



## MCQ HAP 2

1. Part of brain which serves as a relay station between body and cerebrum
  - a) hypothalamus
  - b) amygdala
  - c) thalamus
  - d) cerebellum
2. In humans, reduced part of brain is
  - a) fore brain
  - b) mid brain
  - c) hind brain
  - d) cerebral cortex
3. Human brain is mainly divided into
  - a) two parts
  - b) three parts
  - c) four parts
  - d) five parts
4. Largest portion of brain is
  - a) hypothalamus
  - b) cerebellum
  - c) thalamus
  - d) cerebrum
5. In myelinated neurons, impulse jumps from node to node. This is called
  - a) synapse
  - b) transmitter nodes
  - c) nodes of ranvier
  - d) nodes of impulse transfer
6. Between two neurons, a microscopic gap exists which is contact point of neurons called
  - a) node of ranvier

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- b) neuron bridges  
c) synapse  
d) gaps
7. Neurons at rest (non-conducting neuron) has electric potential called
- a) sleep membrane potential  
b) resting membrane potential  
c) passive membrane potential  
d) dormant membrane potential
8. After passing stimulus from receptors to sensory neurons , it then passes to
- a) effectors  
b) motor neurons  
c) associative neurons  
d) Back to receptors
9. After passing stimulus from receptors to sensory neurons , it then passes to
- a) effectors  
b) motor neurons  
c) associative neurons  
d) Back to receptors
10. After passing stimulus from receptors to sensory neurons , it then passes to
- a) effectors  
b) motor neurons  
c) associative neurons  
d) Back to receptors
11. Sensory neurons are also called as
- a) receptor neurons  
b) motor neurons  
c) relay neurons  
d) effector neurons
12. Which of the following statements is not true about receptors?

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- a) Most receptors are proteins situated in the cell membrane.
  - b) Receptors contain a hollow or cleft on their surface which is known as a binding site.
  - c) Receptors bind chemical messengers such as neurotransmitters or hormones.
  - d) Receptors catalyse reactions on chemical messengers.
13. Which of the following statements is not true about neurotransmitters?
- a) Neurotransmitters are released by nerves.
  - b) Neurotransmitters are required to carry a 'message' from a nerve to a target cell.
  - c) Neurotransmitters have significant distances to cover to reach their target cells.
  - d) Neurotransmitters bind to receptors on target cells.
- e) Which of the following is not a neurotransmitter?
- a) acetylcholine
  - b) cyclic AMP
  - c) noradrenaline
  - d) dopamine
15. Which of the following statements is not true regarding the binding site of a receptor?
- a) The binding site is normally a hollow or cleft in the surface of a receptor.
  - b) The binding site is normally hydrophobic in nature.
  - c) Chemical messengers fit into binding sites and bind to functional groups within the binding site.
  - d) The binding site contains amino acids which are important to the binding process and a catalytic mechanism.
16. Which of the following statements is not true about a ligand-gated ion channel receptor?
- a) Ligand-gated ion channel receptors are present in the cell membrane.
  - b) Neurotransmitters can act as the chemical messengers for ligand-gated ion channels.
  - c) Ligand-gated ion channels consist of five glycoproteins.
  - d) Differences in membrane potential affect whether ligand-gated ion channel receptors open or close.
17. Which of the following statements is true about a G-protein coupled receptor?
- a) It contains five transmembrane hydrophobic sections.
  - b) There are more extracellular loops than intracellular loops.



