

India's Number 1 Education App

BIOLOGY

BOOKS - BETOPPERS

CONTROL AND COORDINATION

Worksheet 1

1. Neurons are the basic unit of the nervous

system and transmit information through

neurotransmitters. In which part of the

neuron neurotransmitters are released

A. Axon

B. Dendrites

C. Node of ranvier

D. Presynaptic terminal

Answer: C

2. The unique structure of nerve cells allows the conduction of nerve impulses.. The structure in nerve cells that receives signals from other nerve cells is called

A. axon

B. dendrite

C. cell body

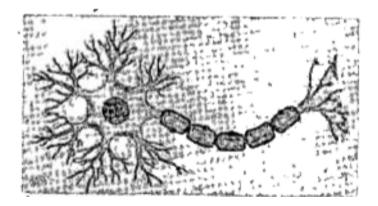
D. golgi body

Answer: B





3. Nerve cells or neurons carry messages through electrochemical signals. They transmit signals from the brain to the target organs in the body.



Which of the following body structures do not

contain nerve cells?

A. Brain

B. Skin

C. Nails

D. Eyes

Answer: C



4. In humans, body temperature is maintained at 37°C, irrespective of the weather conditions. When climatic temperature increases, body begins sweating and cools down as a result.

Sweating is regulated by the

A. nervous system

B. muscular system

C. excretory system

D. circulatory system

Answer: A

5. Contraction of muscles leads to the movement of body. Muscle contraction is controlled by the

A. circulatory system

B. excretory system

C. digestive system

D. nervous system

Answer: D

6. The organ system that controls the senses

of the body is the

A. nervous system

B. digestive system

C. muscular system

D. reproductive system

Answer: A

7. The brain is an organ of the nervous system and is present in most animals. The function of the brain is to

A. breathe in oxygen

B. remove body waste

C. control body activities

D. pump blood to body parts

Answer: C

8. The spinal cord is a continuation of the brain stem. It is encased in the vertebral column. Which of the following functions is performed by the spinal cord?

A. It controls one's memory and learning ability

B. It controls body temperature

C. It controls voluntary muscles

D. It controls reflex actions

Answer: D

9. Thermoregulation is the function of an organism to maintain its body temperature. Internal body temperature must be maintained for the efficient functioning of different organ systems. Body temperature is maintained by the

A. hypothalamus

B. cerebellum

C. kidneys

D. lungs

Answer: A

Watch Video Solution

10. The involuntary muscles present in the stomach and heart cannot be controlled at will.. Which part of the brain controls involuntary muscles?

A. Medulla

B. Cerebrum

C. Cerebellum

D. Hypothalamus

Answer: A

Watch Video Solution

11. The nervous system is one of the most important organ systems of the body. The nervous system performs the function of A. transferring information front and to

the brain

B. protecting the spinal cord by vertebral

column.

- C. transporting blood to the brain
- D. removing waste from the body

Answer: A

12. The vertebrate brain is divided into the forebrain, midbrain, and hindbrain.' The hindbrain controls

A. the breathing rate

B. the body balance

C. olfaction

D. memory

Answer: A

13. Heart is a muscle that pumps blood to various parts of the body. Its movement is controlled by the nervous system. Which part of the brain controls heart beat?

A. Cerebruiti

B. Brain stem

C. Cerebellum

D. Hypothalamus

Answer: B

14. The muscular system helps in various movements of the body. . The signal to contract is provided to muscles by the Activate Windows

A. nervous system

B. skeletal system

C. circulatory system

D. respiratory system

Answer: A



15. The muscular system helps in various movements of the body. The signal to contract is provided to muscles by the

A. Nervous system

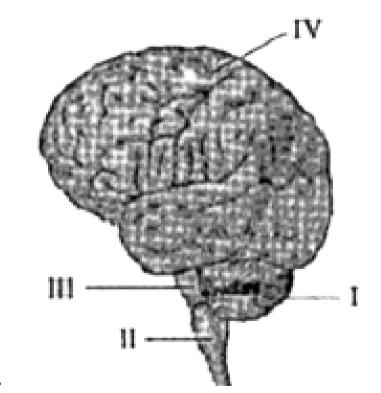
B. Skeletal system

C. circulatory system

D. respiratory system

Answer: A





16.

