CJ-40

Seat Number | | | | | | |

BP-203T
Biochemistry
(712203)

Total Pages : 7] Max. Marks : 75

Time : 3 Hours

Note : (1) Do not write anything on question paper except Seat No.

(2) *All* questions are compulsory.

(3) Figures to right indicate full marks.

(4) Students should note, no supplement will be provided.

(5) Draw figure/diagram/cycles/pathways wherever necessary and it should be drawn with the black ink pen or black HB pencil.

1. Multiple Choice Questions (MCQs) : 20×1=20

(1) Enzymes are _____ in nature.

(A) Carbohydrate

(B) Lipid

(C) Protein

(D) Acidic

(2) Bile acid is synthesized in _____.

(A) Kidney

(B) Liver

(C) Intine

(D) Stomach

P.T.O.

(3) Which test is used for determination of ketone-bodies ?

(A) Rothera test

(B) Shinoda test

(C) Van Ark test

(D) Shick test

(4) Nucleoside is a pyrimidine or purine base :

(A) Covalently bonded to a sugar

(B) Ionically bonded to a sugar

(C) Hydrogen bonded to a sugar

(D) None of the above

(5) Proteins are polymers of

(A) L – α Amino Acid

(B) L – β Amino Acid

(C) D – α Amino Acid

(D) D - β Amino Acid

(6) What are the small fragments of DNA produced during replication ?

(A) Small fragments of DNA

(B) DNA ligase

(C) OKAZAKI fragments

(D) Small fragments of RNA

(7) Blood urea decreases in all of the following conditions except than :

(A) Liver cirrhosis

(B) Pregnancy

(C) Renal Failure

(D) Angina Pectoris

(8) Ketone bodies are not utilized or oxidized in one of the following tissues

(A) Heart

(B) Brain

(C) Liver

(D) Muscles

(9) Examples of Imino acid is :

(A) Arachidonic acid

(B) Proline

(C) Linolenic acid

(D) Oleic Acid

(10) Study of energy relationships and conversions in biological systems is termed as :

(A) Microbiology

(B) Biotechnology

(C) Bioenergetics

(D) Biophysics

(11) One of the following is an aromatic neutral amino acid :

(A) Alanine

(B) Leucine

(C) Tyrosine

(D) Threonine

(12) The end product of oxidative phase of HMP shunt is :

(A) Ribulose-5-P

(B) Ribose-5-P

(C) Xylulose-5-P

(D) Xylose-5-P

(13) _____ is the major site for urea synthesis in urea cycle.

(A) Mitochondria

(B) Golgi apparatus

(C) Cytosol

(D) Ribosomes

(14) Protein part of the conjugate enzyme is called :

(A) Exoenzyme

(B) Endoenzyme

(C) Apoenzyme

(D) Holoenzyme

(15) Allosteric enzyme have allosteric site for :

(A) Activation

(B) Inhibition

(C) Moderation

(D) Both A and B

(16) Hypercholesterolemia is observed in the disorder :

(A) Hypothyroidism

(B) Diabetes mellitus

(C) Nephrotic Sydrome

(D) All of the above

(17) Cellular respiration is an example of :

(A) Endergonic Reaction

(B) Oxidation Reaction

(C) Exergonic Reaction

(D) None of the above

(18) During RNA Replication hydrogen bond is breaked by :

(A) DNA ligase

(B) DNA helicase

(C) DNA gyrase

(D) DNA polymerase

(19) Site of gluconeogenesis is :

(A) Skeletal muscle

(B) Kidneys

(C) Liver

(D) Both (B) and (C)

(20) The blocking of enzyme action by blocking its active site is called as :

(A) Allosteric inhibition

(B) Feedback inhibition

(C) Competitive inhibition

(D) Non-competitive inhibition

2. Long Answers (Answer 2 out of 3) : 2×10=20

(1) Explain in detail glycolysis with its significances.

(2) Describe biosynthesis of purine and pyrimidine nucleotides.

(3) Explain in detail ß oxidation of fatty acid.

3. Short Answers (Answer 7 out of 9) 7×5=35

(1) Explain in detail Citric Acid Cycle with its significances.

(2) Give applications of enzymes and add short note on enzyme inhibition.

(3) Write a note on DNA Replication.

(4) Elaborate Electron Transport Chain with oxidative phosphorylation.

(5) Write a brief note on Pentose Phosphate Pathway with its significances.

(6) Write a note on formation, utilization and excretion of ketone bodies.

(7) Enlighten the term Transamination, Deamination and Decarboxylation,

(8) Give therapeutic and diagnostic applications of enzymes and isoenzymes.

(9) Explain the glycogen storage diseases (GSD).