1. Go through the following points-
I. Regulate the development, maturation and functions of epididymis, vas deferens, seminal vesicle, prostrate gland, urethra, etc.
II. Stimulate muscular growth of facial and axillary hairs, aggressiveness, low pitch of voice, etc.
III. Stimulates spermatogenesis
IV. Act on CNS and sexual behaviour (libido)
V. Produce anabolic (synthetic) effect on protein and carbohydrate metabolism
VI. The Leydig's cell / interstitial cells (present in intertubular space) secrete this hormone under the influence of LH
Above points are associated with _____ hormones-
(a) FSH (b) Progesterone
(c) Androgens (e.g. Testosterone) (d) Melatonin

2. Find the odd one out-
(a) Insulin, Glucagon, Thymosin
(b) Glucocorticoids, Mineralocorticoids, sex corticoids
(c) Relaxin, Oestrogen, progesteron
(d) Nor-epinephrine, Adrenaline

3. Progesteron -
(a) Supports pregnancy
(b) Stimulates the formation of mammary alveoli
(c) Stimulates milk secretion (Lactation)
(d) All

4. A hormone not involved in sugar metabolism is-
(a) Glucagon (b) Cortisone
(c) Aldosterone (d) Calcitonin

5. Which one of the following part acts as an endocrine gland for tissue?
(a) Pars radiate (b) JG cells
(c) Brunner's gland (d) Pancreatic acini

6. Match the Column I with Column II-

	Column I		**Column II**
A.	Peptide, polypeptide protein hormones	I.	Epinephrine, nor-epinephrine
B.	Steroid	II.	T_3 and T_4 (thyroid hormones)
C.	lodothyronines	III.	Cortisol, testosterone, estradiol, progesterone
D.	Aminoacid derivatives	IV.	Pituitary hormones, pancreatic hormones, hypothalamic hormone

(a) A – I, B – II, C – III, D – IV
(b) A – IV, B – III, C – II, D – I
(c) A – IV, B – III, C – I, D – II
(d) A – I, B – II, C – IV, D – III

7. Steroid hormones initiate the production of target cell substances in which manner?
(a) They initiate second messenger activity
(b) They bind with membrane protein
(c) They initiate DNA transcription
(d) They activate enzyme pathways

8. Which of the following hormones does not act by a second messenger system?

(a) Glucagon (b) Epinephrine (c) FSH (d) Testosterone

9. Hormones produce their effect on target tissue by binding to specific A called hormone receptors located in the target tissue only. B soluble hormones usually need C receptor that generate D messengers for regulating cellular metabolism, E soluble hormones can pass through cell membrane and bind to F receptors, mostly G receptors. The hormone receptor complex enter the H and mostly regulate gene expression or chromosome function by interaction of hormone-receptor complex with the I.
(a) A – Protein, B – Water, C – Membrane-bound, D – Second, E – Lipid, F – Intracellular, G – Nuclear, H – Nucleus, I – Genome
(b) A – Lipid, B – Water, C – Membrane-bound, D – Second, E – Water, F – intracellular, G – Nuclear, H – Nucleus, I – Genome
(c) A – Protein, B – Water, C – Intracellular, D – Second, E – Lipid, F – Extracellular, G – Nuclear, H – Nucleus, I – Genome
(d) A – Protein, B – Water, C – Membrane-bound, D – Primary, E – Lipid, F – intracellular, G – Nuclear, H – Nucleus, I – Genome

10. Choose the false one.
(a) Thymus is degenerated in old aged persons resulting in a decreased thymosins production leading weak immune responses.
(b) Cortisol, a type of glucocorticoids stimulates the RBC production
(c) Small amount of androgenic steroids is secreted by adrenal cortex.
(d) Diabetes is not successfully treated with insulin