In the given figure, Irepresent the

A. nervous system

B. skeletal system

C. circulatory system

D. respiratory system

Answer: A

Watch Video Solution

17. The part of the brain that controls heart

beat is the

A. medulla

B. cerebrum

C. cerebellum

D. hypothalamus

Answer: A

 Watch Video Solution

 18. _i _and __ii __are the sites for

information processing and controlling, The

information in which alternative completes

the given statement?

A. i - Brain, ii - spinal cord

B. i - spinal cord, ii - nephron

C. i - fiephron, ii - cell body

D. i - cell body, ii - brain

Answer: B

19. After running some distance, Amy starts breathing heavily. The part of the nervous system that controls breathing is the

A. spinal cord

B. brain stem

C. front lobe

D. back lobe

Answer: A

20. Brain is part of the nervous system. It is made up of nervous tissues. The cells that make up the nervous tissue are known as

A. neurons

B. platelets

C. nephrons

D. leukocytes

Answer: A

21. The brain is the main part of the nervous system. Which of the following functions. is not performed directly by the brain?

A. Digestion of food

B. Pumping the blood

C. Controlling movement

D. Secretion of hormones

Answer: B

22. The brain is the most vital organ of the human body. It controls many activities of the body such as sleeping, eating and breathing The two halves of the brain are known as

A. frontal lobes

B. hemispheres

C. cortex

D. furrows

Answer: D

23. The nervous system consists of two parts, the central and the peripheral nervous systems. The central nervous system comprises the brain and the

A. vertebral column

B. endocrine glands

C. exocrine glands

D. spinal cord

Answer: D



24. Cerebrum is the part of brain which controls thinking, memory, and reasoning. A man sustained head injuries. As a result, his cerebrum lost its functioning. He is made to stand in front of a chair. Which of the following actions is not performed by the man because of his condition?

A. Visualizing the chair

B. Pushing the chair

C. Feeling the chair

D. Using the chair

Answer: A

Watch Video Solution

25. Activities such as walking in a straight line,

riding bicycle, and maintaining posture are

under the control of region X in the brain.

Region X can be identified as he

A. cerebellum

B. forebraif

C. midbrain

D. medulla

Answer: A

26. <u>___i</u> is a part of the brain which controls all the involuntary actions of the body, while___ii___a part of the brain which controls all the voluntary actions of the body. The information in which allerative completes the given statement?

A. i - Medulla, ii - cerebellum

B. i-cerebellum, ii- cerebrum dows

C. i- cerebrum, ii - hypothalamus

D. i - hypothalamus, ii - modullaens





Worksheet 2

1. It is a common observation that roots of plants always grow toward the source of water. The given phenomenon is explained by the concept of

A. gravitropism

B. hydrotropism

- C. phototropism
- D. thermotropism

Answer: B

Watch Video Solution

2. During the process of seed germination, it is observed that seedlings grow towards the source of light. The phenomenon exhibited by seedlings is known as A. gravitropism

- B. phototropism
- C. chemotropism
- D. thermotropism

Answer: B



3. Plant roots tend to grow deeper into the soil to absorb more water. This type of behavioral response in plants is called

- A. thigmotropism
- B. hydrotropism
- C. phototropism
- D. gravitropism

Answer: B



4. Andrew notices that irrespective of the way he positions a seed for germination, the root always grows toward the ground, while the

shoot always grows away from the ground.

The described behavior of roots is termed as

A. gravitropism

B. phototropism

C. hydrotropism

D. thigmotropism

Answer: A

5. It is observed that in a field of sunflowers, all the sunflowers face toward Sun. The given phenomenon is an example of

A. gravitropisin

B. phototropism

C. hydrotropism

D. thignotropism

Answer: B

6. The growth of the roots of plants towards a

source of water is known as

A. phototropism

B. geotropism

C. hydrotropism

D. chemotropism

Answer: C

7. Which plant hormone promotes cell

division?

