

Zoology NTA Abhyas (21-25)

01. Incorrect statement about electrical synapse is
[NTA Abhyas-21-25]
(1) The neurotransmitter released from the pre-synaptic membrane binds to receptors on the postsynaptic membrane
(2) Impulse conduction occurs at faster rate
(3) Pre-synaptic and post-synaptic neurons are very close to each other at synapse
(4) No requirement of neurotransmitters
02. How many of the given statements are true?
I. Pars nervosa stores and releases two hormones called oxytocin and vasopressin.
II. Melatonin influences the menstrual cycle.
III. Calcitonin stimulates reabsorption of Ca^{2+} by the renal tubules.
IV. After ovulation, the ruptured follicle is converted to macula lutea.
(1) None (2) One
(3) Two (4) Three
03. The enzyme missing in Phenylketonuria is
(1) Phenyl alanine hydroxylase
(2) Phenyl alanine reductase
(3) Phenyl oxidase
(4) Phenyl oxireductase
04. In the human brain, the cerebral aqueduct passes through:
(1) Corpus callosum (2) Cerebral himespheres
(3) Midbrain (4) Spinal cord
05. Identify the disease which is characterised by the following symptoms:
A. Alveoli filled with fluid.
B. Fever chills headache.
C. Coughing.
(1) Pneumonia (2) Diphtheria
(3) Small pox (4) Hepatitis
06. Which of the following is not true about the stomach in humans?
(1) Oesophagus opens in cardiac part of stomach
(2) Pepsin is the proteolytic enzyme of stomach
(3) Rennin is the proteolytic enzyme in gastric juice of infants
(4) The secretion of gastric glands does not have lipases
07. Grasshopper is an example of
(1) XY type of sex-determination
(2) XO type of sex-determination
(3) Environment sex determination
(4) Genie sex balance theory

08. Amphetamines and caffeine are respectively

(1)

Amphetamines	Caffeine
Stimulant	Depressant

(2)

Amphetamines	Caffeine
Depressant	Depressant

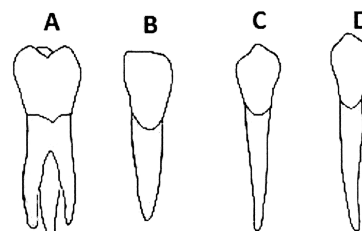
(3)

Amphetamines	Caffeine
Depressant	Stimulant

(4)

Amphetamines	Caffeine
Stimulant	Stimulant

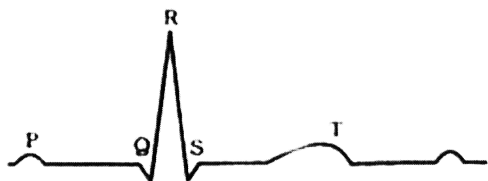
09. The cardiac pacemaker in a patient fails to function normally. The doctors find that an artificial pacemaker is to be grafted in him. It is likely that it will be grafted at the site of
(1) Atrioventricular bundle (2) Purkinje system
(3) Sino-atrial node (4) Atrio-ventricular node
10. Which one of the following pairs of structures distinguishes a nerve cell from other types of cells?
(1) Vacuoles and fibres
(2) Flagellum and medullary sheath
(3) Nucleus and mitochondria
(4) Cell body of a neuron and dendrites
11. Read the following statements (A–D):
A. Hypothalamus controls body temperature, eating and drinking.
B. The midbrain receives and integrates visual, tactile and auditory inputs.
C. The medulla contains centres, which control respiration, cardiovascular reflexes and gastric secretions.
D. The entire process of involuntary response to a peripheral nerve stimulation is called reflex action.
How many of the above statements are correct ?
(1) 3 (2) **4**
(3) 2 (4) 1
12. Identify teeth labelled as A–D in the given figure.



- (1) A–Premolars; B–Incisors; C–Molars; D–Canines
(2) A–Molars; B–Incisors; C–Canines; D–Premolars
(3) A–Molars; B–Incisors; C–Premolars; D–Canines
(4) A–Premolars; B–Incisors; C–Canines; D–Molars

13. Gynaecomastia is a characteristic of
 (1) A genetic disorder caused by trisomy of sex chromosome in females
 (2) A genetic disorder caused by trisomy of autosomal chromosome in females
(3) A genetic disorder caused by trisomy of sex chromosome in males
 (4) A genetic disorder caused by trisomy of autosomal chromosome in males

14. Given below is the ECG of a normal human. Which one of its components in humans is correctly interpreted below?



- (1) **Complex QRS-One complete Pulse**
 (2) Peak T—Initiation of total cardiac contraction
 (3) Peak P and Peak R together—Systolic and diastolic blood pressures
 (4) Peak P—initiation of left atrial contraction only
15. I. Some of these infections like hepatitis-B and HIV can also be transmitted by sharing injection needles, surgical instruments, etc.
 II. The adolescence period is the period between 18–25 years of age.
 III. Early symptoms of most of the STDs are minor and include itching, fluid discharge, slight pain, swellings, etc., in the genital region.
 How many of the above statements are correct?
 (1) None (2) One
(3) Two (4) All
16. Match the hormone with its functions.

