

**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)  $C_{2n}H_{2O_n}$   
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) Intestine & 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)**

- Explain Urea cycle in detail.
- Describe factors affecting enzyme activity.
- Write chemistry and biological significance of cholesterol.
- What is oxidative phosphorylation? Explain any one mechanism of oxidative phosphorylation in detail.
- Define Lipids. Give its classification and add a note on Complex lipids.
- Write a note high energy compounds.
- Define Amino acid. Give its classification and write a note oxidative deamination.
- Write a note on DNA replication.
- What is diabetes mellitus? Explain types and treatment for diabetes mellitus.

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

**(2 x 10 = 20)**

- How oxidation of lipids takes place? Write in detail about  $\beta$ -oxidation with example and energetic.
- What is glycolysis? Explain reaction involved in glycolysis with generation of ATP.
- What is carbohydrate? Give its classification, chemical nature and biological role in detail.

\*\*\* End \*\*\*