A. Auxin

B. Cytokinin

C. Gibberellin

D. Abscisic acid

Answer: B

8. Auxins initiate the bending of the shoots of plants towards light by promoting cell

A. elongation in the unshaded side of the

stem

B. elongation in the shaded side of the stem

C. division in the unshaded side of the stem

D. division in the shaded side of the stem

Answer: B



9. Just as in humans, plants too have a numberof hormones that perform different functions.Which hormone inhibits growth in plants?

A. Auxin

- B. Cytokinin
- C. Gibberelliti
- D. Abscisic acid

Answer: D



10. It is a common observation that the roots of plants always grow downwards, while the shoots of plants always grow upwards. Which type of growth movement is responsible for the given observation?

A. Geotropism

B. Phototropism

C. Hydrotropism

D. Chemotropism

Answer: A



11. Sonia places a potted plant in a covered box. Light enters the box through a small hole in the box. After some time, she observes that the shoots of the plant start growing towards

the source of light. Which type of growth movement is exhibited by the described plant?

A. Geotropism

B. Phototropism

C. Hydrotropism

D. Chemotropism

Answer: B

12. The movement shown by the leaves of touch-me-not on being touched is known as ____i ___ii___involves the bending of shoots towards a source of light. The information in which alternative completes the given statements?

A. i - growth-independent movement, ii - Growth-dependent movement.

B.i - growth-dependent movement, ii -Growth-independent movement. C. i - growth-independent movement, ii -

Growth-independent movement also.

D.i - growth-dependent movement, il -

Growth-dependent movement also.

Answer: A

Column A		Column B	
i	Mimosa pudica	a	Phototropism
ii	Radical	b	Thigmotropism
iii	Plumule	c	Chemotropism
iv	Growth of pollen tube	d	Geotropism

- -

13.

The alternatives in the given table can be.correctly matched as

A. i \rightarrow b, ii \rightarrow a, iii \rightarrow C, iv \rightarrow d

 $\text{B. i} \ \rightarrow \ \text{c,ii} \ \rightarrow \ \text{d,iii} \ \rightarrow \ \text{a, iv} \ \rightarrow \ \text{b}$

C. i \rightarrow b,ii \rightarrow d,iii \rightarrow a, iv \rightarrow c

D. i \rightarrow c,ii \rightarrow a,iii \rightarrow d, iv \rightarrow b

Answer: C





14. A very tall plant with fewer lateral branches

will have auxin: cytokinin ratio of

- A. 2:1
- **B**. 1:1
- C. 1: 2
- D. 3:4

Answer: A



15. Which of the following statements is correct about growth independent movements?

A. This type of movement is apparent.

B. This type of movement is dependent on

phytohormones.

C. This type of movement is shown by

tendrils of the pea plant.

D. This type of movement is independent of

the direction of stimulus.

Answer: D

Watch Video Solution

Worksheet 3

1. Hormones are chemicals that affect various functions of the body such as growth, reproduction, metabolisn etc. Which of the

following hormones regulates glucose level in

the blood?

A. Insulin

B. Thyroxin

C. Growth hormone

D. Gonadotrophic hormone

Answer: A

2. Pituitary is one of the most important glands of the endocrine system. It secretes gonadotropic hormoncs Gonadotropic hormones regulate the functioning of the

A. reproductive system

B. respiratory system

C. circulatory system

D. excretory system

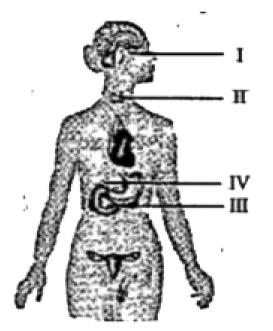
Answer: A





3. The given illustration represents the human

endocrine glands.Name I, II, III, IV



A. I

C. III

D. IV

Answer: A



4. Reproductive organs mature and produce sex cells only at a certain age. The growth and maintenance of the reproductive system is essential for reproduction. The growth and

maintenance of the reproductive system is

under the control of

A. pancreas

B. thyroid gland

C. hypothalamus

D. pituitary gland

Answer: A

5. The increased level of glucose in blood con affect the functioning of various organ systems. Which homone lowers the blood sugar level to normal?

