

Course: B. Pharm.

Semester: I

Subject with Subject Code: Biochemistry (BP203T)

Date: 01/01/2019

Marks: 75

Duration: 3hrs

- Instructions:** i) All questions are compulsory
ii) Figures to the right indicate full marks
iii) Draw the diagrams or flow charts wherever necessary.

Q.No. 1 Multiple Choice Questions:**(20 x 1 = 20)**

- a) The power house of the cell is called as _____
- a) Nucleus
b) Cell membrane
c) Mitochondria
d) Lysosomes
- b) The general formula of monosaccharides is _____
- a) $C_nH_{2n}O_n$
b) $C_2nH_{2n}O_n$
c) $C_nH_2O_{2n}$
d) $C_nH_{2n}O_{2n}$
- c) Which of the following is a non-reducing sugar?
- a) Glucose
b) Maltose
c) Lactose
d) Sucrose
- d) The sugar found in RNA is _____
- a) Ribose
b) Deoxyribose
c) Pentose
d) Erythrose
- e) A positive Benedict's test is **NOT** given by _____
- a) Sucrose
b) Lactose
c) Maltose
d) Glucose
- f) Glucose-6-phosphatase is deficient in _____
- a) Von Gierke's disease
b) Pompe's disease
c) Cori's disease
d) McArdle's disease
- g) Under anaerobic conditions the glycolysis of one mole of glucose yields _____ moles of ATP.
- a) One
b) Two
c) Eight
d) Thirty
- h) Glycogen is converted to glucose-1-phosphate by _____
- a) UDPG transferase
b) Branching enzyme
c) Phosphorylase
d) Phosphatase

- i) Which of the following is not an enzyme involved in glycolysis?
- | | |
|---------------|--------------------|
| a) Enolase | b) Aldolase |
| c) Hexokinase | d) Glucose oxidase |
- j) Sulphur containing amino acid is _____
- | | |
|---------------|---------------|
| a) Methionine | b) Leucine |
| c) Valine | d) Asparagine |
- k) Phospholipids contains _____ group.
- | | |
|-----------|--------------|
| a) Amino | b) Hydroxyl |
| c) Acetyl | d) Phosphate |
- l) _____ is **NOT** the factor affecting the enzyme activity.
- | | |
|------------------|-------------|
| a) Concentration | b) pH |
| c) Temperature | d) Molarity |
- m) The main site for oxidative deamination are _____.
- | | |
|-------------------------|--------------------|
| a) Liver & Kidney | b) Skin & Pancreas |
| c) Intenstine & stomach | d) Lung & Skin |
- n) The carbohydrate reserved in human body is _____.
- | | |
|-------------|------------|
| a) Starch | b) Glucose |
| c) Glycogen | d) Insulin |
- o) RNA is converted to protein by _____.
- | | |
|------------------|----------------|
| a) Transcription | b) Translation |
| c) Lipase | d) Kinase |
- p) Which nitrogenous base is not found in structure of RNA?
- | | |
|------------|-------------|
| a) Thymine | b) Uracil |
| c) Guanine | d) Cytocine |
- q) Which of the following is an essential amino acid?
- | | |
|------------|--------------|
| a) Valine | b) Glycine |
| c) Alanine | d) Histidine |
- r) The cellular organelles called "suicide bags" are _____
- | | |
|-------------------|--------------|
| a) Lysosomes | b) Ribosomes |
| c) Golgi's bodies | d) Nucleolus |
- s) Degree of unsaturation of fats and oils is denoted by _____
- | | |
|-----------------------|------------------|
| a) Iodine Number | b) Acid Number |
| c) Phenol Coefficient | d) Acetyl Number |

t) Million reaction is specific for the amino acid.

a) Valine

b) Tyrosine

c) Phenylalanine

d) Arginine

Q.No. 2 Attempt any SEVEN of the following:

(7 x 5 = 35)

a) Explain Urea cycle in detail.

b) Describe factors affecting enzyme activity.

c) Write chemistry and biological significance of cholesterol.

d) What is oxidative phosphorylation? Explain any one mechanism of oxidative phosphorylation in detail.

e) Define Lipids. Give its classification and add a note on Complex lipids.

f) Write a note high energy compounds.

g) Define Amino acid. Give its classification and write a note oxidative deamination.

h) Write a note on DNA replication.

i) What is diabetes mellitus? Explain types and treatment for diabetes mellitus.

Q.No. 3 Attempt any TWO of the following:

(2 x 10 = 20)

a) How oxidation of lipids takes place? Write in detail about β -oxidation with example and energetic.

b) What is glycolysis? Explain reaction involved in glycolysis with generation of ATP.

c) What is carbohydrate? Give its classification, chemical nature and biological role in detail.

*** End ***