Q1. Which of the following pairs is correctly matched regarding hormone and its function?

A. Oxytocin – Inhibits milk ejection
B. Vasopressin – Stimulates uterine contraction
C. Thyroxine – Regulates metabolism
D. Prolactin – Maintains blood calcium levels

Answer: C
Explanation: Thyroxine increases BMR. Oxytocin stimulates milk ejection, not inhibits it.

Q2. Which of the following hormones are secreted by the anterior pituitary?

1. GH

2. FSH

3. ADH

4. ACTH

Options:
A. 1, 2, and 4
B. 1 and 3
C. 2, 3, and 4
D. 1, 2, 3, and 4

Answer: A
Explanation: ADH (vasopressin) is secreted by the posterior pituitary.

Q3. Assertion and Reason

Assertion (A): Hyposecretion of insulin causes diabetes mellitus.
Reason (R): Insulin helps in the breakdown of glycogen to glucose.

A. Both A and R are true, and R is the correct explanation
B. Both A and R are true, but R is not the correct explanation
C. A is true, but R is false
D. A is false, but R is true

Answer: C
Explanation: Insulin promotes conversion of glucose to glycogen, not the reverse.

Q4. Which hormone increases blood calcium levels?

A. Calcitonin
B. Parathyroid hormone
C. Aldosterone
D. Prolactin

Answer: B
Explanation: PTH increases blood Ca^{2+} by bone resorption, whereas calcitonin lowers it.

Q5. Match the gland with its hormone:

Gland Hormone Secreted

A. Thyroid 1. Cortisol
B. Adrenal cortex 2. Thyroxine
C. Islets of Langerhans 3. Insulin
D. Anterior pituitary 4. Prolactin

Options:
A. A-2, B-1, C-3, D-4
B. A-3, B-1, C-2, D-4
C. A-4, B-2, C-3, D-1
D. A-2, B-3, C-1, D-4

Answer: A

Q6. Which of the following glands is both endocrine and exocrine?

A. Pineal
B. Adrenal
C. Pancreas
D. Thyroid

Answer: C
Explanation: Pancreas has endocrine (islets) and exocrine (digestive enzymes) parts.

Q7. Which of these hormones do not require second messengers for their action?

A. Insulin
B. Thyroxine
C. FSH
D. Epinephrine

Answer: B
Explanation: Thyroxine is lipid-soluble, acts via direct gene expression in nucleus.

Q8. Which of the following is a mineralocorticoid?

A. Cortisol
B. Adrenaline
C. Aldosterone
D. Estrogen

Answer: C
Explanation: Aldosterone conserves Na^+ and water in kidneys.

Q9. Which hormone stimulates the synthesis of milk proteins?

A. Oxytocin
B. Prolactin
C. FSH
D. LH

Answer: B
Explanation: Prolactin → milk production; Oxytocin → milk ejection.

Q10. Assertion and Reason

Assertion (A): Adrenal medulla is a modified sympathetic ganglion.
Reason (R): It releases norepinephrine and epinephrine into bloodstream.

A. Both A and R are true, and R is the correct explanation
B. Both A and R are true, but R is not the correct explanation
C. A is true, but R is false
D. A is false, but R is true

Answer: A

Q11. Which of these hormones is secreted in response to low sodium or high potassium levels?

A. Cortisol
B. Insulin
C. Aldosterone
D. Glucagon

Answer: C
Explanation: Aldosterone promotes Na^+ retention and K^+ excretion.

Q12. Which hormone is secreted during stress and helps increase blood glucose?

A. Thyroxine
B. Insulin
C. Cortisol
D. Oxytocin

Answer: C
Explanation: Cortisol is a glucocorticoid – increases blood glucose by gluconeogenesis.

Q13. In females, LH surge is responsible for:

A. Menstruation
B. Ovulation
C. Follicle maturation
D. Fertilization

Answer: B
Explanation: LH surge → rupture of Graafian follicle → ovulation.

Q14. Which disorder is correctly matched with the hormone deficiency?

A. Goitre – Cortisol
B. Diabetes mellitus – Insulin
C. Tetany – Thyroxine
D. Addison's disease – Thyroxine

Answer: B
Explanation: Goitre = iodine/thyroxine deficiency, Tetany = low calcium/PTH, Addison's = low cortisol.

Q15. Match the hormone with its function

Hormone	Function
A. Glucagon	1. Decreases blood glucose
B. Insulin	2. Increases blood glucose
C. GH	3. Growth promotion
D. FSH	4. Stimulates ovarian follicle

Options:
A. A-2, B-1, C-3, D-4
B. A-1, B-2, C-4, D-3
C. A-2, B-4, C-1, D-3
D. A-3, B-1, C-2, D-4

Answer: A

Q16. Which of the following hormones shows positive feedback during parturition?

