Q.P CODE :105

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

M.B.B.S. PHASE - I Degree Examination – July - 2010

Time : 3 Hrs. **(Max. Marks : 100)**

BIOCHEMISTRY

Use separate answer books for Section -A and Section -B.

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

SECTION – A (Max. Marks: 50)

LONG ESSAY **1 X 10 = 10 Marks**

1. Classify Enzymes. Describe how various factors influence Enzyme action. Define Michaelis menton constant; explain its significance with example.

SHORT ESSAY **5 X 5 = 25 Marks**

2. Stereoisomerism of Monosaccharides
3. Name the Ketone bodies. Describe the synthesis and utilization of Ketone bodies and the conditions in which it is excreted in urine
4. Phenylketonuria
5. Urea synthesis and its regulation
6. Classify lipoproteins and explain the Reverse cholesterol transport

SHORT ANSWERS **5 X 3 = 15 Marks**

7. Mitochondria
8. Enzymes involved in scavenging of free radicals
9. Tumor markers
10. Inhibitors of oxidative phosphorylation
11. Pyruvate dehydrogenase

SECTION - B (Max. Marks: 50)

(Use separate answer book)

LONG ESSAY **1 X 10 = 10 Marks**

1. Describe in detail synthesis of RNA from DNA and post transcriptional modification in eukaryocytes. Name the drugs that act as inhibitors of RNA synthesis

SHORT ESSAY **5 X 5 = 25 Marks**

2. Hyperuricemia
3. Wilson's disease
4. How the hormones regulate Calcium and Phosphorous metabolism
5. What is the normal pH? Name the buffers of body fluids. Describe the renal mechanism in regulation of pH.
6. Describe the synthesis of Heme. Name the disorders associated with it.

SHORT ANSWERS **5 X 3 = 15 Marks**

7. Wald's Visual cycle
8. Basal Metabolic rate
9. Hyperkalemia
10. Normal reference value for –Blood Urea, Serum Creatinine and Serum ALP
11. Restriction endonucleases

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Q.P CODE : 105 – SDUU, SECTION – A (Max. Marks: 50)

LONG ESSAY **1 X 10 = 10 Marks**

1. What are the different types of oxidation of fatty acids? Discuss β oxidation of fatty acids in detail. Add note on the energetics.

SHORT ESSAY **5 X 5 = 25 Marks**

2. Allosteric Inhibition
3. Mechanism of action of insulin
4. Lipotropic factors
5. Oncogenes
6. Tyrosinemia

SHORT ANSWERS **5 X 3 = 15 Marks**

7. Co-enzymes
8. Glucose – transporters
9. Anti oxidants
10. High energy compounds
11. Facilitated diffusion

Q.P CODE : 106 - SDUU, SECTION - B (Max. Marks: 50)

(Use separate answer book)

LONG ESSAY **1 X 10 = 10 Marks**

1. What is the daily requirement of iron? How is iron absorbed and utilized in the human body? What is its manifestation, when accumulated in excess?

SHORT ESSAY **5 X 5 = 25 Marks**

2. Role of lungs in maintaining acid – base balance
3. Post – translational modifications
4. Neonatal jaundice
5. Deficiency manifestations of vitamin B_{12}
6. Types of DNA repair

SHORT ANSWERS **5 X 3 = 15 Marks**

8. Clearance tests
9. Respiratory Quotient
10. How is haem catabolised in the human body?
11. Synthetic nucleotides
12. Vit K- it's role as anticoagulant

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Time : 3 Hrs. **(Max. Marks : 100)**

BIOCHEMISTRY
Q.P CODE :105 – SDUU

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LONG ESSAY **2 X 10 = 20 Marks**

1. Write the steps of disposal of amino acid nitrogen as urea in liver. How urea cycle is regulated?
2. Write a brief account of Chemistry, sources, biochemical role and deficiency manifestations of Niacin.

SHORT ESSAY **10 X 5 = 50 Marks**

3. Active transport with suitable example
4. Explain importance of Hexose Mono-Phosphate (HMP) shunt
5. Name plasma lipoproteins, give functions of each lipoprotein
6. Allosteoric enzyme regulation with suitable example
7. Inhibitors of oxidative phosphorylation
8. Clearance tests in assessment of kidney function
9. Nucleotide coenzymes
10. DNA repair
11. Types of Jaundice
12. Tests for assessment of hepato cellular failure

SHORT ANSWERS **10 X 3 = 30 Marks**

13. Detoxification by conjugation
14. Melatonin
15. Tumor markers
16. Anti-oxidants and their importance
17. cAMP phospo-diestarase
18. Alkali reserve
19. Sources of atoms of purine ring
20. Selenium
21. Marasmus
22. Define Chromatography and write different types of chromatography

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