

NEET BIOLOGY 2018-19 - Chennai

Periodic Test : 02

Number of questions: 150

Name: _____

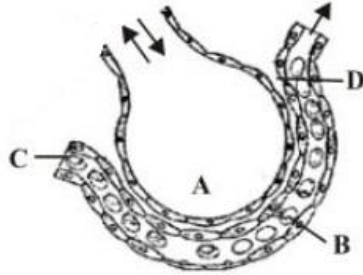
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Negative Marks : 4 marks for correct attempt & 1 mark deducted for every wrong attempt.

Test ID : 014

Test date: 21.03.2019

Time: 3HRS

- Which cell of 'Crypts of Lieberkuhn' secrete antibacterial lysozyme?
 - Paneth cells
 - Zymogen cells
 - Kupffer cells
 - Argentaffin cells
- A body boy aged two years is admitted to play school and passes through a dental check-up. The dentist observed that the boy had twenty teeth. Which teeth were absent?
 - Canines
 - Pre-molars
 - Molars
 - Incisors
- Which of the following guards the opening of hepatopancreatic duct into the duodenum?
 - Pyloric sphincter
 - Sphincter of Oddi
 - Semilunar valve
 - Ileocaecal valve
- The enzyme that is not present in succus entericus is
 - nucleosidase
 - lipase
 - maltase
 - nuclease.
- Gastric juice of infants contains?
 - Pepsinogen, lipase, rennin
 - amylase, rennin, Pepsinogen
 - maltase, Pepsinogen, rennin
 - nuclease, Pepsinogen, lipase
- Which one of the following is the correct statement for respiration in humans?
 - Cigarette smoking may lead to inflammation of bronchi
 - Neural signals from pneumotoxic centre in pons region of brain can increase the duration of inspiration.
 - Workers in grinding and stone-breaking industries may suffer, from lungs fibrosis.
 - About 90% of carbon dioxide(CO₂) is carried by haemoglobin as carbamino-haemoglobin.
- The figure given bellows a small part of human lung where exchange of gases takes place. Select the option which represents labeled part (A, B, C or D) correctly identified along its function.
 - C – arterial capillary – passes oxygen to tissues.
 - A – alveolar cavity – main site of exchange of respiratory gases.

- c) D- capillary wall – exchange of O₂ and CO₂ takes place here
- d) B – red blood cells – transport of CO₂ mainly.

8. Which of the following is a possibility for most of us in regard to breathing, by making a conscious effort?

- a) One can breathe out air totally without oxygen
- b) One can breathe out air through Eustachian tube by closing both nose and mouth.
- c) One can consciously breathe in and breathe out by moving the diaphragm alone, without moving the ribs at all.
- d) The lungs can be made fully empty by forcefully breathing out all air from them.

9. Listed below four respiratory capacities (i-iv) and four jumbled respiratory volumes of a normal human adult.

Respiratory capacities	Respiratory volume
------------------------	--------------------

- | | |
|---------------------------------|--------|
| i) Residual volume | 2500mL |
| ii) Vital capacity | 3500mL |
| iii) Inspiratory reserve volume | 1200mL |
| iv) Inspiratory capacity | 4500mL |

Which one of the following is the correct matching of two capacities and volume?

- a) (ii) 2500mL, (iii) 4500mL.
- b) (iii) 1200mL, (iv) 2500mL.
- c) (iv) 3500mL, (i) 1200mL.
- d) (i) 4500mL, (ii) 3500mL.

10. Which is the vital capacity of our lungs?

- a) Inspiratory reserve volume *plus* expiratory reserve volume
- b) Total lung capacity *minus* residual volume

- c) Inspiratory reserve volume *plus* tidal volume
- d) Total lung capacity *minus* expiratory reserve volume

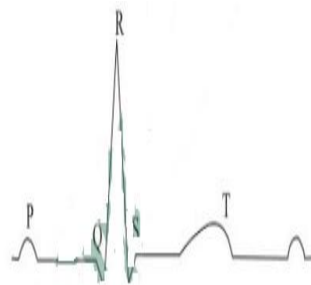
11. Which one of the following plasma proteins is involved in the coagulation of blood?

