BIOLOGY

Worksheet-2

STEP

A PROJECT BY PUNJAB GROUP

Worksheet-2

(Hormonal control)

Q.1 **They do not initiate new biochemical reactions but regulate the chemical reactions already present:**
A) Enzymes C) Hormones
B) Coenzymes D) Cofactors

Q.2 **They may also control some long-term changes:**
A) Enzyme C) CNS
B) Neurons D) Hormone

Q.3 **In animals, it involves endocrine system which comprises endocrine glands in various parts of the body, which secrete hormones:**
A) Nervous coordination
B) Chemical coordination
C) Immediate coordination
D) Skeletal coordination

Q.4 **Endocrine glands/tissues are lying in:**
A) Abdominal cavity
B) CNS
C) Thoracic cavity
D) Different parts of the body

Q.5 **Hormones are:**
A) Poured into specific ducts
B) Transported by specific ducts
C) Poured directly into blood
D) Poured directly into blood which carry them to respective target tissues.

Q.6 **Hormones may also control some long-term changes, such as:**
A) Rate of growth
B) Rate of metabolic activities
C) Sexual maturity
D) Rate of growth and metabolic activities and Sexual maturity

Q.7 **Name the hormones, which is/are produced by one gland, then it is transported through nerves to the other gland for storage and upon receiving nerve impulse, these are released from latter:**
A) Testosterone and estrogen
B) Epinephrine and norepinephrine
C) Oxytocin and ADH
D) Insulin and glucagon

Q.8 **Pick up the correct sequence of events right from production upto the action of oxytocin:**
A) Posterior pituitary → hypothalamus → nerves → smooth muscles of uterus
B) Posterior pituitary → nerves → hypothalamus → smooth muscles of uterus
C) Hypothalamus → nerves → posterior pituitary → smooth muscles of uterus
D) Hypothalamus → posterior pituitary → nerves → smooth muscles of uterus

Q.9 **One of the nerve cluster of hypothalamus secretes:**
A) Releasing and inhibiting hormones
B) Prolactin and LH
C) Oxytocin and vasopressin
D) FSH and ICSH

Q.10 **Pick up the endocrine hormone/s which is/are produced, transported and stored in nerves:**
A) Vasopressin and oxytocin
B) Releasing and inhibiting hormones
C) Somatotrophin releasing factor
D) Thyrotrophin releasing factors

Q.11 **Pituitary gland has:**
A) Four lobes C) Two lobes
B) Five lobes D) Three lobes

Q.12 **In addition to producing primary hormones, it produces the tropic hormones:**
A) Anterior lobe of pituitary
B) Middle lobe of pituitary
C) Posterior lobe of pituitary
D) Hypothalamus

Q.13 The hormone which is not secreted by anterior lobe of pituitary is:
A) GH C) TRF
B) ICSH D) Prolactin

Q.14 SRF is secreted from:
A) Hypothalamus
B) Anterior pituitary
C) Posterior pituitary
D) Middle pituitary

Q.15 If STH is produced in excess during early life it leads to:
A) Gigantism C) Dwarfism
B) Cretinism D) Acromegaly

Q.16 Due to under secretion of STH, symptoms appear which indicate the under secretion of _____ as well.
A) Thyroid hormone
B) Adrenal hormone
C) Both thyroid and adrenal hormones
D) Gonadotrophic hormones

Q.17 Pick up the correct combination:
A) Under secretion of thyroxine – under secretion of TSH
B) Over secretion of thyroxine – over secretion of TSH
C) Under secretion of thyroxine – over secretion of TSH
D) Under secretion of TRF – over secretion of thyroxine

Q.18 Pick up the one which is not included in the stimuli of hypothalamus for the secretion of corticotrophin releasing factor:
A) Steroid level in the blood
B) Stress like fright and infections
C) Stress like cold, heat and pain
D) Water level in the blood

Q.19 Excess and deficiency of which hormone results in disturbance of normal adrenal functions:
A) ACTH C) FSH
B) TSH D) GH

Q.20 Prolactin is inappropriately called:
A) Luteotropic hormone
B) Follicle stimulating hormone
C) Luteinizing hormone
D) Interstitial cell stimulating hormone

Q.21 The hormones which share common hypothalamic factor are:
A) FSH and LH/ICSH
B) ACTH and GH
C) ICSH, LTH
D) Prolactin and FSH