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- c) The binding region for the G-protein involves two extracellular loops.
- d) The N-terminal chain is extracellular and the C-terminal chain is intracellular.
18. Which of the following is not a G-protein coupled receptor?
- a) the muscarinic receptor
- b) the glycine receptor
- c) the adrenergic receptor
- d) the glutamate receptor
19. Which of the following statements is not true about G-protein coupled receptors?
- a) They generally mediate the action of fast acting neurotransmitters.
- b) They mediate the action of some hormones.
- c) They activate signal proteins called G-proteins.
- d) Histamine can act as a ligand for some G-protein coupled receptors.
20. Which of the following pairs of receptors are likely to show the greatest structural similarity?
- a) the dopamine receptor subtypes D3 and D5
- b) the M2 muscarinic receptor and the  $\beta$ 2-adrenergic receptor
- c) the H2 histamine receptor and the  $\alpha$ 1-adrenoceptor
- d) the H1 histamine receptor and the  $\beta$ 2 adrenoceptor
21. Which of the following pairs of receptors illustrates convergent evolution?
- a) the D2 and D3-dopaminergic receptor subtypes
- b) the D4 and D5-dopaminergic receptor subtypes
- c) the  $\beta$ 1 and  $\beta$ 2-adrenoceptor subtypes
- d) the M3 and M5-muscarinic receptor subtypes
22. Which of the following reactions is catalysed by a protein kinase?
- a) the phosphorylation of alcohol groups in protein substrates
- b) the hydrolysis of phosphate groups in protein substrates
- c) the phosphorylation of alcohol groups in carbohydrates
- d) the hydrolysis of phosphate groups in ATP and GTP
- c) Electrical impulses gather and accumulate in which part of a neuron, in order to initiate an action potential?





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- d) Dendrites
- e) Axon hillock
- f) Axon terminal branches
- g) Node of Ranvier

Ans b

24. What is largely responsible for the negative resting membrane potential (around -70 mV) in a neuron?

- a) Axonal insulation by Schwann cells.
- b) Voltage-gated sodium channels opening.
- c) The action potential.
- d) Potassium leak currents.

Ans d

1. Part of brain which serves as a relay station between body and cerebrum

- a. Hypothalamus
- b. Amygdale
- c. Thalamus
- d. Cerebellum

Ans c

2. Epithelial cells of the intestine involved in food absorption have on their surface

- a. pinocytic vesicles
- b. Zymogen granules
- c. phagocytic vesicles
- d. microvilli

Ans d

3. Study of relationship of energy and transformation of energy in living organisms is known as

- a. catabolise energetic
- b. anabolic energetic
- c. broken energetic
- d. bioenergetics

Ans d

4. Identify a well-known inhibitory brain neurotransmitter from following:

- a. Glutamate
- b. Acetylcholine
- c. GABA
- d. Glycine

Ans c

5. Degeneration of certain cholinergic neurons occurs in brain of the people with

- a. Alzheimer's disease.

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- b. diabetes mellitus.
  - c. Parkinson's disease.
  - d. Huntington's Disease.
- Ans a
6. Human brain is mainly divided into
- a. two parts
  - b. three parts
  - c. four parts
  - d. five parts
- ans b
7. Division of human egg is:
- a. Holoblastic and equal
  - b. Holoblastic and unequal
  - c. Isoblastic
  - d. Meroblastic
- Ans b
8. Cholecystinin (CCK) stimulates the gallbladder to release
- a. bile to emulsify fats
  - b. stones that store wastes
  - c. lymph
  - d. digestive juices
- ans a
9. Most of the fat digestion occurs in
- a. Rectum
  - b. Stomach
  - c. Duodenum
  - d. Small intestine
- Ans d
10. The seat of intelligence is
- a. Cerebellum
  - b. Cerebrum
  - c. Medulla oblongata
  - d. Diencephalon
- Ans b
11. Recognise the inner lining of the uterus from the following:
- a. Cervix
  - b. Oviduct
  - c. Endometrium
  - d. Fimbriae
- Ans c
12. The volume of air that can be exhaled during forced breathing in addition to tidal volume is.
- a. residual volume
  - b. expiratory reserve volume
  - c. vital capacity



