Total No. of Questions: 22

Enrollment No : _____

MEDICAPS UNIVERSITY

Faculty of Pharmacy

End Semester Examination May 2025

PY3CO07 Biochemistry

Programme	:	B.Pharm.	**Branch/Specialisation**	:	-
Duration	:	3 hours	**Maximum Marks**	:	75

Note: *All questions are compulsory. Internal choices, if any, are indicated. Assume suitable data if necessary. Notations and symbols have their usual meaning.*

Section 1 (Answer all question(s))

Q1. Define term exothermic and endothermic reaction. **Marks: 2 CO: 1 BL: 1**

Rubric	Marks
Definition- Exothermic and Endothermic reaction	2

Q2. What is gibbs free energy? **Marks: 2 CO: 1 BL: 1**

Rubric	Marks
Gibbs free energy formula	2

Q3. Write significance of HMP shunt pathway. **Marks: 2 CO: 2 BL: 1**

Rubric	Marks
Any three Significance of HMP shunt pathway	2

Q4. Where does the Glycolysis and Krebs cycle occurs? **Marks: 2 CO: 2 BL: 1**

Rubric	Marks
Glycolysis occurs in the cytoplasm, while the Krebs cycle takes place in the mitochondrial matrix.	2

Q5. What is ketoacidosis? **Marks: 2 CO: 3 BL: 1**

Rubric	Marks
Definition of Ketoacidosis	2

Q6. Enlist disorders of lipid metabolism. **Marks: 2 CO: 3 BL: 1**

Rubric	Marks
Any 4 disorders of lipid metabolism	2

Q7. Define nucleic acid. **Marks: 2 CO: 4 BL: 1**

Rubric	Marks
Definition of nucleic acid	2

Q8. Give the names of amino acids required for synthesis of purines and pyrimidines. **Marks: 2 CO: 4 BL: 1**

Rubric	Marks
glycine, aspartate, and glutamine	2

Q9. Define enzymes and co-enzymes. **2 5 1**

Rubric	Marks
Definition of enzymes and co-enzymes	2

Q10. What are enzyme inhibitors? Give examples. **2 5 1**

Rubric	Marks
Definition 1 Mark Any two example 1 Mark	2

Section 2 (Answer any 2 question(s))

Marks CO BL

Q11. Describe Krebs cycle, energetics and its significance. **10 1 1**

Rubric	Marks
krebs cycle	5
energetics and significance	5

Q12. Discuss about electron transport chain and its mechanism in detail. **10 2 1**

Rubric	Marks
Electron Transport chain	5
Mechanism	5

Q13. (a) Give difference between endergonic and exergonic reaction. **10 1 1**
(b) Define glycolysis and its pathway.

Rubric	Marks
(a) Five points- 5M (each point -1M)	5
(b) Glycolysis	2.5
(B)Pathway	2.5

Section 3 (Answer any 2 question(s))

Marks CO BL

Q14. Explain urea cycle. **5 3 1**

Rubric	Marks
Definition of urea cycle	2
reaction/pathway	3

Q15. Give details about De Novo Synthesis of fatty acids. **5 3 1**

Rubric	Marks
De Novo Synthesis reaction	2
Explanation	3

Q16. Write note on – **5 3 1**
(a) Atherosclerosis
(b) Fatty liver & obesity

Rubric	Marks
Note on i)Atherosclerosis	2.5
ii)Fatty liver & obesity	2.5

Section 4 (Answer any 2 question(s))

Marks CO BL

Q17. Describe structure of DNA in detail. **5 4 1**

Rubric	Marks
Structure of DNA	2
Explanation	3

Q18. What is hyperuricemia and gout? **5 4 1**

Rubric	Marks
Hyperuricemia	2.5
Gout	2.5

Q19. Write any five differences between DNA and RNA. **5 4 1**

Rubric	Marks
Five points- 5M (each point -1M)	5

Section 5 (Answer all question(s))

Marks CO BL

Q20. Write about enzyme inhibitors and their kinetics. **5 5 1**

Rubric	Marks
enzyme inhibitors	2.5
their kinetics.	2.5

Q21. Define enzymes and classify them. **5 5 1**

Rubric	Marks
Definition of enzymes	2
classification	3

Q22. Write a note on coenzymes and biochemical functions. **5 5 1**

Rubric	Marks
Coenzymes	2.5
biochemical functions	2.5

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