



BIOLOGY

BOOKS - PREMIERS PUBLISHERS

PLANTS AND ANIMAL HORMONES

Textbook Evaluation | Choose The Correct Answer

1. Gibberellins cause :

A. Shortening of genetically tall plants

B. Elongation of dwarf plants

C. Promotion or rooting

D. Yellowing of young leaves

Answer: B



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2. The hormone which has positive effect on apical dominance is

A. Cytokinin

B. Auxin

C. Gibberellin

D. Ethylene

Answer: B



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3. Which one of the following hormones is naturally not found in plants:

A. 2,4-D

B. GA3

C. Gibberellin

D. IAA

Answer: A



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4. Avena coleoptile test was conducted by

A. Darwin

B. N. Smit

C. Paal

D. F.W. Went

Answer: D



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5. To increase the sugar production in sugarcane they are sprayed with:

A. Auxin

B. Cytokinin

C. Gibberellins

D. Ethylene

Answer: D



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6. LH is secreted by

A. Adrenal gland

B. Thyroid gland

C. Anterior pituitary

D. Hypothalamus

Answer: C



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7. Identify the exocrine gland

A. Pituitary gland

B. Adrenal gland

C. Salivary gland

D. Thyroid gland

Answer: C



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8.gland is both exocrine and endocrine.

A. Pancreas

B. Kidney

C. Liver

D. Lungs

Answer: A



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9. Which one is referred as "Master Gland"?

- A. Pineal gland
- B. Pituitary gland
- C. Thyroid gland
- D. Adrenal gland

Answer: B



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Textbook Evaluation li Fill In The Blanks

1. _____ causes cell elongation, apical dominance and prevent abscission.



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2. is a gaseous hormone involved in abscission of organs and acceleration of fruit

ripening



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3.causes stomatal closure.



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4. Gibberelins induce stem elongation in
_____ plants.



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5. The hormone which has negative effect on apical dominance is.....



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6. Calcium metabolism of the body is controlled by



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7. In the islets of Langerhans, beta cells secrete

.....



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8. The growth and functions of thyroid gland is controlled by



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9. Decreased secretion of thyroid hormones in the children leads to.....



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Textbook Evaluation Iii Match The Column

1. Match Column I with Columns II and III

Column I	Column II	Column III
Auxin	<i>Gibberella fujikuroi</i>	Abscission
Ethylene	Coconut milk	Internodal elongation
Absciscic acid	Coleoptile tip	Apical dominance
Cytokinin	Chloroplast	Ripening
Gibberellins	Fruits	Cell division



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2. Match the following hormones with their deficiency states.

Hormones		Disorders	
A	Thyroxine	(i)	Acromegaly
B	Insulin	(ii)	Tetany
C	Parathormone	(iii)	Simple goitre
D	Growth hormone	(iv)	Diabetes insipidus
E	ADH	(v)	Diabetes mellitus



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Textbook Evaluation Iv State Whether True Of False If False Write The Correct Statement

1. A plant hormone concerned with stimulation of cell division and promotion of nutrient mobilization is cytokinin.



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2. Gibberellins cause parthenocarpy in tomato



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3. Ethylene retards senescence of leaves, flowers and fruits.



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4. Exophthalmic goiter is due to the over secretion of thyroxine.



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5. Pituitary gland is divided into four lobes.



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6. Estrogen is secreted by corpus luteum.



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Textbook Evaluation V Assertion And Reasoning

1. Assertion: Application of cytokinin to marketed vegetables can keep them fresh for several days.

Reason: Cytokinins delay senescence of leaves and other organs by mobilisation of nutrients

A. If both A and R are true and R is correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. A is true but R is false

D. Both A and R are false

Answer: B



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2. Assertion (A): Pituitary gland is referred as "Master gland.

Reason (R): It controls the functioning of other endocrine glands.

A. If both A and R are true and R is correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. A is true but R is false

D. Both A and R are false

Answer: A



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3. Assertion (A) : Diabetes mellitus increases the blood sugar levels.**Reasons(R) :** Insulin decreases the blood sugar levels .

