Question Paper Code:RS 205

SRI DEVRAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

M.B.B.S Phase-I Degree Examination – JULY 2018

Time:3 hours **Max Marks:100**

BIOCHEMISTRY- PAPER 1

Your answer should be specific to the question asked Draw neat and labeled diagrams wherever necessary

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

1. Describe Vitamin D under the following headings ,sources, RDA, absorption,synthesis and functions of vitamin D. Write the deficiency manifestations of vitamin D
2. Describe various types of enzyme inhibition with graphs. Write any three practical uses of enzyme inhibitors in medicine. (7+3)

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

3. Classify amino acids with suitable examples.
4. Describe the role of calcium as secondary messengers.
5. What are eicosanoids? Give examples. Write chemical nature and functions of one of them.(1+2+2)
6. List five Glycosides. Describe their structure and biomedical importance.
7. What are dietary fibers? Give examples. Describe the beneficiary effect & disadvantage of dietary fibers. (1+1+2+1)
8. Name Bile salts. Explain their role in lipid digestion and deficiency manifestations of bile salts. (1+2+2)
9. Explain the active absorption of glucose powered by sodium pump with diagram. Add a note on glucose transporters. (3+2)
10. Compare and contrast Lactose and sucrose with reference to Source,composition and structure.
11. What are Amphipathic lipids? Give examples & biomedical importance of amphipathic lipids. (1+4)
12. Classily hormones based on the location of their receptor and give two examples for each group.

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

13. Mention the role of amino acids in detoxification.
14. What is TRH stimulaion test?
15. What is Levy- Jenning's Chart? Mention its applications.
16. List any three functions of Albumin
17. Mention the types of RNA and write the functions.
18. What is nanotechnology? Mention its applications.
19. Mention the Biological effects of radiation on tissues.
20. Define Antioxidants. Describe the role of Glutathione peroxidase as anitoxidant in cellular regulation.
21. What are unusual bases? Give examples.
22. What is A/G Ratio? Mention the normal A/G Ratio. Name two conditions associated with decreased A/G Ratio.

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BIOCHEMISTRY PAPER 2

Your answer should be specific to the question asked Draw neat and labeled diagrams wherever necessary

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

1. What is the normal blood pH? Describe the various mechanisms by which acid- base balance is regulated in the body
2. What is lac operon? Describe in detail the regulation of gene expression in prokaryotes. (2+8)

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

3. Describe the steps of purine nucleotide degradation. Add a note on abnormalities due to excessive purine catabolism. (3+2)
4. Enumerate high energy phosphate compounds. Write the differences between oxidative phosphorylation and substrate level phosphorylation with examples.(2+3)
5. Describe the role of Carnitine in oxidation of fatty acid. (5)
6. Enumerate the biologically important compounds derived from glycine. Give their biomedical importance. (2+3)
7. Explain the Amphibolic nature of TCA cycle with suitable examples.
8. Mention normal levels of serum calcium . Explain the regulation of blood calcium level. (1+4)
9. Define Atherosclerosis. Explain the risk factors and biochemical diagnosis of atherosclerosis
10. What is meant by detoxification? Give an account of various detoxification processes.
11. Write the role of liver in integration metabolism
12. Describe the mechanism of viral carcinogenesis.

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

13. What is subacute combined immuno deficiency syndrome? Mention the enzyme defect
14. What is thermogenin? Mention its biomedical importance
15. Mention the derivatives of cholesterol and write their biomedical importance.
16. What is Maple Syrup urine disease? Mention two clinical features
17. Mention three reducing substances excreted in urine.
18. Give 3 examples of hemoproteins with their functions
19. Mention the clinical conditions in which following markers are elevated a) CA125 b) CEA c) PSA
20. What is short term and prolonged starvation.
21. Isotonic expansion of ECF
22. List the types of jaundice and mention one cause for each type.