A. Insulin

B. Thyroxine

C. Progesterone

D. Testosterone

Answer: A



6. Tony takes part in a 4x 400.m relay. His body temperature rises rapidly while he runs, in response to which, the sweat glands produce sweat to cool his body. Where does the signal to release sweat come from?

A. Pituitary

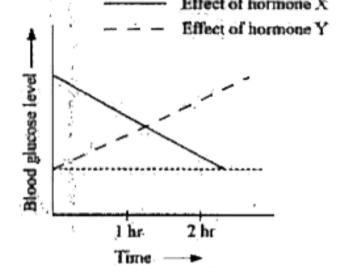
B. Cerebrum

- C. Cerebellum
- D. Hypothalamus

Answer: D



7. The given graph illustrates the effect of two hormones " X and Y on blood sugar level of a person. Xrepresents the effect of __i__and Y represents the effect of __i__



The information in which alternative correctly completes the given statement?

A. i-adrenaline, ii - insulin

B. i-oestrogen, ii - insulin

C. i-irusulin, ii - adrenaline

D. i-oestrogen, ii - adrenaline

Answer: C



8. A type of self-regulating system in which increased output from the system inhibits future production by the system is called negative feedback loop. Which of the following statements is correct for insulin in light of the given information? A. Insulin regulation rate remains'same in

all individuals.

B. Insulin is regulated through negative

feedback loop.

C. Insulin regulation is independent of the

levels of stimulant,

D. Insulin is regulated through reverse of

negative feedback loop.

Answer: B

9. Insulin is the hormone secreted by ___i___ Its low secretion in the body leads to____ii____. The information in which alternative completes the givet statements?

A. i - pancreas, ii - diabetes

B. i - pancreas, ii - goitre

C. i-pituitary, ii - diabetes

D. i-pituitary, ii - goitre

Answer: A



10. Dwarfism is a deficiency disorder in which a person does not attain normal height and iemains.short Dwarfism occurs due to the deficiency of

A. insulin

B. adrenaline

- C. growth hormone
- D. thyroxin hormone

Answer: C



11. The proper intake of iodine in diet helps prevent goitre. Iodine is essential for the functioning of whic endocrine gland?

A. Adrenal

B. Thyroid

C. Testis

D. Ovary

Answer: B



12. Adrenaline is a hormone secreted by the adrenal gland in humans under extreme conditions of stress Which of the following statements about adrenaline is incorrect?

A. It increases heart beat.

B. It causes the contraction of diaphragm. .

C. It causes the contraction of muscles

around arteries.

D. It increases the flow of blood to the

digestive system.

Answer: D

Watch Video Solution

13. Hormones play an important role in regulating various body functions. Which of

the following hormone lower the blood sugar

level in the body?

A. Insulin

B. Glucagon

C. Oxytocin

D. Thyroxine

Answer: A

Watch Video Solution

Competitive Worksheet

Column-I

Column-II

- A. White neurons
- B. Grey neurons
- C. Unipolar neurons
- D. Bipolar neurons
- P. Sensory hair cells
- Q. Embryonic Nerve tissue
- R. White matter of cerebrum
- S. Cerebral Cortex

View Text Solution

2. Match the column I with Column II.

Column-I

- A. Innermost covering of CNS
- B. Middle covering of CNS
- C: Outermost covering of CNS

Column-II

- P. Durmeter
- Q. Piamater
- R. Arachnoid membrane

Column-I

Column-II

- A. Cerebrum
- B. Thalamus
- C. Hypothalamus
- P. Sensory and motor signaling
- Q. Excitement, anger, fear, pleasure
- R. Hearing, seeing, tasting