A. If both A and R are true and R is correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. A is true but R is false

D. Both A and R are false

Answer: A



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Textbook Evaluation Vi Answer In A Word Or Sentence

1. Which hormone promotes the production of male flowers in Cucurbits?



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2. Write the name of a synthetic auxin.



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3. Which hormone induces parthenocarpy in tomatoes?



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4. What is the hormone responsible for the secretion of milk in female after child birth?



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5. Name the hormones which regulates water and mineral metabolism in man.



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6. Which hormone is secreted during emergency situation in man?



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7. Which gland secretes digestive enzymes and hormones?



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8. Name the endocrine gland associated with kidneys



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Textbook Evaluation Vii Short Answer Question

1. What are synthetic auxins? Give examples.



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2. What is bolting? How can it be induced artificially?



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3. Bring out any two physiological activities of abscisic acid (ABA).



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4. What will you do to prevent leaf fall and fruit drop in plant ? Support your answer with reason.



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5. What are chemical messengers?



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6. Write the differences between endocrine and exocrine gland.



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7. What is the role of parathorone?



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8. What are the hormones secreted by posterior lobe of the pituitary gland? Mention

the tissues on which they exert their effect



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9. Why are thyroid hormones referred as personality hormone?



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10. (i) Which hormone requires iodine for its formation ? What will happen if intake of iodine in our diet is low ?

(ii) What is the importance of raivater harvesting ?

(iii) What is colosturm ? How is milk production hormonally regulated ?



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Textbook Evaluation Viii Long Answer Questions

1. (a) Name the gaseous plant hormone.
Describe its three different actions in plants.

(b) Which hormone is known as stress hormone in plants ? Why?



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2. Describe an experiment which demonstrates that growth stimulating hormone is produced at the tip of coleoptile.



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3. Write the physiological effects of gibberellins.



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4. Where are estrogens produced? What is the role of estrogens in the human body?



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5. (i) What are the conditions which occur due to lack of ADH and insulin? How are the conditions different from one another?

(ii) Write the events involved in the sexual reproduction of a flowering plant. Discuss the first event and write the types.



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Textbook Evaluation ix Higher Order Thinking Skills Hots

1. What would be expected to happen if
- a. Gibberellin is applied to rice seedlings.
 - b. A rotten fruit gets mixed with unripe fruits.
 - c. When cytokinin is not added to culture medium



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2. A plant hormone was first discovered in Japan when rice plant were suffering from Bakanae disease caused by *Gibberella fujikoroi*.

Based on this information answer the following questions.

(i) Identify the hormone involved in this process.

(ii) Which property of this hormone causes the disease?

(iii) Give two functions of this hormone.



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3. Senthil has high blood pressure, protruded eyeball and an increased body temperature.

Name the endocrine gland involved and hormone secretion responsible for this condition



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4. Sanjay is sitting in the exam hall. Before the start of the exam, he sweats a lot, with increased rate of heart beat. Why does this condition occur?



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5. Susan's father feels very tired and frequently urinates. After clinical diagnosis he was advised to take an injection daily to maintain his blood glucose level. What would be the possible cause for this? Suggest preventive measures.



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Other Important Questions Answers | Choose The Correct Answer

1. Auxin is mainly produced by:

A. Apical root meristem

B. Root cambium

C. Apical shoot meristem

D. Phloem in shoot tip

Answer: C



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2. Plant hormones are:

A. Growth regulators

B. Growth promoters

C. Growth inhibitors

D. None of the above

Answer: A



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3. Pick out the hormone which maintain mineral metabolism.

A. Parathormone

B. Thymosin

C. Thyroxine

D. Melatonin

Answer: A



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4. Among the following, which one is attached to the hypothalamus.

A. Pineal gland

B. Pituitary gland

C. Thymus

D. Thyroid

Answer: B



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5. Stem elongation affected by:

A. Gibberellin and Florigen

B. Florigen and Kinn

C. Kinn and Auxin

D. Auxin and Gibberellin

Answer: D



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6. Which of the following is not natural occurring plant hormone?