Q.22 Corpus luteum and progesterone secretions are maintained by:
A) Prolactin
B) LH
C) Prolactin and LH synergistically
D) LTH

Q.23 Pick up the hormone which is not secreted by the anterior lobe of pituitary gland:
A) STH C) MSH
B) TSH D) ACTH

Q.24 Pick up the hormone which is secreted by posterior lobe of pituitary:
A) MSH C) Oxytocin
B) STH D) GH

Q.25 Hypothalamic neurosecretory cells are influenced by following factors, EXCEPT:
A) Osmoreceptors of hypothalamus
B) External sensory stimuli
C) Chemoreceptor of hypothalamus
D) Decrease of progesterone level in blood

Q.26 Increased levels of vasopressin cause increased water reabsorption in:
A) Distal parts of nephron
B) Cortical part of kidney
C) Proximal parts of nephron
D) Medullary part of kidney

Q.27 Diabetes insipidus is a consequence of deficiency of:
A) ADH C) STH
B) MSH D) TSH

Q.28 Decrease in progesterone level in blood stimulates the secretion of:
A) Oxytocin
B) MSH
C) Antidiuretic hormone
D) Progesterone

Q.29 Adrenal gland is subdivided into:
A) 2 major parts C) Four major parts
B) 3 major parts D) Five major parts

Q.30 Name the hormone that dilates blood vessels in certain parts of the body such as skeletal muscles and increase the heart's output:
A) Adrenaline C) Nor-epinephrine
B) Nor-Adrenaline D) Aldosterone

Q.31 Rarely found but in excess, these hormones lead to abnormally high blood pressure:
A) Cortisol and corticosterone
B) Aldosterone and corticosterone
C) Adrenaline and nor adrenaline
D) Aldosterone and androgens

Q.32 In rare cases, hypersecretion of adrenaline and nor-adrenaline hormone leads to:
A) Abnormally high blood pressure
B) Hypoglycemia
C) Abnormally low blood pressure
D) Electrolyte imbalance

Q.33 In rats, whose adrenal medulla has been removed surgically, the ability to with stand any stress situation; such as cold:
A) Is enhanced
B) Is diminished
C) Remains unaffected
D) Is finished

Q.34 Stress situations, such as cold, which would normally be overcome, lead to collapse and death as a result of:
A) Destruction of the adrenal cortex
B) Cushing's disease
C) Addison's disease
D) Destruction of the adrenal cortex or addison's disease

Q.35 Very small amounts of androgens are secreted by adrenal glands:
A) In male
B) In female
C) In male and female both
D) In person of intermediate sex

Q.36 Pick up the correct sequence:
A) FSH → Development of follicle → Estrogens → Secondary sexual characters
B) FSH → Development of follicle → Secondary sexual character → Estrogen
C) FSH → Secondary sexual character → Development of follicle → Estrogens
D) FSH → Estrogen → Development of follicle → Secondary sexual characters

Q.37 Deficiency of sex hormones, for one reason or another, leads in the adult to:
A) Failure to mature sexually
B) Sterility
C) Failure to mature sexually and as a consequence sterility
D) Failure to survive for longtime

Q.38 Progesterone is produced by the ruptured follicle in response to:
A) LH from the pituitary
B) LTH from the pituitary
C) FSH from the pituitary
D) Prolactin from the pituitary

Q.39 Progesterone inhibits:
A) Release of LH
B) Anymore follicle from ripening
C) Conception
D) Continuity of gestation

Q.40 In foetus, it initiates the development of the male sex organs:
A) Estrogen C) ICSH
B) Progesterone D) Testosterone

Q.41 A hormone that is secreted by the pineal gland and that reverses the darkening effect of melanocyte – stimulating hormone by causing aggregation of melanin granules in the melanocytes is called:
A) MSH C) Melanotonin
B) Melatonin D) FSH

Q.42 Pick up the choice which is incorrect about progesterone:
A) Causes further thickening and vascularization of uterine wall
B) Prepares uterus for maintenance of pregnancy
C) Brings about secondary sexual changes
D) Suppresses ovulation

Q.43 In a mature human female, the deficiency of sex hormones will result in:
A) Reversal of maturity
B) Sterility
C) Production of some male characteristics
D) No development of secondary sex characters

