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**DHANALAKSHMI SRINIVASAN COLLEGE
OF ARTS & SCIENCE FOR WOMEN
(AUTONOMOUS)**
(For Candidates admitted from 2020-2021 onwards)



PG DEGREE EXAMINATIONS APRIL - 2021

M.Sc., - BIOCHEMISTRY

METABOLISM AND REGULATION

Time: 3 Hrs

Max.Marks: 75

PART - A

CHOOSE THE CORRECT ANSWER

(10X1=10)

- AMP contains.
 - High energy phosphohate
 - phosphate bond
 - double bond
 - low energy phosphate
- The High energy compound
 - UDPG
 - ATP
 - ADP
 - All of them
- The intermediate in hexose monophosphate shunt
 - D- ribulose
 - Lactose
 - Maltose
 - Arabinose
- Fructokinase is present
 - Intestine
 - heart
 - Liver
 - Kidney
- The rate of fatty acid oxidation is increased by
 - Phospholipids
 - Liver
 - Brain
 - muscle
- Phospholipids help the oxidation of
 - Fatty acids
 - HGPRT
 - Glucose 6 phosphate
 - All of them.
- The transaminase activity needs the coenzyme
 - atp
 - B₆-p₀₄
 - FAD
 - All of them
- Transamination is a
 - Irreversible process
 - Reversible process
 - Both of the above
 - none of the above
- Which of the following statements is true about brain metabolism in starvation
 - The brain can use glucogenic amino acids for energy
 - The brain can only use glucose as fuel
 - VLDL
 - Chylomicrons
- The synthesis of adenylate cyclase is increased by
 - Thyroid hormones
 - ATP
 - Malonyl CoA
 - Acyl CoA

PART- B

ANSWER ALL THE QUESTIONS

(5X7=35)

11. a) Write the inhibitors of respiratory chain and oxidative phosphorylation.

(OR)

b) Write short on High energy phosphate compounds.

12. a) Explain the steps involved in glycolysis.

(OR)

b) Explain how the glycogen metabolism is regulated?

13. a) Explain the steps involved in phospholipid biosynthesis.

(OR)

b) Briefly explain in steps involved in beta oxidation of fatty acids.

14. a) Give a short on Urea cycle.

(OR)

b) Write note on catabolic pathway of pyrimidines?

15. a) Explain the metabolic profile of liver and kidney .

(OR)

b) Briefly explain the nutritional and hormonal states of pregnancy and lactation

PART - C

ANSWER ANY THREE QUESTIONS

(3X10=30)

16. Write an essay on Electron transport chain.

17. Enumerate the citric acid cycle and regulation.

18. Give an account on Fatty acid biosynthesis and regulation.

19. Explain the De novo pathways of purine biosynthesis.

20. Explain the nutritional and hormonal states of NIDDM.