A. 2,4_D

B. Cytokinin

C. Gibberellin

D. IAA

Answer: A



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7. Leaf fall occur when the content of:

A. Auxin increases

B. Auxin decreased

C. Absciscic acid decreases

D. Gibberellin acid decreases

Answer: B



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8. Indole acetic acid generally inhibits the growth of:

A. Root

B. Leaves

C. Shoots

D. Plants in general

Answer: A



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9. Hormones are chemically:

A. Amino acid

B. Protein

C. Steroid

D. All

Answer: D



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10. Pituitary gland is under the control of:

A. Hypothalamus

B. Adrenal gland

C. Pineal gland

D. Thyroid

Answer: A



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11. Hypothyroidism in adults causes:

A. Addison's disease

B. Myxoedema

C. Sterility

D. Cretinism

Answer: B



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12. Parathormone deficiency in man causes:

A. Hyper calcaemia

B. Hypo calcaemia

C. Goitre

D. All

Answer: B



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13. The function of norepinephrine is:

A. Almost similar to epinephrine

B. Similar to ADH

C. Opposite to epinephrine

D. Opposite to ADH

Answer: A



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14. Adrenalin increases:

A. Heart beat

B. Blood pressure

C. Both (a) and (b)

D. None

Answer: C



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15. Hormone responsible for ovulation is:

A. LH

B. GSH

C. Progesterone

D. Testosterone

Answer: A



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16. Which hormone is responsible for milk ejection after the birth of baby?

A. Progesterone

B. Prolactin

C. Oxytocin

D. Oestrogen

Answer: C



17. The islets of Langerhans are found in:

- A. Pancreas
- B. Stomach
- C. Liver
- D. Alimentary canal

Answer: A



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Other Important Questions Answers li Fill In The Blanks

1. Gibberellin promotes cell division and elongation in, and



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2. Absciscic acid controls



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3. is called as 'Master gland' of the body.



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4. growth hormone is produced in



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5. Urine concentration is controlled by



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6. The two lobes of thyroid gland are joined by horizontal connection called



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7. Insulin are secreted by cells.



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8. Progesterone maintains pregnancy.



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9. What is normal blood glucose level in human beings ?



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10. converts glycogen into glucose.



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11. is responsible for growth of female reproduction organs.



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12. Anti-inflammatory hormone is



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13. hormone stimulates the growth of mammary gland.



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14. helps in reabsorption of water.



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15. Endocrine glands are glands.



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Other Important Questions Answers iii Match
The Following

1. Match the Column I with Column II.

Column I		Column II	
A	ADH	(i)	Pituitary
B	ACTH	(ii)	Mineralocorticoid
C	Aldosterone	(iii)	Diabetes insipidus
D	Insulin	(iv)	Diabetes mellitus
E	Testosterone	(v)	Vasodilator



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2. Match the Column I with Column II.

Column I		Column II	
A	Bolting	(i)	Abscisic acid
B	Apical Dominance	(ii)	Ethylene
C	Richmond effect	(iii)	Gibberellin
D	Growth inhibitor	(iv)	Auxin
E	Senescence	(v)	Cytokinin



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Other Important Questions Answers Iv State Whether True Or False If False Write The Correct Statement

1. Bakanae disease or Foolish seeding disease in cucurbits.



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2. Synthesis of ethylene occurs during ripening of fruits.



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3. The secretion of Neurohypophysis are secretions of part of only pituitary.



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4. Excess production of GH in children result in dwarfism.



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5. Cortisone stimulates the breakdown of glycogen into glucose.



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Other Important Questions Answers V Assertion And Reasoning

1. Assertion (A): Ethylene is a plant hormone, which can transfer from one plant to another plant.

Reason (R): Ethylene is a gaseous hormones in plants.

A. If both A and R are true and R is correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. A is true but R is false

D. Both A and R are false

Answer: A



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2. Assertion (A): Senescence is induced by the application of cytokinin in plants.

Reason (R): Cytokinin promotes the degradation of chlorophyll and nucleic acids.

A. If both A and R are true and R is correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. A is true but R is false

D. Both A and R are false

Answer: D



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3. Assertion (A): ABA plays an important role in plants during water stress.

Reason (R): ABA promotes stomatal closing during water stress.

A. If both A and R are true and R is correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. A is true but R is false

D. Both A and R are false

Answer: A



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4. Assertion (A): Gibberellin is a bolting hormone.