Watch Video Solution

4. Match the column I with Column II.

Column-I

Column-II

- A. Coordinates the group movements of voluntary muscles as in walking or running B:: It relays the information from the cerebrum to
- cerebellum C. centre for several reflexes involved in the regulation of I heartbeat
- P. Medulla Oblongata
- Q. Cerebellum
 - R. Pons

Column-I

- A. Cerebellum and medulla oblongata.
- B. Cerebrum, thalamus and hypothalamus.
- C: Cerebral aqueduct, Corpora quadrigemina

Column-II

- P. Fore Brain
- Q. Mid Brain
- R. Hind Brain

Watch Video Solution

6. Match the column I with Column II.

Column-I

- A. Spinal cord's enlargement in neck region
- B. Spinal cord's enlargement in Lumbar region
- C. Spinal cord's filamentous lower end
- D. Narrow depression on the mid dorsal side of the spinal cord.

Column-II

- P. Dorsal fissure
- Q. Lumbar plexus
- R. Cervical plexus
- S. Filum terminale

View Text Solution

Column-I

- A. Central Nervous System (CNS)
- B. Peripheral Nervous System(PNS)
- C: Autonomous Nervous System (ANS)

Column-II

- P. Sympathetic nerves and parasympathetic nerves.
- Q. Cranial Nerves, Spinal Nerves
- R. Brain, Spinal Cord

Watch Video Solution

8. Match the column I with Column II.

Column-I		Column-II		
А.	STH	P.	Brings for th growth	
В.	TSH	Q.	Production of thyroxine	
С.	ACTH	R.	Aldosterone	

Column-l

Column-II

A. STH B. TSH

- P. Brings for th growth
- Q. Production of thyroxine

C. ACTH

R. Aldosterone



Watch Video Solution

10. Match the column I with Column II.

Column-I

Column-II

- A. Simple goiter
- B. Myxoedema
- C. Cretinism
- P. Bulging of thyroid gland
- Q. Defective tooth and protrusion of tongue
- R. Loss of physical and mental vigour

11. Match the column I with Column II.

Column-I

Column-II

- A. Adrenal Gland
- B. Aldosterone
- C. Cortisone

- P. Glucocorticoid
- Q. Supra renal gland
- R. Mineralocorticoid



Watch Video Solution

12. Match the column I with Column II.

Column-I)

Column-II

- A. Testes B. Ovaries
- P. Oestrogen
- Q. Testosterone
- R. Determines secondary sexual characters in male.
- Q. Determines secondary sexual characters in female

13. Match the column I with Column II.

Column-I

- A. Parathyroid gland
- B. Thymus gland
- C. Pineal gland

Column-II

- P. Thymosin
- Q. Melatonin
- R. Parathormone

Watch Video Solution

14. Spot the mistakes in the given statements and correct them.

a) Medullated nerve cells are enclosed by Myclin sheath.

b) Nont - Medullated nerve cells are enclosed

by Myelin sheath,





15. Spot the mistakes in the given statements and correct them.

a) Association areas are responsible for the initiation of voluntary activities takes place.
b) Motor areas are responsible for complex functions like intersensory associations, memory and communication,

16. Spot the mistakes in the given statements and correct them.

a) White matter of cerebrum contains Grey neurons.

b) Cerebrum is the major conducting centre

for sensory and motor signalling,

Watch Video Solution

17. Spot the mistakes in the given statements and correct them.

a) The outer region of the cerebrum is called

White matter.

b) The inner region of the cerebrum is called

Grey matter.



18. Spot the mistakes in the given statements and correct them,

a) The middle covering of CNS is thin and vascularised and is called Piameter

b) The innermost cover of CNS is a very thin

delicate membrane and is closely applied on the outer surface of brain and spinal cord and it is called Arachnoid membrane.