Q.44 Most _____ are harmful and in some cases resulting in death:
A) Feedback inhibition mechanism
B) Feedback mechanism
C) Positive feedback mechanism
D) Negative feedback mechanism

Q.45 In _____ the accumulation of the product of a reaction affects its rate of production:
A) Positive feedback
B) Negative feedback
C) Feedback control system
D) Precursor activation

Q.46 Which of the followings hormone influences daily rhythms called circadian rhythms?
A) Melatonin C) Insulin
B) MSH D) Epinephrine

Q.47 Hormones do not:
A) Regulate the chemical reactions
B) Inhibit or stimulate the chemical reactions
C) Control the chemical reactions
D) Initiate new biochemical reactions

Q.48 Addison's disease leads to all of the following, EXCEPT:
A) General metabolic disturbance
B) Weakness of muscles action
C) Loss of salts
D) Loss of glucose

Q.49 A short stalk which connects the pituitary gland to brain is called:
A) Corpus callosum
B) Hypophysiscerebri
C) Infundibulum
D) Epiphysis cerebri

Q.50 It inhibits menstrual cycle in lactating women:
A) FSH
B) GH
C) Prolactin
D) ADH

ANSWER KEY (Worksheet-2)							
1	C	16	C	31	C	46	A
2	D	17	C	32	A	47	D
3	B	18	D	33	B	48	D
4	D	19	A	34	D	49	C
5	D	20	A	35	C	50	C
6	D	21	A	36	A		
7	C	22	C	37	C		
8	C	23	C	38	A		
9	C	24	C	39	B		
10	A	25	D	40	D		
11	D	26	A	41	C		
12	A	27	A	42	C		
13	C	28	A	43	B		
14	A	29	A	44	C		
15	A	30	A	45	C		

EXPLANATION

Q.1 **Answer is "Hormone"**
Explanation: As enzymes speed up the already proceeding chemical reactions, hormones regulate them i.e. speed up or slow down according to the need of the body.

Q.2 **Answer is "Hormones"**
Explanation: Hormones regulate long term changes like development as well.

Q.3 **Answer is "Chemical coordination"**
Explanation: Coordination through hormones is called chemical coordination. Endocrine glands secrete hormones.

Q.4 **Answer is "Different parts of the body"**
Explanation: See location of various endocrine glands in human body.

Q.5 **Answer is "Poured directly into blood which carry them to respective target tissues"**
Explanation: Hormones use blood stream as a source of transport.

Q.6 **Answer is "Rate of growth and metabolic activities and sexual maturity"**
Explanation: These are developmental changes which take long time to be accomplished.

Q.7 **Answer is "Oxytocin and ADH"**
Explanation: These are produced by hypothalamus then transported through nerves to posterior lobe of pituitary and get stored there. Now upon receiving stimulus they are released from posterior pituitary.

Q.8 **Answer is "Hypothalamus – Nerves – Posterior Pituitary – Smooth muscles of uterus"**
Explanation: It is believed that oxytocin and antidiuretic hormones (ADH) are produced in hypothalamus and travel down the nerves to the posterior lobe of pituitary to be stored. They are released from their storage after receiving nerve impulses from the hypothalamus.

Q.9 **Answer is "Oxytocin and vasopressin"**
Explanation: Neurosecretory cells in the hypothalamus produce and secrete a variety of hormones. One of the nerve clusters synthesizes oxytocin and vasopressin, then stores them in nerve endings located in the posterior pituitary.

Q.10 **Answer is "Vasopressin and oxytocin"**
Explanation: See explanation of Q.7

Q.11 **Answer is "Three lobes"**
Explanation: Anterior, middle and posterior pituitary.

Q.12 **Answer is "Anterior lobe of pituitary"**
Explanation: Primary hormones are ADH and oxytocin whereas tropic hormones control the activities of other endocrine glands.

Q.13 **Answer is "TRF"**
Explanation: Thyrotrophin releasing factor is secreted by hypothalamus.

Q.14 **Answer is "Hypothalamus"**
Explanation: All releasing and inhibiting hormones are secreted by hypothalamus.

Q.15 **Answer is "Gigantism"**
Explanation: Because growth is over boosted in such situation.

