

## A. Choose the best answer from following Questions:

20 X 1 = 20

- During synaptic transmission of nerve impulse, neurotransmitter (P) is released from synaptic vesicles by the action of ions (Q). Choose the correct P and Q.
  - P = Acetylcholine, Q =  $Ca^{++}$
  - P = Acetylcholine, Q =  $Na^+$
  - P = GABA, Q =  $Na^+$
  - P = Cholinesterase, Q =  $Ca^{++}$
- The respiratory centre is present in the
  - Medulla oblongata
  - Hypothalamus
  - Cerebellum
  - Thalamus
- Spermatogenesis in mammalian testes is controlled by
  - Luteinising hormone
  - Follicle stimulating hormone
  - FSH and prolactin
  - GH and prolactin
- Which one of the following statement is correct
  - Calcitonin and thyroxin are thyroid hormones
  - Pepsin and prolactin are secreted in stomach
  - Secretin and rhodopsin are polypeptide hormones
  - Cortisol and aldosterone are steroid hormones
- When a nerve fibre is stimulated, the axolemma is permeable to  $Na^+$  ions in which of the following process?
  - Opening sodium voltage-gate
  - Opening potassium voltage-gate
  - Opening sodium voltage-gate and closing potassium voltage-gate
  - Opening neurolemma
- The subarachnoid space is present in between .....
  - Piamater and arachnoid mater
  - Arachnoid mater and duramater
  - Brain and Piamater
  - Spinal cord and duramater
- Which of the following plays a key role in learning and memory?
  - Hypothalamus
  - Pons varolii
  - Thalamus
  - Medulla oblongata
- Which of the following is produced at the terminal ends of the postganglionic fibres at the effector organs of the parasympathetic neural system?
  - Noradrenaline
  - Acetylcholine
  - Adrenalin
  - Melatonin
- Which of the following absorbs light to prevent internal reflection in the eye?
  - Sclera
  - Retina
  - Chorid
  - Cornea
- The defect hypermetropia can be overcome by using .....
  - Concave lens
  - Convex lens
  - Cylindrical glass
  - Surgical procedures
- Which of the following are present in the fingertips and soles of the feet?
  - Pacinian corpuscles
  - Meissner's corpuscles
  - Ruffini endings
  - Krause end bulbs
- The blind spot is called so because
  - It has only cones
  - It has only rods
  - It has neither rods nor cones
  - It is present beyond lens
- A person is unable to sleep normally. He may not get proper secretion of?
  - Thyroxine
  - Vasopression
  - Melatonin
  - Oxytocin
- Which of the following is not the function of cortisol?
  - It produces anti inflammatory reactions
  - It stimulates RBC production
  - It supresses the immune response

- (d) It regulates water and electrolyte balance of the body
15. Which of the following hormones prepares the body for meeting emergency situations?  
 (a) Adrenalin and noradrenalin (b) Glucocorticoids and mineralocorticoids  
 (c) Cortisol and Aldosterone (d) Glucocorticoids and corticosterone
16. Which of the following hormone is secreted by proximal tubules of nephron?  
 (a) Renin (b) Calcitriol (c) Erythropoietin (d) Cholecystokinin
17. A person attains a maximum of 4 feet height. What could be the reason for this?  
 (a) Hypersecretion of somatotrophic hormone (b) Hypersecretion of ACTH  
 (c) Hyposecretion of TSH (d) Hyposecretion of somatotrophic hormone
18. Why does cretinism occur?  
 (a) Hypothyroidism in adults (b) Hypothyroidism in infants  
 (c) Hyperthyroidism in adults (d) lower level of iodine in blood
19. Increased heartbeat, high BP and protrusion of eyeball are the characteristics of .....  
 (a) Endemic goitre (b) Tetany (c) Myxedema (d) Grave's disease
20. Hyper pigmentation of skin and low metabolic rate are the symptoms of .....  
 (a) Cushing's syndrome (b) Addison's disease (c) Grave's disease (d) Gull's disease

**B. Answer the following questions (any 10)****10 X 2 = 20**

21. At the end of repolarization, the nerve membrane gets hyperpolarized. Why?
22. The action potential occurs in response to a threshold stimulus; but not at sub threshold stimuli. What is the name of the principle involved?
23. Cornea transplant in humans is almost never rejected. State the reason.
24. Define Presbyopia?
25. What is Reflex Arc?
26. Write short notes on cerebral spinal fluid (CSF)?
27. Draw and label L.S. of the eye
28. Write the role of oestrogen in ovulation
29. Comment on Acini of thyroid gland.
30. Hormones are known as chemical messenger. Justify
31. What is Sporadic goitre?
32. Define Circadian rhythm
33. Write short notes on Insulin?

**C. Answer the following questions (any 10)****10 X 3 = 30**

34. Differentiate between rod and cone cells
35. What is ANS? Explain the components of ANS.
36. Why the limbic system is called the emotional brain? Name the parts of it.
37. Write short notes on Organ of Corti
38. Difference between Myopia and Hypermetropia
39. List out Functions of different brain lobes
40. What are the types based on number of axon and dendrites?
41. Write the functions of (CCK) Cholecystokinin.
42. Specify the symptoms of acromegaly
43. Comment on the functions of adrenalin.
44. Why avoid use of steroid components? Give reason
45. Chemical nature of hormones
46. Functions of testosterone

**D. Answer the following questions :****6 X 5 = 30**

47. Describe the sensory receptors present in the skin. (or)

Explain the Transmission of Impulses

48. Classify receptors based on type of stimuli. (or)

Describe Synaptic Transmission with diagram

49. The sense of taste is considered to be the most pleasurable of all senses. Describe the structure of the receptor involved with a diagram. (or)

Describe the structure of Neuron

50. Briefly explain the structure of thyroid gland (or)

Explain the Mechanism of hormone action

51. Write a detailed account of gastro intestinal tract hormones. (or)

Tabulate the major hypothalamic hormones and their functions

52. Describe the Hormones of neurohypophysis (or)

Explain in detailed Hormones of Adenohypophysis