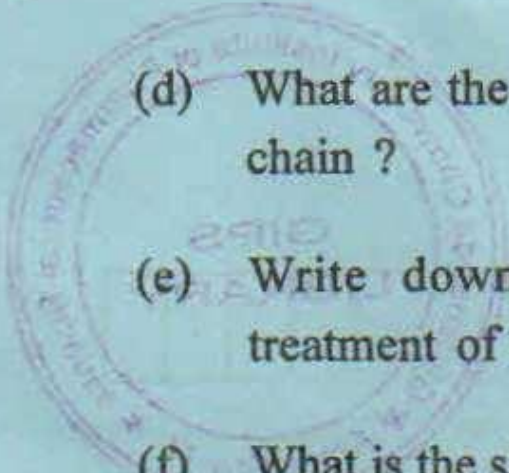


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- (d) What are the inhibitors of electron transport chain ?
- (e) Write down the cause, symptoms and treatment of Refsum's disease.
- (f) What is the significance of nitrogen balance? What is positive and negative nitrogen balance ? 1+2=3
- (g) What are the metabolic disorders of Urea cycle ?
- (h) What is the role of DNA topoisomerase in 'Supercoils' ?
- (i) What is mutation ? Name four chemical mutagens. 1+2=3
- (j) How DNA replication process is inhibited in bacteria and human ?
- (k) Give explanation of the systemic name of arachidonic acid $20 : 4\Delta^{5,8,11,14}$.
- (l) What is genetic code ? Name the initiating codons and termination codons. 1+2=3

2. Answer any *eight* questions : $8 \times 5 = 40$

- (a) Explain the enzyme nomenclature and classification with proper examples. $2+3=5$
- (b) Discuss the process of Glycogenolysis.
- (c) What are ketone bodies ? Write down the process of Ketogenesis.
- (d) Discuss the biochemical role of prostaglandins.
- (e) Discuss the effect of substrate concentration on enzyme activity. Write down the significance of K_m value.
- (f) Write a note on Urea cycle.
- (g) Discuss the process of DNA repair.
- (h) Explain the features of transamination. Discuss about oxidative deamination. $2+3=5$
- (i) Discuss the process of DNA replication in prokaryotes.
- (j) Discuss lactate and ethanol fermentation process. Write down the significance of lactate fermentation. $2+2+1=5$

3. Answer any *three* questions : $3 \times 10 = 30$

(a) Explain the reactions of electron transport chain. How uncouplers work ? Give two examples of uncoupler. $7+2+1=10$

(b) Discuss how glucose gets converted to pyruvate through Glycolysis process. What are the regulatory enzymes of glycolysis ? $8+2=10$

(c) Describe the biosynthesis of RNA in prokaryotes.

(d) What are the locations of HMP shunt ? Explain the reactions of HMP shunt. What is the importance of HMP shunt ? $1+8+1=10$