Reason (R): Gibberellin induces parthenocarpy in fruits.

A. If both A and R are true and R is correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. A is true but R is false

D. Both A and R are false

Answer: D



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5. Assertion (A): Bolting effect in plants is performed by Gibberellin.

Reason (R): Gibberellin induce internode elongation.

A. If both A and R are true and R is correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. A is true but R is false

D. Both A and R are false

Answer: A



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6. Assertion (A): Vasopressin is a new hormone.

Reason (R): Vasopressin is synthesized by pars nervosa of pituitary glands.

A. If both A and R are true and R is correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. A is true but R is false

D. Both A and R are false

Answer: C



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7. Assertion (A): Hormones are said to be similar to enzyme in action and chemical nature.

Reason (R): Hormones and enzymes are proteinaceous in nature and act as informational nature.

A. If both A and R are true and R is correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. A is true but R is false

D. Both A and R are false

Answer: D



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8. Assertion (A): Deficiency of insulin produce polyuria condition.

Reason (R): Glucagon is anatagonistic hormone of insuline.

A. If both A and R are true and R is correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. A is true but R is false

D. Both A and R are false

Answer: B



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9. Assertion (A): Epinephrine and nor-epinephrine are secreted by adrenal medulla are called emergency hormone.

Reason (R): These hormones rapidly mobilize the body to face a stress or emergency situation.

A. If both A and R are true and R is correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. A is true but R is false

D. Both A and R are false

Answer: A



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10. Assertion (A): Ovaries are both cytogenic and endocrine.

Reason (R): Ovaries produce ovum and reproductive hormone.

A. If both A and R are true and R is correct explanation of A

B. If both A and R are true but R is not the correct explanation of A

C. A is true but R is false

D. Both A and R are false

Answer: A



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Other Important Questions Answers Vi Answer In A Word Or Sentence

1. What is apical dominance.



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2. What is Richmond Lang effect?



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3. Write the chemical composition of thyroxine?



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4. Give the uses of progesterone.



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5. In which condition the excess of dilute urine is produced? Name the disease.



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6. What is the main function of Glucogen.



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7. Specify the symptoms of acromegaly



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[Other Important Questions Answers Vii Short Answer Questions](#)

1. Name the layers of adrenal cortex and mention their secretions.



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2. Growth hormone is important for normal growth. Explain.



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3. Which hormone is called as life saving hormone? Why?



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4. Why pancreas is called as dual gland?



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5. Write the functions of the thymosin.



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6. Which gland is a link between endocrine and lymphoid gland.



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7. Differentiate hyperglycemia from hypoglycemia



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8. What are plant hormones?



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Other Important Questions Answers Viii Long Answer Questions

1. What are the functions of thyroid hormones? Write any three points.



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2. List out the hormones secreted by Adenohypophysis of pituitary_explain any two.

(i) Growth Hormone

(ii) Thyroid stimulating Hormone

(iii) Adrenocorticotrophic Hormone

(iv) Gonadotropic Hormone which comprises the Follicle Stimulating Hormone and Luteinizing Hormone

(v) Prolactin



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3. Explain the testes and its functions.



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4. Write the physiological effect of Cytokinins.



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**Other Important Questions Answers lx Higher
Order Thinking Skills Hots**

1. You are given a tissue with its potential for differentiation in an artificial culture. Which of the following pairs of hormones would you add to the medium to secure shoots as well as roots?



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2. Insulin and thyroxine arrive at an organ at the same time. Thyroxine causes an effect on

the organ but insulin does not. This is because:



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3. A person entering an empty room suddenly finds a snake right in front on opening the door. What changes happen in his neuro-hormonal control system?



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4. A pregnant female delivers a baby who suffers from stunted growth mental retardation low intelligence quotient and abnormal skin, This is the result of



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5. A patient of diabetes mellitus excretes glucose in urine even when he kept in a carbohydrate free diet. It is because:



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6. Dr. F went noted that if coleoptile were removed and placed on agar for one hour, the agar would produce a bending when placed on one side of freshly - cut - coleoptile stumps

Of what significance is this experiment?



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