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- d. total lung capacity  
ans b
13. Identify Cells prepare insulin in Pancreas from the following:
- Epithelial cells
  - Hepatic cells
  - Germ cells
  - Islet cells
- Ans c
14. The lumen of the digestive tract is lined with which layer.
- serosa
  - mucosa
  - submucosa
  - muscularis
- ans b
15. Aerobic respiratory pathway is also termed as \_\_\_\_\_ pathway.
- Anabolic
  - Catabolic
  - Creatine phosphate
  - Amphibolic
- Ans d
16. Corpus luteum develops under the influence of
- Progesterone
  - Estrogen
  - FSH
  - LH
- Ans d
17. Fibrous connective tissue that surrounds each kidney is the:
- Cortex.
  - Hilum.
  - Medulla
  - Renal capsule
- Ans d
18. Identify lower most portion of the pharynx.
- oropharynx
  - nasopharynx
  - laryngopharynx
  - pharyngeal tonsils
- ans c
19. When released from ovary, human egg contains
- One Y chromosome
  - Two X chromosomes
  - One X chromosome
  - XY chromosomes
- Ans c



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20. Energy is obtained by organisms by
- induction of food
  - catabolizing the food
  - metabolizing the food
  - anatomizing the food
- ans c
21. The hormone which regulates the basal metabolism in our body is secreted from
- adrenal cortex
  - pancreas
  - pituitary
  - thyroid
- ans d
22. Biologist who discovered ATP is
- Daniel Olive
  - Daniel Koshland
  - Karl Lohmann
  - Emil Augus
- Ans c
23. Identify secretion of posterior pituitary that regulates water retention by the kidneys:
- Antidiuretic hormone
  - Aldosterone
  - Thyroxine
  - Erythropoietin
- Ans a
24. Testosterone is produced by
- Sertoli cells
  - Leydig's cells
  - oxyntic cells
  - pituitary gland
- ans b
25. Largest portion of brain is
- Hypothalamus
  - Cerebellum
  - Thalamus
  - Cerebrum
- Ans d
26. Recognise role of Schwann cells in neurotransmission:
- Thermal insulation of neuronal axons
  - Limit the speed of the action potential
  - Enhance the speed of the action potential





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- d. Protect the neuronal soma from trauma  
Ans c
27. Volume of urine is regulated by
- Aldosterone
  - Aldosterone and testosterone
  - ADH
  - Aldosterone and ADH
- Ans iv
28. Nucleoside is composed of \_\_\_\_\_
- Base + Sugar
  - Base + Sugar+ Phosphate
  - Base + Phosphate
  - None of these
- Ans a
29. Melatonin is secreted by
- pineal body
  - skin
  - pituitary gland
  - thyroid
- ans a
30. When the infection invades the urinary bladder, it is called
- Cystitis
  - Urethritis
  - Pyelonephritis
  - Hemodialysis
- Ans a
31. Locate hormone that is not pancreatic in nature:
- glucagon
  - aldosterone
  - Insulin
  - Somatostatin
- Ans b
32. Identify area of regulatorycenter that control breathing and promotes inspiration.
- apneustic area
  - pneumotaxic area
  - rhythmicity center
  - aortic and carotid bodies
- ans b
33. Basal metabolism refers to amount of energy required
- to eat dinner
  - to carry out all vital processes
  - for running a marathon
  - to keep heart beating
- ans b



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34. The large intestine absorbs \_\_\_\_\_ .
- alcohol and water
  - water, salts, and some vitamins
  - bacteria and vitamins
  - most nutrients important to maintaining homeostasis
- ans b
35. Starch digestion begins \_\_\_\_\_ with the addition of salivary amylase to food particles.
- in the mouth
  - in the esophagus
  - in the stomach
  - in the small intestine
- ans a
36. Villi are present in
- Heart
  - Liver
  - Pancreas
  - Ileum
- Ans d
37. Locate false statement regarding trachea:
- It usually lies posterior to the muscular esophagus.
  - It splits into the right and left bronchi to supply air to the lungs
  - Opening to the trachea is covered by epiglottis.
  - Tracheal rings are C-shape
- Ans a
38. The liver stores glucose in which form.
- Fructose
  - Maltose
  - Glycogen
  - Proteins
- Ans c
39. Fertilization usually take place in this part of reproductive system
- Cervix
  - Vagina
  - Uterus
  - Oviduct
- Ans d
40. Term used for food leaving the stomach is
- abulus
  - rhyme
  - chiyme
  - faece
- ans c



