Answer all the questions \[10 \times 10 = 100 \text{ Marks}\]

1. Write in detail about the isolation and purification of subcellular organelles, their functions and biochemical markers.

2. Describe the principle, procedure and uses of molecular biology techniques in Biochemistry.


4. Applications of bioinformatics in medicine.

5. Nanotechnology in research.

6. Flame photometry.

7. Acute phase proteins.

8. Ultracentrifugation techniques.

9. Write in detail detection and measurement of stable and radioactive isotopes and add a note on applications.

10. Describe the structure and functions of mucopolysaccharides.
Rajiv Gandhi University of Health Sciences
M.D. Degree Examination – MAY-2018

[Time: 3 Hours] [Max. Marks: 100]

BIOCHEMISTRY
PAPER – II
INTERMEDIARY METABOLISM AND BIOCHEMICAL GENETICS
Q.P. CODE : 7316

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

Answer all the questions 10 X 10 = 100 Marks

1. Describe the pathway of gluconeogenesis from alanine. How is the pathway regulated? Add a note on its energetics.

2. Describe the process of translation in detail. What are the different post translational modifications and inhibitors of translation?

3. Antioxidants.


5. Phase I detoxification.


7. Salvage pathway of nucleotide synthesis.

8. Polyamines.

9. Describe the steps of catabolism of phenylalanine and tyrosine. Add a note on inborn errors associated with this pathway.

10. Lysosomal storage disorders.

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Rajiv Gandhi University of Health Sciences
M.D. Degree Examination – MAY-2018

[Time: 3 Hours] [Max. Marks: 100]

BIOCHEMISTRY
PAPER – III
ENZYMES, NUTRITION AND SPECIALIZED TISSUES
Q.P. CODE: 7317

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

Answer all the questions 10 X 10 = 100 Marks

1. Explain the various types of inhibition of enzyme activity with suitable examples.

2. Describe the sources, factors affecting absorption and daily requirement of iron. Add a note on iron deficiency anemia.


4. Dietary fibre.

5. Nitric oxide.


7. Cytoskeleton.

8. Protein energy malnutrition.


10. Methemoglobinemias.

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1. Explain various types of porphyrias. Add a note on the biochemical tests available to evaluate the same.

2. Explain the metabolism of catecholamines. Add a note on vanillyl mandelic acid estimation.

3. Explain the formation, tests and interpretation of glycated haemoglobin.

4. Discuss lipid profile in diabetes mellitus.

5. Chemical composition of cerebrospinal fluid (CSF) in various diseases.


8. Explain the causes and classify various types of jaundice.

9. Pancreatic function tests.

10. Mucopolysachharidoses.

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