11. Sleep-wake cycle and menstrual cycle are maintained by
(a) Progesterone (b) Melatonin
(c) Oxytocin (d) MSH

12. Vasopressin, also called ADH, is synthesized by
(a) Adenohypophysis (b) Hypothalamus
(c) Neurohypophysis (d) Kidney

13. Which hormone acts on exocrine part of pancreas?
(a) GIP (b) Insulin (c) Secretin (d) Steapsin

14. Juvenile diabetes mellitus is due to _____
(a) Loss of pancreatic beta cells (b) Resistance to insulin
(c) Obesity (d) Malnutrition

15. Which of the following hormones stimulate production of estrogen at puberty?
(a) FSH and LH (b) ACTH (c) TSH (d) GH

16. A person entering an empty room suddenly finds a snake right in front on opening the door. Which one of the following is likely to happen in his neurohormonal control system? ***CBSE-AIPMT 2012***
(a) Sympathetic nervous system is activated releasing epinephrine and nor-epinephrine from adrenal medulla
(b) Neurotransmitters diffuse rapidly across the cleft and transmit a nerve impulse
(c) Hypothalamus activates the parasympathetic division of brain
(d) Sympathetic nervous system is activated releasing epinephrine and nor-epinephrine from adrenal cortex

17. Islets of Langerhans are
(a) endocrine cells of adrenal medulla
(b) exocrine cells of adrenal cortex
(c) endocrine cells of pancreas
(d) exocrine cells of pancreas

18. Study the following table and select the correct option for endocrine gland, its hormone and its eficiency disorder.

	Endocrine glands	Hormones	Deficiency disorders
(a)	Neurohypophysis	Vasopressin	Diabetes mellitus
(b)	Adrenal cortex	Corticosteroids	Addison's disease
(c)	Parathyroid gland	Parathormone	Myxoedema
(d)	Thyroid gland	Calcitonin	Acromegaly

19. The steroid hormones, oestrogen and progesterone are secreted by which part/structure of ovary?
(a) Ova and Leydig cells, respectively
(b) Ovarian follicle and corpus luteum, respectively

(c) Corpus luteum and corpus albicans, respectively
(d) Graafian follicle and ova, respectively

20. Which of the following given features are appropriate for progesterone?
(a) Supports the pregnancy
(b) Acts on the mammary glands and stimulates the formation of alveoli
(c) Stimulates milk secretion
(d) All of the above

21. 'ANF' is a hormone, which
(a) is secreted in response to increased BP
(b) decreases BP
(c) causes vasodilation
(d) All of the above

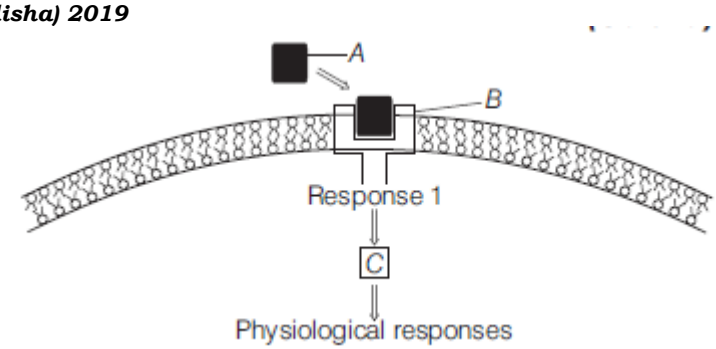
22. Cholecystokinin (CCK) acts on
(a) pancreas (b) gall bladder
(c) Both (a) and (b) (d) liver

23. Among the following sets of hormones, which one contain only peptide hormones?
(a) Epinephrine, cortisol, pituitary hormones
(b) TSH, hypothalamic hormones, oestradiol
(c) Insulin, progesterone, cortisol
(d) Insulin, glucagon, prolactin

24. Hormones, which interact with membrane bound receptors normally
(a) enters into the cell membrane
(b) do not enter the target cell
(c) generate secondary messengers
(d) Both (b) and (c)

