bond with suitable diagram.
- (d) Write a note on : 5
Explain oxidation - Reduction reaction.

- 3 (a) Objective type questions : 4
- (1) Carbohydrates are the most abundant class of organic molecules found in nature and biological system. TRUE or FALSE
 - (2) Give examples of aromatic amino acid. (any two)
 - (3) Give full name of PUFA.
 - (4) In DNA which base is not found ?
- (b) Answer in brief : 2
- What is Tautomerization ?
- (c) Answer in detail : 3
- Write note on Triacylglycerol.
- (d) Write a note on : 5
- Explain DNA structure by Watson and crick model.
- 4 (a) Objective type questions : 4
- (1) Give Common formula of carbohydrates.
 - (2) Define : lipid.
 - (3) Give full form of DNA.
 - (4) RNA means Ribonucleic Acid : TRUE or FALSE.
- (b) Answer in brief : 2
- Write function of lipids. (any four)
- (c) Answer in detail : 3
- Give the physical properties of amino acids.
- (d) Write a note on : 5
- Explain the structure of polysaccharide.
- 5 (a) Objective type questions : 4
- (1) Who postulated lock and key analogy ?
 - (2) The acceleration of a chemical Reaction by some substance which itself undergoes no permanent chemical change known as _____.
 - (3) Define : Prosthetic Group.
 - (4) Holoenzyme is made up of Apoenzyme + Coenzyme this Statement is True or False.
- (b) Answer in brief : 2
- What is Inducible Enzyme ?
- (c) Answer in detail : 3
- Write a note on Lock and key model.
- (d) Write a note on : 5
- Discuss factors affecting enzyme activity.

- 6 (a) Objective type questions : 4
- (1) Give the full name : IUPAC.
 - (2) Oxidoreductase is one class of Enzyme. TRUE or FALSE.
 - (3) The term enzyme first time used by whom ?
 - (4) Enzymes are basically made up of _____ ?
- (b) Answer in brief : 2
- What is Allosteric Enzyme ?
- (c) Answer in detail : 3
- What is catabolite Repression ?
- (d) Write a note on : 5
- Explain various mechanism of enzyme activity regulation.
- 7 (a) Objective type questions : 4
- (1) Give Full Form of HEPA.
 - (2) The Process of Destroying all forms of microbial life in the sense of microbiological. It is free from microorganisms this process known as _____.
 - (3) Define : Thermal Death Time.
 - (4) An agent that kills bacteria known as bactericide. TRUE or FALSE.
- (b) Answer in brief : 2
- What is osmotic pressure ?
- (c) Answer in detail : 3
- What is the use of filtration for microbial control ?
- (d) Write a note on : 5
- Discuss Characteristic of ideal antimicrobial agent.
- 8 (a) Objective type questions : 4
- (1) Define : Sterilization.
 - (2) Give an example of heavy metals used as an antimicrobial agent.
 - (3) Give full name : DRT.
 - (4) What is the temperature of dry heat sterilization by hot air oven ?
- (b) Answer in brief : 2
- How dye can use for microbial control ? (one example)
- (c) Answer in detail : 3
- Write a mode of action of quaternary ammonium compounds with application.
- (d) Write a note on : 5
- Explain phenol coefficient method in detail.

- 9 (a) Objective type questions : 4
- (1) Who discovered antibiotic penicillin ?
 - (2) The treatment of a disease with a chemical substance is known as _____.
 - (3) Chemical substance used to treat disease known as a chemo-therapeutic agent. TRUE or FALSE.
 - (4) Streptomycin is produced by which microorganism ?
- (b) Answer in brief : 2
Write Characteristics of ideal chemotherapeutic agent.
- (c) Answer in detail : 3
Write about mode of action of penicillin.
- (d) Write a note on : 5
Explain microbiological assay for antibiotic activity.
- 10 (a) Objective type questions : 4
- (1) Who discovered antibiotic streptomycin ?
 - (2) Full Name : HIV.
 - (3) Define : MIC.
 - (4) Antibiotics are produced by bacteria. TRUE or FALSE.
- (b) Answer in brief : 2
What is mode of action of ampicillin ?
- (c) Answer in detail : 3
Write a note on antifungal antibiotics.
- (d) Write a note on : 5
Discuss nonmedical use of antibiotics.
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