REV-00
BBT/40 /46 2014/06

B. Sc BIOTECHNOLOGY

Second Semester
Biochemistry II
(BBT- 08)

Duration: 3Hrs. **Full Marks: 70**

PART A (Objective) =20
PART-B (Descriptive)=50

PART-B (Descriptive)

Duration: 2 hrs. 40 mins. **Marks: 50**

I. Answer any five: **2×5=10**

1. Give the structures of adrenal cortex hormones.
2. Describe in brief the structure of the adrenal gland.
3. Write the sources and RDA of vitamin K.
4. What are Ketogenic and Glucogenic amino acids?
5. In which phases of cell cycle Gibberellic acid stimulated cell division is regulated?
6. What is Richmond- Lang Effect?
7. What is Contractile Protein?

II. Answer any five: **3×5=15**

1. What are the deficiency symptoms of vitamin B1?
2. Explain transamination reaction.
3. Describe Nitrogen assimilation.
4. Insulin and Glucagon have antagonistic functions in the body. Explain
5. Give a brief account of the various disorders caused due to abnormal concentration of pituitary hormones.
6. What is apical dominance? Discuss auxins role in apical dominance.
7. Briefly describe distribution of gibberelin in plants.

III. Answer any five: **5×5=25**

1. Explain Kreb's Cycle.
2. Give the structure and functions of testicular hormones.
3. Explain nitrogen cycle.
4. How peptide hormones act on human body? Explain with a suitable mechanism.
5. Discuss physiological effects of hormone ethylene in plants.
6. Write a note on neurotransmitters.
7. Discuss the mechanism of gibberelin action of promotion of stem elongation.

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Duration: 20 minutes **Marks – 20**

PART-A (Objective)

Time: 20 mins **Total Marks: 20**

I. Choose the correct option: **1×10=10**

1. Which one of the vitamin A functions as a steroid hormone?
   a) Retinal b) Retinol
   c) Provitamin d) B- carotene

2. The coenzyme directly concerned with the synthesis of biogenic amines.
   a) TPP b) NADP+
   c) Biotin d) Pyridoxal phosphate

3. The synthesis of urea occurs in
   a) Kidney b) Muscle
   c) Liver d) Intestine

4. One amino group of urea in the urea cycle comes from
   a) Fumarate b) Aspartate
   c) Citruline d) Ornithine

5. Which of the following phytohormone is known as fruit ripening hormone?
   a) Auxin b) Gibberellin
   c) Cytotonin d) Ethylene

6. In a green dicot seedling, which plant part has the highest concentration of auxin?
   a) Apical bud b) Auxillary shoot
   c) Leaf d) Root tip

7. In the presence of which of the hormone plant shows counteraction of apical dominance
   a) Auxin b) Gibberellin
   c) Cytokinin d) Ethylene

8. Which of the following is the most important function of Abscinic Acid?

a) Apical dominance b) Elongation of internodes
c) Fruit ripening d) Stomatal cloning

9. cAMP acts as a second messenger in

a) Glucagon action b) Estrogen action
c) T3 action d) None of the above

10. Luteotropic hormone is also known

a) Prolactin b) PTH
c) GH d) Ocytocin

II. Fill in the blanks: **1×5=5**

1. The vitamin containing Isoalloxazine ring is.....
2. Pellagra is seen in deficiency of .....
3. The most important enzyme involved in oxidative deamination is.....
4. Increased concentration of ammonia in blood is termed as.....
5. Leaf epinasty in dicot plants is caused by.....

III. Write whether the statements are true or false: **1×5=5**

1. The auxin binding receptor protein found in plants is ABP1.
2. Fibrous actin is a polymer of myosin.
3. Auxin causes initiation of lateral branch roots.
4. The meaning of hormone is 'to exite'.
5. Steroid hormones bind to cell surface receptor.

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