

**SECTION I: Attempt any three**

Q1.	List different types of Enzyme reactors & discuss in detail about any three types.	(14)
Q2.	Discuss immobilized enzymes with reference to types, methods of immobilization. Explain with proper diagram.	(14)
Q3.	Write a note on Genetically modified foods	(14)
Q4.	A. Discuss the advantages of Probiotics.	(07)
	B. Briefly explain Single Cell Proteins.	(07)
Q5	Explain different approaches and types of Gene therapy	(14)
Q6	Write a note on	
	A. Subunit vaccines	(07)
	B. DNA Finger printing technique	(07)
Q7	Write a note on Biofertilizers and state its advantages & disadvantages	(14)
Q8 A	Explain: <i>In situ</i> and <i>Ex situ</i> Bioremediation. List their advantages	(07)
B	Discuss: Biodegradation of Naphthalene	(07)
	<b><u>SECTION II: Attempt any Eight</u></b>	(08)
Q1	Draw a schematic diagram of a biosensor & label it.	(01)
Q2	Give one objective of enzyme engineering?	(01)
Q3	Name the different types of enzyme biosensor.	(01)
Q4	What is the use of site directed mutagenesis in Enzyme engineering?	(01)
Q5	Which was the first Genetically modified crop?	(01)
Q6	Define Probiotics.	(01)
Q7	Name any one enzyme and its use in Food industry	(01)
Q8	Which enzyme is used to convert Starch to Dextrins in process of Beer making?	(01)
Q9	What any two vectors used in gene therapy	(01)
Q10	What are VNTRs	(01)

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Q11	Give any one advantage of DNA vaccines	(01)
Q12	Name any two cell sources for tissue engineering	(01)
Q13	Give two examples of recalcitrant compound	(01)
Q14	What is phyto remediation	(01)
Q15	What is Biostimulation	(01)
Q16	Give one example of phosphate solubilising bacteria	(01)

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July -2021

B.Sc., Sem.-VI

ELECTIVE -311 : Biochemistry

(ENDOCRINOLOGY)

Time : 2-00 hrs

Total marks : 50

Instruction : All Questions in **Section I** carry equal marks

**Attempt any THREE** questions in Section I

Questions IX in **Section II** is **Compulsory**

- Q.I A Write a brief note on characteristic of hormone 7  
B. Describe role of hormones a secondary messenger 7
- Q.II A Explain types of gland hormones of each gland 7  
B. Describe any one model of hormone actions 7
- Q.III A. Describe chemistry and biosynthesis of thyroid hormone 7  
B. Explain hyperthyroidism 7
- Q.IV A Explain diseases associated with parathyroid hormone 7  
B Write a brief note on Calcium homoestatis 7
- Q.V A. Write the role of insulin and glucagon in the human body 7  
B Write a note on chemistry of pancreatic hormone 7
- Q.VI A Explain Diabetes mellitus in detail. 7  
B. Explain biosynthesis of pancreatic hormone 7

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- Q.VII A. Write the biosynthesis of hormones of adrenal cortex 6  
B. Discuss in biosynthesis of hormones of gonads 8
- Q.VIII A. Discuss the chemistry of hormone of adrenal medulla 7  
B. Write a note chemistry of hormones of gonads 7

## SECTION II

Answer (any 8) of the following 8

1. Name the hormone is synthesized by alpha cell of islets of langerhans of Pancreas  
a. Progesterone      b. estrogens      c. Glucagon      d. Insulin
2. Name the elements is required for the synthesis of thyroid hormone.  
a. iodine      b.sulfur      c. Iron      d. Zinc
- 3.Which hormone is synthesized by Gonads  
a. Insulin      b. Progesterone      c. Glucagon      d. TSH
4. Where the epinephrine is secreted in the human body ?  
a . adrenal medulla   b. islets of langerhans   c. Thyroid gland   d. Intestine
5. Which of the following gland can be classified as an endocrine and an exocrine gland ?  
a. Thyroid      b. Thymus      c. Pancreas      d. Pituitary

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6. Which of the following is/are the female gonads?  
a. Ovary      b. Ova      c. Testis      d. Testicles
7. Which hormone stimulates the production of testosterone  
a. FSH      b. LSH      c. ESH      d. LH
8. Give the full form of LH ?  
a. lethal hormone      b. Ligamentous hormone      c. Lutain hormone  
d. Luteinizing hormone
9. What is location of secretion of Epinephrine and Non epinephrine ?  
a. adrenal cortex      b. adrenal paracortex      c. adrenal medulla  
d. Pancreas
10. How many polypeptide chain of amino acid in Glucagon  
a. 1      b. 2      c. 3      d. 4
11. Which of the following is protein hormone?  
a. Oxytocin      b. Insulin      c. TSH      d. Antidiuretic hormone
12. Name the disease result in low level of adrenal cortex hormones  
a. Goitre      b. Diabetes      c. Addison disease      d) Cushing syndrome
13. Where ADH perform its functions?  
a. Loop of henle      b. Collecting ducts of testes      c. Collecting tubules of kidneys  
d. PCT

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14. Which of the following hormone stimulates the growth of eggs in the ovaries.

- a. LH                      b. BSH                      c. LSH                      d. FSH

15. Which of the following hormone is known as flight and fight hormone?

- a. Thyroxin      b. Adrenaline      c. ADH                      d. Oxytocin

16. . Which of the following is a male sex hormone

- a. Estrogen                      b. Androgen\_                      c. Insulin                      d. Pheromones
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