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MBI-003-10120016 Seat No. _____

B. Sc. (Sem. II) (CBCS) Examination

March / April - 2018

MB - 201 : Microbial Chemistry & Microbial Control

(New Course)

Faculty Code : 003

Subject Code : 10120016

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

1 (A) Attempt following questions : **4**

(1) Give formula to find atomic weight.

(2) Which bond involves sharing of electrons?

(3) Give name of scientist who gave concept of pH.

(4) Define Biochemistry.

(B) Answer in brief : (Any **one** out of two) **2**

(1) Define atom with suitable example.

(2) Explain H-bond.

.(C) Answer in detail : (Any **one** out of two) **3**

(1) Explain Covalent bond.

(2) Explain difference between atom and molecule with suitable example.

(D) Write a note on : (Any **one** out of two) **5**

(1) Explain various chemical reactions.

(2) Explain Non-covalent bonds.

2 (A) Attempt following questions : **4**

(1) Define carbohydrates

(2) How many minimum no. of carbon must present in carbohydrates?

(3) Alpha-helix is an example of secondary structure True or false.

(4) Define lipid.

(B) Answer in brief : (Any **one** out of two) **2**

(1) What is anomers? Explain it.

(2) Explain simple lipid.

(C) Answer in detail : (Any **one** out of two) **3**

(1) Explain secondary structure of proteins

(2) Explain DNA double helix structure.

(D) Write a note on : (Any **one** out of two) **5**

(1) Explain polysaccharides.

(2) Explain compound lipid.

3 (A) Attempt following questions : **4**

(1) Define enzymes.

(2) Which scientist coined word enzyme?

(3) Oxido reductase belongs to class-2. True or False.

(4) Define enzyme inhibitors.

(B) Answer in brief : (Any **one** out of two) **2**

(1) Biocatalyst vs. Chemical catalyst.

(2) Explain Physical properties of Enzymes.

(C) Answer in detail : (Any **one** out of two) **3**

(1) Explain enzyme inhibition.

(2) Explain difference between prokaryotic and eukaryotic enzyme regulation.

(D) Write a note on : (Any **one** out of two) **5**

(1) Explain Nomenclature and classific ation of enzymes.

(2) Explain mechanism and regulation of enzyme synthesis.

4 (A) Attempt following questions : **4**

(1) Define sterilization.

(2) Instrument used for moist sterilization ?

(3) Define Phenol coefficient.

(4) Define desiccation.

(B) Answer in brief : (Any **one** out of two) **2**

(1) Explain selection of ideal antimicrobial agents

(2) Explain high temperature as microbial control

(C) Answer in detail : (Any **one** out of two) **3**

(1) Explain gaseous agents to inhibit bacteria.

(2) Explain radiation as sterilizer.

(D) Write a note on : (Any **one** out of two) **5**

(1) Explain physical agents for microbial control.

(2) Explain chemical agents for microbial control.

5 (A) Attempt following questions : **4**

(1) Define antibiotics.

(2) Penicillin inhibits cell wall synthesis. True or False ?

(3) Which scientist coined the term Chemotherapy?

(4) What is mode of action of streptomycin?

(B) Answer in brief : (Any **one** out of two) **2**

(1) Give characteristics of ideal chemotherapeutic agent

(2) Explain semi synthetic penicillin.

(C) Answer in detail : (Any **one** out of two) **3**

(1) Antibiotics: Inhibiting cell wall synthesis in bacteria.

(2) Antibiotics: Inhibiting Enzyme synthesis bacteria.

(D) Write a note on : (Any **one** out of two) **5**

(1) Explain Microbial assay of antibiotics.

(2) Explain Antibiotic inhibiting nucleic acid and protein synthesis.
