

PHB Education Sample Paper - 1

D. Pharm IInd Year

SECOND SESSIONAL EXAMINATION 2024-25 (BIOCHEMISTRY & CLINICAL PATHOLOGY)

Time: 02Hrs

Maximum Marks: 40

Instructions:

1. Write the Roll no. on your question paper.
2. Candidate should ensure that the question paper supplied to them is complete in all respects. Complain in this regard, if any, should be made to the invigilator on the duty in the exam centre within 15 minutes of Commencement of the exam. No complaint shall be entertained thereafter.

Attempt all the questions:

(Section: A)

Multiple choice questions:

[1x5=5]

Q.1 Guanine has an amino group at position

- | | |
|-------|-------|
| (a) 5 | (b) 7 |
| (c) 1 | (d) 2 |

Q.2 DNA is made up of monomeric unit called

- | | |
|------------|-----------------|
| (a) Purine | (b) Pyrimidine |
| (c) Uracil | (d) Nucleotides |

Q.3 The nature of an enzyme is:

- | | |
|------------------|--------------|
| (a) Lipids | (b) Vitamins |
| (c) Carbohydrate | (d) Protein |

Q.4 Vitamins K was discovered by in 1939.

- | | |
|-------------------|---------------------|
| (a) Justus Liebig | (b) Funk |
| (c) DAM | (d) Gowland Hopkins |

Q.5 Which of the following is a tricarboxylic acid?

- | | |
|----------------------|-------------------|
| (a) Acetic acid | (b) Succinic acid |
| (c) Oxaloacetic acid | (d) Citric acid |

Very Short answer type question:

[1x5=5]

Q.1 How many ATP are produced in TCA cycle?

Q.2 What is the location of glycolysis pathway?

Q.3 Give the source of vitamin E.

Q.4 Who gave the term 'enzyme'?

Q.5 Who discovered DNA?

(Section: B)

Short answer type question (Attempt any five):

[5×3=15]

- Q.1 What are the difference between DNA and RNA?
- Q.2 Write a detailed note on IUB classification of enzymes.
- Q.3 Write in details about the fat-soluble vitamins and its deficiency disease.
- Q.4 Write short note on:
- (a) Source and function of vitamin A
 - (b) Source and function of Vitamin K
- Q.5 What are lipid storage diseases? Explain arteriosclerosis.
- Q.6 Write short note on:
- (a) Citric acid cycle
 - (b) Glycogenesis

(Section: C)

Long answer type question (Attempt any three):

[5×3=15]

- Q.1 What do you understand by the term glycolysis? Outline the steps involved in the conversion of glucose to lactic acid.
- Q.2 Briefly explain the role, source, and deficiency disease of each vitamin.
- Q.3 Write a detailed note on : - Metabolism of fatty acid
: - HMP Pathway
- Q.4 Explain the difference between nucleotides and nucleosides.

PHB Education Sample Paper - 2

D. Pharm IInd Year

**SECOND SESSIONAL EXAMINATION 2024-25
(BIOCHEMISTRY & CLINICAL PATHOLOGY)**

Time: 02Hrs

Maximum Marks: 40

Instructions:

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Attempt all the questions:

(Section: A)

Multiple choice questions:

[1x5=5]

1. What is the net gain of ATP during the conversion of glucose to pyruvate?

- | | |
|-----------|-----------|
| (a) 2 ATP | (b) 6 ATP |
| (c) 8 ATP | (d) 6 ATP |

2. Where does gluconeogenesis take place?

- | | |
|-------------|-----------|
| (a) Heart | (b) Lungs |
| (c) Stomach | (d) Liver |

3. The chain of nucleotide molecule is known as

- | | |
|-----------------|--------------------|
| (a) Nucleobases | (b) Polynucleotide |
| (c) Nucleotide | (d) Purine |

4. Common name of adenine is:

- | | |
|---------------|---------------------|
| (a) Adenosine | (b) cytidine |
| (c) Uracil | (d) Thymidylic acid |

5. Which of the following is a component of the coenzyme A?

- | | |
|-------------------|----------------------|
| (a) Retinol | (b) Pyridoxine |
| (c) Retinoic acid | (d) Pantothenic acid |

One word answer:

[5]

1. The type of coiling in DNA is

2. Optical specificity is also known as

3. The Scientific name of vitamin A is

4. Kreb cycle is an aerobic process and that occurs in in eukaryotes.

5. formation & Breakdown of lipids is called

(Section: B)

Short Questions (Attempt any five):

[5x3 = 15]

1. Write a short note on:
(a) Diseases related to abnormal metabolism of lipids
(b) Glycogenesis
2. Enlist the clinical significance of ketone bodies.
3. Give structure, biochemical role and deficiency diseases of pyridoxine.
4. Write a detailed note on IUB & MB classification of enzymes.
5. Discuss the structure of DNA.
6. Explain differences between nucleotides & nucleosides.

(Section: C)

Long Questions (Attempt any three):

[3x5 =15]

1. Explain the biological roles of DNA & RNA.
2. Briefly explain the role, source & deficiency each vitamins.
3. Write detailed note on:
(a) Kreb's cycle
(b) Glycolysis pathway
4. Write detailed note on Metabolism of amino acids.