A. Prolactin
B. Oxytocin
C. Estrogen
D. Progesterone

Answer: B
Explanation: Oxytocin secretion is increased by uterine contractions – a classic positive feedback loop.

Q17. Which hormone is called the emergency hormone or fight or flight hormone?

A. Glucagon
B. Epinephrine
C. Cortisol
D. Growth hormone

Answer: B
Explanation: Adrenaline (epinephrine) is secreted by adrenal medulla during stress.

Q18. Assertion and Reason

Assertion (A): Hypersecretion of GH in adults leads to acromegaly.
Reason (R): GH stimulates the growth of long bones only.

A. Both A and R are true, and R is the correct explanation
B. Both A and R are true, but R is not the correct explanation
C. A is true, but R is false
D. A is false, but R is true

Answer: C
Explanation: GH affects bones and soft tissues in adults (jaw, hands, face). Long bones no longer elongate in adults.

Q19. Which hormone acts by directly entering the nucleus and modifying gene expression?

A. Insulin
B. FSH
C. Thyroxine
D. Epinephrine

Answer: C
Explanation: Thyroxine is lipid-soluble and enters the cell nucleus directly.

Q20. Which of the following shows neuroendocrine control?

A. Adrenal cortex

B. Pancreas
C. Adrenal medulla
D. Pineal gland

Answer: C
Explanation: Adrenal medulla is directly controlled by sympathetic nerves.

Q21. Match the endocrine disorder with the correct hormone imbalance:

Disorder Cause

A. Diabetes insipidus 1. Cortisol deficiency
B. Cretinism 2. ADH deficiency
C. Addison's disease 3. Thyroxine deficiency
D. Goitre 4. Iodine deficiency

Options:
A. A-2, B-3, C-1, D-4
B. A-1, B-2, C-3, D-4
C. A-3, B-2, C-1, D-4
D. A-2, B-1, C-4, D-3

Answer: A

Q22. Which hormone would you expect to be high in a person exposed to chronic cold?

A. Cortisol
B. Thyroxine
C. ADH
D. Prolactin

Answer: B
Explanation: Thyroxine increases metabolic heat production.

Q23. Which of the following is NOT a function of cortisol?

A. Anti-inflammatory
B. Immunosuppressive

C. Stimulates gluconeogenesis
D. Promotes protein synthesis

Answer: D
Explanation: Cortisol breaks down proteins for gluconeogenesis.

Q24. Which of the following is a peptide hormone?

A. Insulin
B. Thyroxine
C. Cortisol
D. Estrogen

Answer: A
Explanation: Insulin is a protein/peptide hormone. The others are steroid or amino acid-derived.

Q25. Assertion and Reason

Assertion (A): FSH and LH are called gonadotropins.
Reason (R): They are secreted by the hypothalamus.

A. Both A and R are true, and R is the correct explanation
B. Both A and R are true, but R is not the correct explanation
C. A is true, but R is false
D. A is false, but R is true

Answer: C
Explanation: FSH and LH are secreted by anterior pituitary, not hypothalamus.

Q26. In which of the following conditions would a person suffer from frequent urination and dehydration, but maintain normal blood glucose levels?

A. Diabetes mellitus
B. Cushing's syndrome
C. Diabetes insipidus
D. Addison's disease

Answer: C

Explanation: Diabetes insipidus = ADH deficiency → large water loss.

Q27. Match the Column – Identify the hormone based on function:

Function	Hormone
A. Inhibits LH and FSH	1. Somatostatin
B. Inhibits GH and insulin	2. Inhibin
C. Stimulates milk ejection	3. Oxytocin
D. Raises blood calcium	4. Parathyroid hormone

Options:
A. A-2, B-1, C-3, D-4
B. A-1, B-2, C-3, D-4
C. A-3, B-4, C-2, D-1
D. A-4, B-1, C-2, D-3

Answer: A

Q28. Which hormone regulates the circadian rhythm?

A. Cortisol
B. Oxytocin
C. Melatonin
D. FSH

Answer: C
Explanation: Melatonin from pineal gland helps in biological clock regulation.

Q29. Identify the INCORRECT statement:

A. Calcitonin decreases blood calcium
B. Aldosterone increases K^+ reabsorption
C. FSH promotes follicle development
D. Glucagon raises blood glucose levels

Answer: B

Explanation: Aldosterone increases Na^+ reabsorption and K^+ excretion.

Q30. Which hormone uses cAMP as a second messenger?

A. Insulin
B. Cortisol
C. TSH
D. Thyroxine

Answer: C
Explanation: TSH (like many peptide hormones) uses cAMP pathway.