P	Melatonin	I.	It plays an important role in the regulation of the basal metabolic rate.
Q	Aldosterone	II.	It stimulates the reabsorption of Na^+ and water and excretion of K^+ and phosphate ions.
R	Thyroxine	III.	It stimulates reabsorption of Ca^{+2} by the renal tubules and increases Ca^{+2} absorption from the digested food.
		IV.	It helps in maintaining the normal rhythms of the sleep-wake cycle and body temperature.
		V.	It stimulates the breakdown of glycogen resulting in an increased concentration of glucose in the blood.

- (1) P-IV; Q-I; R-II (2) P-II; Q-IV; R-V
(3) P-IV; Q-II; R-I (4) P-II; Q-III; R-V

17. Select the option with a correct representation of an animal belonging to the below mentioned class of vertebrates.
 I. The notochord is persistent throughout life. The mouth is ventral.
 II. The skin is moist without scales. The tail may be present.
 III. 6 to 15 pairs of gill slits. Jaws absent.
 IV. Viviparous usually. Pinna present in most of the members.
 (1) I—Dog fish; II—Ichthyophis; III—Calotes; IV—Canis
 (2) I—Hagfish; II—Salamandra; III—Betta; IV—Aptenodytes
(3) I—Pristid; II—Hyla; III—Lamprey; IV—Pteropus
 (4) I—Clarius; II—Rana; III—Myxine; IV—Delphinus

18. Which of the following is a feature of a bony fish?
 (1) Placoid scales present
(2) Gills with operculum
 (3) Habitat of marine water only
 (4) Air bladder absent
19. DPT vaccine provides immunity against all of the following diseases, except
 (1) Pertusis (2) Diphtheria
(3) Tuberculosis (4) Tetanus
20. Disease caused by the biting of Culex mosquito is
(1) Filariasis (2) Dengue fever
 (3) Yellow fever (4) Pneumonia
21. Match the hormones with its source of secretion:

	Column-I		Column-II
(A)	Somatostatin	(1)	Pineal gland
(B)	Melatonin	(2)	Pancreas
(C)	Aldosterone	(3)	Placenta
(D)	Erythropoietin	(4)	Adrenal cortex
(E)	hCG	(5)	Kidney
		(6)	Liver

- (1) A-4; B-1; C-2; D-3; E-5
 (2) A-2; B-1; C-4; D-3; E-5
 (3) A-4; B-1; C-2; D-3; E-6
(4) A-2; B-1; C-4; D-5; E-3
22. Unidirectional transmission of a nerve impulse through nerve fibre is due to the fact that
 (1) Nerve fibre is insulated by a medullary sheath
 (2) Sodium pump starts operating only at the cyton and then continues into the nerve fibre
 (3) Neurotransmitters are released by dendrites and not by axon endings
(4) Neurotransmitters are released by the axon endings and not by dendrites
23. Which of the following features is common between birds

and mammals?

- (1) Pigmented skin and bony endoskeleton
- (2) Pulmonary respiration and four-chambered heart
- (3) Viviparity and 12 pairs of cranial nerves
- (4) Homeotherms and four-chambered heart**

24. Name a peptide hormone which acts mainly on hepatocytes and adipocytes and enhances cellular glucose uptake and utilisation.

- (1) Insulin
- (2) Glucagon
- (3) Secretin
- (4) Gastrin

25. All the following options regarding blood transfusion is incorrect, except

- (1) The recipient plasma should not contain antigens against antibodies present in donor plasma
- (2) The donor RBCs should not contain antibodies against an antigen in recipient plasma
- (3) The recipient plasma should not contain antibodies against donor RBC antigens**
- (4) The recipient RBCs should not have antigens found on donor RBCs.

26. Read the following (A–D) statements:

- (A) Plasma without the clotting factor is called lymph.
- (B) The spleen is the graveyard of RBCs.
- (C) Eosinophils resist infections and are also associated with allergic reactions.
- (D) The universal donor blood group is O+ve.

How many of the above statements are correct?

- (1) Four
- (2) Three
- (3) Two**
- (4) One