Q.16 Answer is "Both thyroid and adrenal hormone"
Explanation: Because STH stimulates the functions of both these glands indirectly by increasing the demand of energy.

Q.17 Answer is "Under secretion of thyroxin over secretion of TSH"
Explanation: By undersecretion of thyroxine, secretion of TRF from hypothalamus will be increased and as a result secretion of TSH from anterior pituitary is also increased.

Q.18 Answer is "Water level in the blood"
Explanation: Water level in body is not regulated by any hormone secreted by adrenal cortex.

Q.19 Answer is "ACTH"
Explanation: Adrenocorticotrophic hormone regulates the secretion of adrenal cortical hormones.

Q.20 Answer is "Luteotropic hormone"
Explanation: Prolactin (PRL), also known as lutriotropic hormone or luteotropin, is a protein that is best known for its role in enabling mammals, usually females to produce milk. It is influential in over 300 separate processes in various vertebrates, including humans. Out of these functions is maintenance of corpus luteum of the ovary which is the source of the female sex hormone progesterone which helps to sustain pregnancy.

Q.21 Answer is "FSH and LH/ ICSH"
Explanation: Both FSH and LH (which is called ICSH in male) are gonadotropic hormones and their secretion is regulated by common hypothalamus releasing factor.

Q.22 Answer is "Prolactin & LH synergistically"
Explanation: LH acts synergistically with prolactin to maintain the corpus luteum (and hence the progesterone it secrete).

Q.23 Answer is "MSH"
Explanation: It is secreted by middle pituitary.

Q.24 Answer is "Oxytocin"
Explanation: Oxytocin is a product of hypothalamus which is stored in posterior pituitary.

Q.25 Answer is "Decrease in progesterone level of blood"
Explanation: Decreased level of progesterone induces the secretion of oxytocin from posterior pituitary.

Q.26 Answer is "Distal parts of nephron"
Explanation: Vasopressin (ADH) acts upon urine collecting duct to get water actively reabsorbed from filtrate.

Q.27 Answer is "ADH"
Explanation: Deficiency of ADH also called vasopressin will let the water go in urine and volume and frequency of urine will be increased. Thus diabetes insipidus occurs.

Q.28 Answer is "Oxytocin"
Explanation: Decreased level of progesterone induces the secretion of oxytocin from posterior pituitary.

Q.29 Answer is "2 major parts"
Explanation: Cortex and medulla.

Q.30 Answer is "Adrenaline"
Explanation: Whenever we are faced to some emergency situation our adrenal medulla secretes adrenaline and nor adrenaline hormone. Adrenaline hormone dilates those blood vessels which provide blood to skeletal muscles whereas nor-adrenaline induce the constriction of those blood vessels, which are associated with those parts/organs of the body having no immediate role to cope with emengency (e.g. gut, skin etc.).

Q.31 Answer is "Adrenaline and nor adrenaline"
Explanation: Both increase the blood pressure synergistically, adrenaline by increasing cardiac output and nor-adrenaline by vasoconstriction.

Q.32 Answer is "Abnormally of high blood pressure"
Explanation: Excess of adrenaline and nor adrenaline increase the blood pressure.

Q.33 Answer is "Is diminished"
Explanation: As it enables to face the stress situation.

Q.34 Answer is "Destruction of the adrenal cortex or Addison in disease"
Explanation: Deficiency of adrenal cortical hormones is the cause of Addison's disease and as a result the person will be unable to cope with the stress situation.

Q.35 Answer is "In male and female both"
Explanation: Very small amount of androgens are secreted in both male and female by adrenal glands.

Q.36 Answer is "FSH – Development of follicle – Estrogens–Secondary sexual characterstion"
Explanation: Secretion of FSH from anterior pituitary induces the formation of Graafian follicle in ovary. Follicle produces estrogen alongwith oogenesis. Estrogen induces the bringing about of secondary sexual changes in female.

Q.37 Answer is "Failure to mature sexually and as a consequence sterility"
Explanation: As sexual maturity and reproductive capability is regulated by sex hormones.

Q.38 Answer is "LH from the pituitary"
Explanation: Luteinizing hormone stimulates the rupture of mature follicle and formation of corpus luteum which secretes progesterone.

Q.39 Answer is "Anymore follicle from ripening"
Explanation: It maintains the ongoing pregnancy and discourages further pregnancy to occur.