Q31. Which hormone is responsible for Na^+ retention and K^+ excretion in kidneys?

A. Cortisol
B. Aldosterone
C. ADH
D. Renin

Answer: B
Explanation: Aldosterone (a mineralocorticoid) acts on renal tubules to retain Na^+ and excrete K^+, maintaining electrolyte balance.

Q32. Assertion and Reason

Assertion (A): Hypothyroidism in children causes cretinism.
Reason (R): Thyroxine is essential for normal physical and mental development in infants.

A. Both A and R are true and R is the correct explanation
B. Both A and R are true but R is not the correct explanation
C. A is true, but R is false
D. A is false, but R is true

Answer: A
Explanation: Thyroxine deficiency in infants leads to poor growth and mental retardation.

Q33. Which of the following is NOT correctly matched?

A. Oxytocin – Milk ejection
B. Vasopressin – Water reabsorption
C. Prolactin – Ovulation
D. FSH – Follicle development

Answer: C
Explanation: Prolactin promotes milk production, not ovulation.

Q34. Hormone responsible for permissive effect on other hormones:

A. Epinephrine
B. Cortisol
C. Insulin
D. Melatonin

Answer: B
Explanation: Cortisol enhances the effects of other hormones (like glucagon and catecholamines) – this is called a permissive effect.

Q35. Which hormone is secreted during long-term stress?

A. Epinephrine
B. Cortisol
C. Insulin
D. Oxytocin

Answer: B
Explanation: Cortisol is released from adrenal cortex during chronic stress.

Q36. Match the Column – Endocrine Gland and Secretion

Gland Hormone Secreted

A. Adrenal cortex 1. Cortisol
B. Thyroid gland 2. Calcitonin
C. Pancreas 3. Glucagon
D. Pineal gland 4. Melatonin

Options:
A. A-1, B-2, C-3, D-4
B. A-2, B-3, C-1, D-4
C. A-3, B-4, C-2, D-1
D. A-1, B-3, C-4, D-2

Answer: A

Q37. Which hormone deficiency leads to goitre?

A. ADH
B. Cortisol
C. Thyroxine
D. Insulin

Answer: C
Explanation: Thyroxine deficiency due to iodine deficiency causes goitre.

Q38. Which hormone stimulates maturation of Graafian follicles?

A. LH
B. Progesterone
C. FSH
D. Estrogen

Answer: C
Explanation: FSH stimulates the growth and maturation of ovarian follicles.

Q39. Which of the following is not a function of parathyroid hormone?

A. Enhances calcium absorption from intestine
B. Stimulates calcium reabsorption from kidneys
C. Stimulates osteoblast activity
D. Mobilizes calcium from bones

Answer: C

Explanation: PTH activates osteoclasts, not osteoblasts.

Q40. Assertion and Reason

Assertion (A): Insulin causes hypoglycemia.
Reason (R): Insulin promotes glycogenolysis.

A. Both A and R are true and R is the correct explanation
B. Both A and R are true but R is not the correct explanation
C. A is true, but R is false
D. A is false, but R is true

Answer: C
Explanation: Insulin causes hypoglycemia by promoting glycogenesis, not glycogenolysis.

Q41. Which hormone opposes the action of insulin?

A. Oxytocin
B. Glucagon
C. ADH
D. Prolactin

Answer: B
Explanation: Glucagon increases blood sugar, while insulin lowers it.

Q42. A tumour in adrenal medulla causes excess secretion of:

A. Cortisol
B. Aldosterone
C. Epinephrine
D. Insulin

Answer: C
Explanation: Adrenal medulla secretes epinephrine and norepinephrine.

Q43. Which of the following hormone(s) is/are derivatives of amino acids?

A. Thyroxine
B. Adrenaline
C. Melatonin
D. All of these

Answer: D
Explanation: All are amino acid derivatives:

Thyroxine → Tyrosine

Adrenaline → Tyrosine

Melatonin → Tryptophan

Q44. Match the disorder with the correct hormone excess/deficiency:

Disorder	Hormone Involved
A. Gigantism	1. GH excess in children
B. Acromegaly	2. GH excess in adults
C. Myxedema	3. Thyroxine deficiency in adults
D. Grave's disease	4. Thyroxine excess

Options:
A. A-1, B-2, C-3, D-4
B. A-2, B-1, C-4, D-3
C. A-4, B-3, C-2, D-1
D. A-3, B-4, C-1, D-2

Answer: A

Q45. Which hormone has no target organ but acts on most body cells?

A. TSH
B. FSH
C. Thyroxine
D. LH

Answer: C

Explanation: Thyroxine affects general metabolism and acts on nearly all body tissues.