Watch Video Solution

19. Spot the mistakes in the given statements and correct them.

a) goitre Thalamus controls body temperature,

urge eat and drink.

b) Hypothalamus is the major conducting centre for scesory and motor signaling.





20. Spot the mistakes in the given statements and correct them.

a) Less production of STH causes gigantism in children.

b) Excess production of STH causes dwarfism in children.



21. Spot the mistakes in the given statements

and correct them.

a) LH produces testosterone

b) ICSH produces oestrogen and progosterone

Watch Video Solution

22. Spot the mistakes in the given statements

and correct them.

a) LTH stimulates the growth of mammary glands in female.

b) More production of ADH results in Diabetes

insipidus.



23. Spot the mistakes in the given statements

and correct them.

a) Hypothyroidism is due to excess secretion

of thyroxine.

b) Hyperthyroidismi is due to less secretion of

thyroxine.



24. Spot the mistakes in the given staternents and correct them.

a) Alpha cells of Islets of Langerhans produces Glucagon.

b) Beta cells of Islets of Langerhans produces
 Glucagon.

Watch Video Solution

25. Spot the mistakes in the given statements

and correct them.

a) Diabetes mellitus is-caused due to the less

production of insulin.

b) Glucagon is secreted when glucose level in

blood is high.



26. Spot the mistakes in the giveti statements and correct them.

a) Alpha cells produce a hormone called testosterone.

progesterone.



27. Spot the mistakes in the given statements and correct them.

 a) Progesterone stimulates the growth of reproductive organs and the production of male sex cell, the sperms.

b) Testosterone maintains pregnancy and regulates menstrual cycle.





28. Spot the mistakes in the given statements and correct them.

a) Mitosis bring the change in chromosome number.

b) Meosis bring change in structure and number of chromosmcs.



29. Spot the mistakes in the given statements

and correct them.

a) Meosis - I is called Mitosis.

b) Meosis - II is called Reduction,

Watch Video Solution

30. Spot the mistakes in the given statements and correct them.

a) The point of contact between the homologous pair of chromosomes are called,

crossing over.

b) The exchange of segments of chromatids

between homologous chromosomes, is called

Chiasmata.



31. Assertion (A): Medulated nerve cells appears greyish in colour.

Reasoning (R): This neuron is enclosed by myelin sheath, so it appears greyish in colour

Choose the correct option

A. A is correct and R is the correct

explanation of A.

B. A is correct and R is not the correct

explanation of A.

C. A is correct and R is wrong.

D. A and R are wrong

Answer:

32. Assertion(A): The inner part of the cerebrum lying below the cerebral cortex is called white matter.

Reasoning(R): It consists of bundles of nerve fibers with myelin sheath giving the white colour. Choose the correct answer.

A. A is correct and R is the correct explanation of A.

B. A is correct and R is not the correct explanation of A.

C. A is correct and R is wrong.

D. A is wrong and R is correct.

Answer:



33. Assertion(A): Less production of ADH causes Diabetes insipidus.

Reasoning(R): It helps in the reabsorption of water, producing concentrated urine in small

quantity Control and Coordination Choose the

correct answer

A. A is correct and R is the correct

explanation of A.

B. A is correct and R is not the correct

explanation of A.

- C. A is correct and R is wrong.
- D. A is wrong and R is correct.

Answer:



34. Assertion(A): Aldosterone is called mineralocortoid.

Reasoning (R): Cortisone is called glucocortoid. Choose the correct answer

A. A is correct and R is the correct explanation of A.

B. A is correct and R is not the correct explanation of A.

C. A is correct and R is wrong.

D. A is wrong and R is correct.

Answer:

Watch Video Solution

35. Assertion (4): Aldosterone maintains mineral metabolism.

Reasoning (R): Cortisone stimulates the breakdown of glycogen into glucose raising the blood glucose level. Choose the correct option A. A is correct and R is the correct

explanation of A.

B. A is correct and R is not the correct

explanation of A.

