

D. PHARMACY SECOND YEAR EXAMINATION, NOVEMBER 2023
EDUCATION REGULATIONS ER 2020

BIOCHEMISTRY & CLINICAL PATHOLOGY (Question Paper code: 201120233)
(Subject Code: 20231)

Time: Three hours

Maximum marks: 80

Note: 1. Answer all the questions.
 2. Draw diagrams wherever necessary

1x5 = 5

I. Fill in the blanks

- 1) ___ is the building units of proteins
- 2) The synthesis of glycogen from glucose is called ___
- 3) Bilirubin is the excretory product of ___
- 4) Enlargement of thyroid gland is called ___
- 5) Abnormally low concentration of sodium in the blood is called as ___.

1 x 5 = 5

II. Choose the correct answer

- 1) All amino acids are optically active except
 (a) Glycine (b) Alanine (c) Serine (d) All of the above
- 2) Deficiency of Vitamin E leads to ___
 (a) Sterility (b) Anaemia (c) Glossiitis (d) Microcytic anaemia
- 3) An example of isoenzyme is ___
 (a) Urease (b) Esterase (c) Lactate dehydrogenase (d) Pepsin
- 4) The main site of detoxification is ___
 (a) Pancreas (b) Liver (c) Skin (d) Kidney
- 5) Blood pigment in urine is detected by ___ test
 (a) Gmelin's test (b) Benzidine test (c) Fouchat test (d) Murexide test

III. Match the following

1 x 5 = 5

| | A | B |
|---|------------------|-------------------------|
| 1 | Cobalt | Prostate cancer |
| 2 | Acetyl CoA | Niacin |
| 3 | Pellagra | Cholesterol |
| 4 | FMN | Vitamin B ₁₂ |
| 5 | Acid phosphatase | Riboflavin |

...2/-

-2-

IV. Write very short answers 1 x 5 = 5

- 1) Metabolism
- 2) Bence Jones protein
- 3) Carbohydrate
- 4) Leucocytosis
- 5) Phospholipids

V. Write Short Answers on ANY TEN of the following

10 x 3 = 30

- 1) Causes of dehydration
- 2) Sketch urea cycle
- 3) Name the trace elements and mention their importance
- 4) Enumerate the renal function tests
- 5) Components of nucleotide with examples
- 6) Osazone formation
- 7) Essential fatty acids
- 8) Ketogenesis
- 9) ESR
- 10) Hypercholesterolemia
- 11) Primary and secondary structure of protein

VI. Answer ANY SIX of the following in detail 6x5 = 30

1. Write the source, biochemical functions and deficiency manifestations of vitamin D.
2. Describe glycolysis. Give the energetic and other names of glycolysis.
3. Give an account of abnormal constituents of urine.
4. Define Nucleic acid. Explain the Watson and Crick's double helical structure of DNA.
5. Write the function, deficiency disease and daily requirements of sodium.
6. Define carbohydrates. Classify them with examples. Write the identification tests for carbohydrates.
7. Define enzyme. Classify enzymes. Write a brief note on factors affecting enzyme activity.