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41. The hormone that stimulates the stomach to secrete gastric juice is
- Enterokinase
  - Enterogastrone
  - Gastrin
  - Rennin
- Ans c
42. Study of relationship of energy and transformation of energy in living organisms is
- catabolise energetic
  - anabolic energetic
  - broken energetic
  - bioenergetics
- ans d
43. The gonadotrophic hormones are secreted by
- anterior lobe of pituitary
  - interstitial cells of testes
  - adrenal cortex
  - posterior part of thyroid
- ans a
44. The lower most portion of the pharynx is
- oropharynx
  - nasopharynx
  - laryngopharynx
  - pharyngeal tonsils
- ans c
45. The opening of axon membrane voltage-gated potassium channels is responsible for which part of the action potential:
- Depolarisation of the membrane
  - Repolarisation of the membrane
  - Contraction of the post synaptic muscle fibre
  - Signalling vesicular release of neurotransmitters
- Ans b
46. Identify a well-known inhibitory brain neurotransmitter from following:
- Glutamate
  - Acetylcholine
  - GABA
  - Glycine
- Ans c
- Question @A neuron  
A basic unit of nervous system.



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- B basic unit of muscular system.
- C basic unit of epithelial tissue
- D basic unit of connective tissue

ans a

47. ATP is hydrolyzed into

- a. ADP
- b. inorganic phosphate
- c. both A and B
- d. organic phosphate

ans c

48. Cholecystokinin (CCK) stimulates the gallbladder to release

- a. bile to emulsify fats
- b. stones that store wastes
- c. lymph
- d. digestive juices

ans a

49. The seat of intelligence is

- a. Cerebellum
- b. Cerebrum
- c. Medulla oblongata
- d. Diencephalon

Ans b

50. Recognise the inner lining of the uterus from the following:

- a. Cervix
- b. Oviduct
- c. Endometrium
- d. Fimbriae

Ans c

51. If pancreas is removed, the compound which remain undigested is:

- a. Proteins
- b. Carbohydrates
- c. Fats
- d. all of these

ans d

52. Acromegaly is caused by

- a. excess of Somatotrophic hormone
- b. excess of thyroxine
- c. deficiency of thyroxine
- d. excess of adrenaline

ans a

53. Locate the correct sequence in which urine flows through the kidney toward the urinary bladder.

- a. Renal pelvis, major calyx, minor calyx, papillary duct, ureter.
- b. Papillary duct, minor calyx, major calyx, renal pelvis, ureter





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- c. Minor calyx, major calyx, papillary duct, renal pelvis, ureter.  
d. Papillary duct, major calyx, minor calyx, ureter, renal pelvis.  
Ans b
54. Aerobic respiratory pathway is also termed as this pathway.  
a. Anabolic  
b. Catabolic  
c. Creatine phosphate  
d. Amphibolic  
Ans d
55. The maximum volume of air that can be released from the lungs by forceful expiration after deepest inspiration is called:  
a. Total lung capacity  
b. Vital capacity  
c. Tidal volume  
d. Ventilation rate  
Ans c
56. Corpus luteum develops under the influence of  
a. Progesterone  
b. Estrogen  
c. FSH  
d. LH  
Ans d
57. Fibrous connective tissue that surrounds each kidney is the:  
a. Cortex.  
b. Hilum.  
c. Medulla  
d. Renal capsule  
Ans d
58. When released from ovary, human egg contains  
a. One Y chromosome  
b. Two X chromosomes  
c. One X chromosome  
d. XY chromosomes  
Ans c
59. The nose, pharynx, and associated structures are all part of which system.  
a. Respiratory division  
b. upper respiratory system  
c. lower respiratory system  
d. bronchial tree  
ans b