C. A is correct and R is wrong.

D. A is wrong and R is correct.

Answer:

36. Nerve cells or neurons are the structural and functional units of the nervous system There are different types of nerve cells. The description of each of the nerve cells. is mentioned below. Identify the type of neuron corresponding to the neuron, A. A neuron that has a nerve cell body with a single process or fibre, which will act both as axon and Dendron

B .A neuron whose axon is enclosed by the white fatty myelin cover:

C. A neuron whose axon is covered by only

neurilemma and Schwann cells.



37. There are different types of neurons in our bodly present in different parts. Given below are some of the neurons. Identify the site of each of its location. P) White neurons Q) Grey neurons R) Unipolar neurons S) Bipolar neurons T) Multipolar neuron



38. Man is a vertebrate and a manual belonging to the animal kingdom. But, he stands unique and supreme and this supremacy in the living world is reflected in the organization of the brain. The brain is the central information processing organ and acts as the contrand and control system. The human brain is mainly divided into tluce parts - A, B, C. The part A consist of D, E and F. The part C comprises of G H and I. If B is located between A and C. Then identify A, B, C, D, E, F, G

H and I respectively.



39. Identify the following parts of the brain from their descriptions.

X - It is the part of fore brain and nearly two third of the human brain contains X.

Y- It is the canal that passes through mid brain

Z-It is the posterior most part of the brain

where it merges with the spinal cord. It acts as

a coordination pathway for both ascending

and descending nerve tracts.



40. Sudha is a X Class student. She used to be very intalligent and score good marks in the examinations. Suddenly due to an accident consciousness, intelligence memory, imagination and reasoning abilities have come down, Wluch part of the brain nuivt lave aflucted in the accident?



41. Krish is a fantasy movie character. Children are crazy of his adventurous activities. During a fight with his enemy, Krish head got a bad hurt. After few days, the following activities of Krish was found to be impaired: hearing, secing, tasting, smelling and speaking: Which part of the brain of him would have damaged due to which the above impaired activities are found?



42. Three patients named, Ram, Rahim and Anthony are found with the following symptoms. Ram: Non coordination of group Inovements of voluntary muscles as in walking Or running, Rahim: Triformation related to sleep and respiratory system is not coordinated with the brain. Anthony: Improper functioning of the centre for several reflexes involved in the regulation of heartbeat, blood vessel contraction, breathing. Identify the

parts of the brain that are affected due to

which the above symptoms are seen in them.



43. The endocrine glands present in head region are A, B in neck region are C, D and E is the endocrine' gland present in thorax region. Identify A, B, C, D and E.

44. Choose the right statement related to endocrine system

A. Maintaining the homeostasis is the work of endocrine system.

B. Endocrines control and coordinate the physical processes of growth, reproduction and sustenance of life.

C. Endocrine glands are glands with ducts.

D. The hormones produced by endocrine glands are carried by the blood from the site of production to the site of action.

45. Which of the following are the functions thyroxine?

A) It increases the rate of metabolism

B) It promotes growth and differentiation of tissues.

C) It regulates iodine and sugar level in the blood.

D) It controls working of kidneys and urine output.

46. The rate of metabolism and growth is decreased in a person. His kidney are improperly functioning and urine output is uncontrolled. Further the level iodine and sugar in blood are not regulated. Identify the hormone that is not generated properly in this person.



47. A, B and C are the disorders caused due to less secretion of thyroxine. A: This is produced in children and the symptoms are stunted growth, retarded mental development, defective teeth, protrusion of tongue and loose skin. B: It is caused in the adults, the symptoms are, low metabolic rate, loss of mental and physical vigour, increase in weight, thickening of skin, lowered heartbeat, mental dullness, etc, C: It is due to the deficiency of iodine. in our diet. Thyroid gland bulges as a swelling in the neck Identify A, B and C.

48. Raju is suffering from the symptoms of high metabolic rate, high blood pressure, high irritability, profuse sweating, loss of eight, fatigueness and protrusion of eyeballs. Further he is suffering from the Grave's disease. Identify the cause for this

