



## BRAINWARE UNIVERSITY

### D. Pharm Part I Examination 2018 - 19

Programme– Diploma in Pharmacy

Course Name – Biochemistry and Clinical Pathology

Course Code – 1.4T

(D. Pharm First Year Final)

**Time allotted: 3 Hours**

**Full Marks: 80**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

#### Group –A

(Multiple Choice Type Question)

20 x 1 = 20

1. *Choose the correct alternative from the following*
  - (i) The pigment in the rod cells of eye is called as \_\_\_\_\_
    - a. Rhodopsine
    - b. Melanine
    - c. Haemoglobin
    - d. Erythrocyte
  - (ii) The normal platelet count is \_\_\_\_\_
    - a. 2-5 lacs per cu.mm of blood
    - b. 2-8 lacs per cu.mm of blood
    - c. 3-5 lacs per cu.mm of blood
    - d. 1-5 lacs per cu.mm of blood
  - (iii) Which Hormone is responsible for regulation of water metabolism?
    - a. Vasopressin
    - b. Aldosterone
    - c. Renin
    - d. All of above
  - (iv) Vitamin B<sub>12</sub> is component of \_\_\_\_\_
    - a. FAD
    - b. TPP
    - c. NAD
    - d. COA
  - (v) Aldosterone regulate \_\_\_\_\_
    - a. Sodium absorption
    - b. Blood glucose
    - c. Urine concentration
    - d. Potassium absorption
  - (vi) Lactose is made up of \_\_\_\_\_
    - a. One glucose molecule and one galactose molecule
    - b. Two glucose molecule
    - c. Two glucose molecules
    - d. One glucose and one fructose molecule

- (vii) Enzymes are \_\_\_\_\_
- a. Protein in nature
  - b. Lipid in nature
  - c. Carbohydrate in nature
  - d. Acidic in nature
- (viii) Heparin is a
- a. Monosaccharide
  - b. Aldolase
  - c. Disaccharide
  - d. Hetero polysaccharide
- (ix) Rickets occur due to deficiency of \_\_\_\_\_
- a. Vitamin E
  - b. Vitamin A
  - c. Vitamin D
  - d. Vitamin K
- (x) The normal WBC count is \_\_\_\_\_
- a. 4000 to 11000 per cu.mm of blood
  - b. 9000 to 11000 per cu.mm of blood
  - c. 4000 to 15000 per cu.mm of blood
  - d. 6000 to 11000 per cu.mm of blood
- (xi) Multiple forms of the same enzyme are called \_\_\_\_\_
- a. Apoenzyme
  - b. Holoenzyme
  - c. Coenzyme
  - d. Isoenzyme
- (xii) Which of the following is not excreted through urine?
- a. Lactic acid
  - b. Sodium
  - c. Sulphur
  - d. Urea
- (xiii) Milky white colour of urine is due to the presence of \_\_\_\_\_
- a. Ketone bodies
  - b. Urea
  - c. Uric acid
  - d. Fat globules
- (xiv) The coenzyme form of niacin is \_\_\_\_\_
- a. NAD
  - b. TPN
  - c. FMN
  - d. All of these
- (xv) Which of the following is a sulphur containing amino acid
- a. Glycine
  - b. Tryptophan
  - c. Methionine
  - d. Valine
- (xvi) Which of the following is not a reducing sugar?
- a. Lactose
  - b. Galactose
  - c. Maltose.
  - d. Sucrose.
- (xvii) Severe form of anemia known as
- a. Polycythemia
  - b. Iron deficiency anemia
  - c. Megaloblastic anemia
  - d. Pernicious anemia

- (xviii) Cholesterol is a
- |                 |               |
|-----------------|---------------|
| a. Carbohydrate | b. Steroid    |
| c. Lipid        | d. Fatty acid |
- (xix) In anaerobic glycolysis number of ATP production from one mole of glucose is
- |      |      |
|------|------|
| a. 3 | b. 2 |
| c. 5 | d. 7 |
- (xx) Blood platelets are formed by
- |                           |                |
|---------------------------|----------------|
| a. Spleen                 | b. W.B.C       |
| c. Spleen and Bone marrow | d. Bone marrow |

**Group – B**

(Short Answer Type Questions)

8 x 5 = 40

Answer any *eight* from the following

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|--|---------|
| 2. Define nucleic acid. Write the function of and difference between DNA and RNA.                                  | 1+2+2   |
| 3. Write a note on reducing sugar and non-reducing sugar with examples.  | 2.5+2.5 |
| 4. What is the difference between essential, non-essential and semi essential amino acids? Describe with examples. | 5       |
| 5. Write the differences between Transamination and Decarboxylation.   | 5       |
| 6. What is muta-rotation? Define Invert sugar with example.  | 2+3     |
| 7. What is ATP? Write the structure and function of ATP.   | 1+4     |
| 8. What do you mean by D, L; d, l, alpha and beta variety of glucose?  | 1+1+2+1 |
| 9. Describe the general function of major and trace elements of human body.  | 5       |
| 10. Human being cannot digest cellulose, but Herbivores can digest cellulose. Why?                                 | 5       |

**Group – C**

(Long Answer Type Questions)

2x 10 = 20

Answer any *two* from the following

- |  |       |
|--|-------|
| 11. Write about Enzyme inhibition with examples. Write down about the Diagnostic application of Enzymes.   | 6+4   |
| 12. Define Kreb's Cycle. Write the various steps of Tri carboxylic acid cycle & its regulations. Calculate the number of ATP formed from aerobic metabolism of carbohydrate. | 1+7+2 |
| 13. Define lymphocytes. Describe the abnormalities of Lymphocytes.   | 2+8   |

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