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- 61 Stool of a person is whitish grey coloured due to malfunction of the following organ?
- Pancreas
  - Spleen
  - Kidney
  - Liver
  - Ans d
- 62 If pancreas is removed, the compound which remain undigested is
- Proteins
  - Carbohydrates
  - Fats
  - all of these
2. Ans d
63. Most of the fat digestion occurs in
- Rectum
  - Stomach
  - Duodenum
  - Small intestine
3. Ans d
- 64• 12. Where is protein digestion accomplished?
- Stomach
  - Ileum
  - Rectum
  - Duodenum
4. Ans b
- 65• 13. Which of the following is not involved in the stimulation of release of pancreatic juice?
- gastrin
  - Secretin
  - Trypsinogen
  - Cholecystokinin
5. Ans c
- 66• 14. What is common among amylase, rennin and trypsin?
- These are produced in stomach
  - These act at a pH lower than 7
  - These all are proteins
  - These all are proteolytic enzymes
6. Ans c
- 67 Which of the following is correct pairing of site of action and substrate of rennin?
- mouth-starch
  - stomach-fat
  - stomach -casein



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- d) small intestine-casein
7. Ans c
8. 16. The function of the digestive system is
- a) to ingest food
  - b) to digest food to small nutrients molecules that can pass through membranes
  - c) to absorb nutrient molecules
  - d) to eliminate indigestible remains
  - e) all of the above
9. Ans e
10. Starch digestion begins \_\_\_\_\_ with the addition of salivary amylase to food particles. (p. 83)
- a) in the mouth
  - b) in the esophagus
  - c) in the stomach
  - d) in the small intestine
11. Ans a
12. What does the crown of a tooth consist of?
- a) enamel
  - b) dentin
  - c) pulp
  - d) enamel, dentin, and pulp
13. Ans d
14. Swallowing is a \_\_\_\_\_ that occurs in the \_\_\_\_\_ and includes the closing off of the nasopharynx by the \_\_\_\_\_.
- a) voluntary action; larynx; Adam's apple
  - b) reflex action; pharynx; soft palate
  - c) voluntary action; mouth; epiglottis
  - d) reflex action; soft palate; glottis
15. Ans b
16. 20. The \_\_\_\_\_ conducts the chewed bolus of food from the pharynx to the stomach.
17. A)
- a) esophagus
  - b) trachea
  - c) intestine
  - d) glottis
18. Ans a
19. 21. The lumen of the digestive tract is lined with \_\_\_\_\_.
20. A)
- a) serosa
  - b) mucosa
  - c) submucosa
  - d) muscularis
21. Ans b
22. In the stomach, HCl in gastric juice \_\_\_\_\_.
- a) kills bacteria



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- b) breaks down the connective tissue of meat  
c) activates pepsin  
d) all of the above
22. Ans d  
23. Food leaving the stomach is called \_\_\_\_\_.  
a) a bolus  
b) rhyme  
c) chyme  
d) feces
23. Ans c
24. 24. The wall of the small intestine contains fingerlike projections called \_\_\_\_\_ that serve to increase surface area for absorption. (p. 87)  
a) extensions  
b) flagella  
c) reticula  
d) villi
25. Ans d
26. 25. The duodenal wall of the small intestine secretes \_\_\_\_\_.  
a) secretin  
b) cholecystokinin (CCK)  
c) secretin and cholecystokinin (CCK)
27. Ans c  
26. The microvilli of the small intestine are for \_\_\_\_\_.  
a) digestion of nutrients  
b) absorption of nutrients  
c) movement of chyme
28. Ans b
29. 27. Cholecystokinin (CCK) stimulates the gallbladder to release \_\_\_\_\_.  
a) bile to emulsify fats  
b) stones that store wastes  
c) lymph for defense against infection  
d) digestive juices to aid digestion
30. Ans a
31. 28. The large intestine consists of the \_\_\_\_\_.  
a) colon  
b) cecum  
c) rectum  
d) colon, cecum, rectum, and anus
32. Ans d  
29. The large intestine absorbs \_\_\_\_\_.  
a) alcohol and water  
b) water, salts, and some vitamins  
c) bacteria and vitamins  
d) most nutrients important to maintaining homeostasis
33. Ans b  
30. The accessory organs of digestion are \_\_\_\_\_.  
a) pancreas and liver  
b) stomach and duodenum





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- c) pancreas, liver, and gallbladder
  - d) esophagus and duodenum
34. Ans c