25. Which one of the following is not a second messenger in hormone action?
(a) Calcium (b) Sodium
(c) *c*AMP (d) *c*GMP

26. Identify *A, B* and *C* in the diagrammatic representation of the mechanism of hormone action. ***NEET (Odisha) 2019***



Select the correct option from the following
(a) A–Steroid hormone, B–Hormone-receptor complex, C–Protein
(b) A–Protein hormone, B–Receptor, C–CyclicAMP
(c) A–Steroid hormone, B-Receptor, C-Second messenger
(d) A – Protein hormone, B–Cyclic AMP, C–Hormone-receptor complex

27. Gradual atrophy degeneration with ageing is shown by
(a) pineal gland (b) thymosin
(c) adrenal cortex (d) Both (a) and (b)

28. Mary is about to face an interview. But during the first five minutes before the interview she experiences sweating, increased rate of heartbeat, respiration, etc. Which hormone is responsible for her restlessness?
(a) Oestrogen and progesterone
(b) Oxytocin and vasopressin
(c) Adrenaline and nor-adrenaline
(d) Insulin and glucagon

29. The steroid responsible for balance of water and electrolytes in our body is
(a) insulin (b) melatonin
(c) testosterone (d) aldosterone

30. Ahormone responsible for normal sleep-wake cycle is
(a) epinephrine (b) gastrin
(c) melatonin (d) insulin

1. (c)

2. (a)

3. (d)

4. (c)

5. (b)

6. (b)

7. (c)

8. (d)

9. (a)

10. (d)

11. (b)

12. (b)

13. (c)

14. (a)

15. (a)

16. (*a*) Epinephrine and nor-epinephrine are secreted by adrenal medulla (under the control of sympathetic nervous system) in response to stress of any kind or during emergency situations. These are also called emergency hormones or hormones of flight and fight. Thus, if a persons on suddenly entering a room finds a snake right in front of him, his sympathetic nervous system would get activated leading to the release of epinephrine and nor-epinephrine from the adrenal medulla.

17. (*c*) The endocrine pancreas consists of islets of Langerhans. There are about 1 to 2 million islets of Langerhans in a normal human pancreas representing only 1 to 2 per cent of the pancreatic tissue. The two main types of cells in the islets of Langerhans are called a-cells and b-cells.

18. (*b*) Only option (b) is correct. Others are incorrect and can be corrected as Neurohypophysis Vasopressin Diabetes insipdus Parathyroid gland PTH Hypocalcemic tetany Thyroid gland Calcitonin Osteoporosis

19. (b)

20. (d)

21. (*d*) Atrial Natriuretic Factor (ANF) is a hormone which decreases blood pressure. ANF is secreted when blood pressure is high and causes dilation of the blood vessels. This reduces the blood pressure. Thus, option (d) is correct.

22. (*c*) CCK acts on both pancreas and gall bladder and stimulate the secretion of pancreatic enzyme and bile juice, respectively.

23. (*d*) Set of hormones given in option (d) contain only peptide hormones. These are insulin, glucagon and prolactin (a pituitary hormone). Rest sets are incorrect and can be corrected as Progesterone, oestradiol, cortisol, testosterone are steroid hormones. Thyroid hormones, e.g. T3 and T4 are iodothyronines and epinephrine is an amino acid derivative hormone.

24. (*d*) Hormones, which interact with membrane bound receptor normally do not enter the target cell, but generate secondary messengers (e.g. cyclic AMP, IP3, Ca2+, etc.), which in turn regulate cellular metabolism.

25. (*b*) Sodium is not a second messenger in hormone action. Second messengers are cyclic AMP, IP3, calcium ions, etc.

26. (b)

27. (a)

28. (*c*) Mary, during her first five minutes before interview experiences sweating, increased heartbeat and respiration because she is under stress due to which emergency hormones or hormones of flight and fight, i.e. adrenaline and nor-aderaline are being released in her body by the adrenal medullary part of the adrenal gland. These hormones stimulate the breakdown of glycogen resulting in increased a concentration of glucose in the blood.

29. (d)

30. (c)