Q.40 Answer is "Testosterone"
Explanation: Testosterone is counterpart of estrogen in human male. It induces the secondary sexual changes in male at puberty and also maintains sexual and reproductive capability in male.

Q.41 Answer is "Malanotonin"
Explanation: Malanotonin is a hormone that is secreted by the pineal gland and the reverses the darkening effect of melanocyte. Stimulating hormone by causing aggregation of the melanin granules in the melanocytes.

Q.42 Answer is "Brings about secondary sexual changes"
Explanation: Secondary sexual charges in female are brought about by estrogen.

Q.43 Answer is "Sterility"
Explanation: Incapability to reproduce.

Q.44 Answer is "Positive feedback mechanism"
Explanation: Most positive feedback mechanism are harmful and in some cases resulting in death.

Q.45 Answer is "Feedback control system"
Explanation: In feedback control system in which the accumulation of the product of a reaction affects its rate of production.

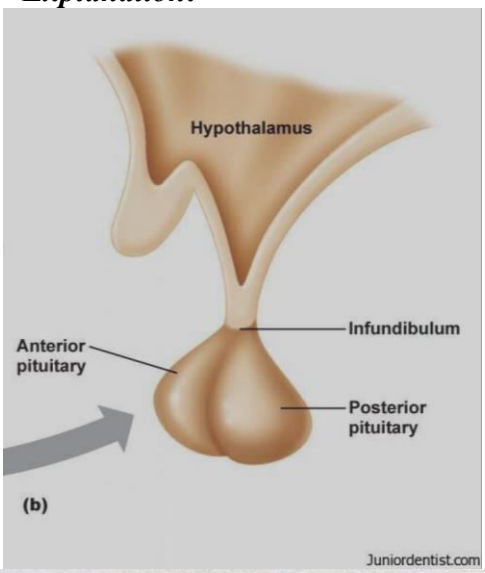
Q.46 Answer is "Melatonin"
Explanation: Melatonin influences daily rhythms secrete from pineal gland which is attached to the hypothalamus.

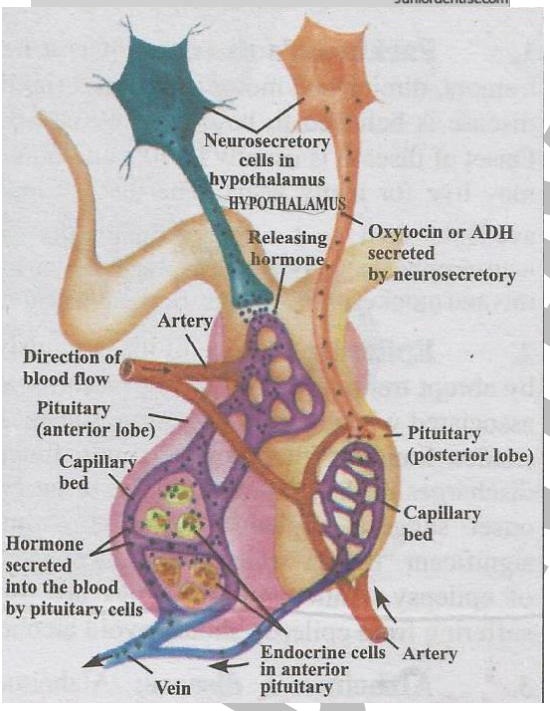
Q.47 Answer is "Initiate new biochemical reactions"
Explanation: They do not initiate new biochemical reactions but produce their efects by regulating enzymatic and other chemical reactions, already present. They may either stimulate or inhibit a function. Hormones may also control some long term changes, such as rate of growth, rate of metabolic activity and sexual maturity.

Q.48 Answer is "Loss of glucose"
Explanation: The destruction of the adrenal cortex, such as occurs in Addison's disease, will lead to general metabolic disturbance, in particular weakness of muscle action and loss of salts. Stress situations, such as cold, which would normally be overcome, lead to collapse and death.

Q.49 Answer is "Infundibulum"

Explanation:





Q.50 Answer is "Prolactin"

Explanation: During pregnancy, secretion of prolactin cause enlargement of the mammary glands and prepare for the production of milk (lactation). It inhibits menstrual cycle in lactating women.

STEP

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