



**END TERM EXAM- 2020**  
**SECOND YEAR MBBS – SEQs**

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**Time Allowed: 2½ Hours**

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**Q No. 1.**

- a. What are mutations? Explain different types of mutations along with their cause and their effect on proteins. (5)
- b. Which mutation causes sickle cell disease? How? (5)

**Q No. 2**

- a. Discuss the process of Translation in Prokaryotes & Eukaryotes specifying the difference in both. (5)
- b. Write a note of post transcriptional modifications. (5)

**Q No. 3**

- a. What are the causes of Addison's disease? What is Addisonian crisis? (5)
- b. What is Cushing's syndrome describe its salient features? What is dexamethasone test? (5)

**Q No. 4**

- a. What are the non-metabolic effects of Cortisol? (5)
- b. Describe Renin- Angiotensin-Aldosterone system. (5)

**Q No. 5**

- a. What is the composition of Nascent VLDL and Mature VLDL? How VLDL is metabolized? (5)
- b. A 43-year-old gentleman with a long history of type 2 diabetes (> 6 years), dyslipidemia and hypertension presented to the emergency department with a 6-day history of weakness, fever, nausea, vomiting. Urine analysis shows Glucose 4+, ketones 3+, nitrite and leucocyte negative. Blood pH of 7.06  
What is the likely Diagnosis?  
What is the cause of this condition? (5)

**Q No. 6**

- a. Describe the regulation of Cholesterol synthesis. What are the fates of Cholesterol? (5)
- b. What are the types of fatty acid oxidation? Explain salient features of each type. (5)

**Q No. 7**

- a. How are purines catabolized. What is severe combined immunodeficiency? What is the cause, symptoms and treatment? (5)
- b. How are pyrimidines synthesized from salvage pathway? (5)