- a) Albumin
- b) Serum amylase
- c) Globulin
- d) Fibrinogen

12. Which one of the following statements is correct regarding blood pressure?

- a) 130/90 mm Hg is considered high and requires treatment
- b) 100/55 mm Hg is considered an ideal blood pressure
- c) 105/50 mm Hg makes one very active
- d) 190/110 mm Hg may harm vital organs like brain and kidney

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



- a) Complex QRS – one complete pulse.
- b) Peak T- intimation of total cardiac contraction.
- c) Peak P and peak R together – systolic and diastolic blood pressures.
- d) Peak P – intimation of left atrial contraction only.

14. Which one of the following changes (1-4) usually tend to occur in the plain dwellers when they move to high altitudes (3500 m or more)?

- (1) Increase in red blood cell size
- (2) Increase in red blood cell production
- (3) Increased breathing rate
- (4) Increase in thrombocyte count

Changes occurring are

- a) (2) and (3)
- b) (3) and (4)
- c) (1) and (4)
- d) (1) and (2)

15. Given below are four statements (i-iv) regarding human blood circulatory system.

- (i) Arteries are thick-walled and have narrow lumen as compared to veins.
- (ii) Angina is acute chest pain when the blood circulation to the brain is reduced.
- (iii) Persons with blood group AB can donate blood to any person with any blood group under ABO system.
- (iv) Calcium ion play a very important role in blood clotting.

Which two of the above statement is correct?

- a) (i) and (iv)
- b) (i) and (ii)
- c) (ii) and (iii)
- d) (iii) and (iv)

16. Which one of the following does not favour the formation of large quantities of dilute urine?

- a) Renin.
- b) Atrial-natriuretic factor
- c) Alcohol
- d) Caffeine

17. Which of the following cause an increase in sodium reabsorption in the distal convoluted tubule?

- a) Increase in aldosterone levels
- b) Increase in antidiuretic hormone levels
- c) Decrease in aldosterone levels
- d) Decrease in antidiuretic hormone levels

18. The maximum amount of electrolytes and water (70-80 percent) from the glomerular filtrate is reabsorbed in which part of the nephron?

- a) Ascending limb of loop of Henle
- b) Distal convoluted tubule
- c) Proximal convoluted tubule
- d) Descending limb of loop of Henle

19. A fall in glomerular filtration rate (GFR) activates?

- a) Juxtaglomerular cells to release renin.
- b) Adrenal cortex to release aldosterone.
- c) Adrenal medulla to release adrenaline.
- d) Posterior pituitary to release vasopressin.

20. Which one of the following is not a part of a renal pyramid?

- a) Peritubular capillaries
- b) Convoluted tubules
- c) Collecting duct
- d) Loop of Henle

21. Which of the following is not a function of the skeletal system?

- a) Production of body heat.
- b) Locomotion.
- c) Production of erythrocytes.
- d) Storage of minerals.

22. Sliding filament theory can be best explained as

- a) Actin and myosin filaments do not shorten but rather slide past each other.

- b) When myofilaments slide pass each other, myosin filaments shorten while actin filaments do not shorten.
- c) When myofilaments slide pass each other, actin filaments shorten while myosin filaments do not shorten.
- d) Actin and myosin filaments shorten and slide pass each other.

23. Select the correct matching of the type of joint with the example in human skeletal system.

Type of Joint	Example
a) Cartilaginous joint	Between frontal and parietal
b) Pivot Joint	Between third and fourth cervical vertebrae
c) Hinge joint	Between humerus and pectoral girdle
d) Gliding joint	Between carpals

24. Select the correct statement with respect to locomotion in humans.
- a) The vertebral column has 10 thoracic vertebrae
 - b) The joint between adjacent vertebrae is a fibrous joint
 - c) A decreased level of progesterone causes osteoporosis in old people
 - d) Accumulation of uric acid crystals in joints causes their inflammation
25. The characteristic and example of a synovial joint in humans is

Characteristic	Example
a) Fluid filled synovial cavity	Joint between atlas and axis

between two bones

b) Lymph filled between two bones, limited movement Gliding joint between carpals

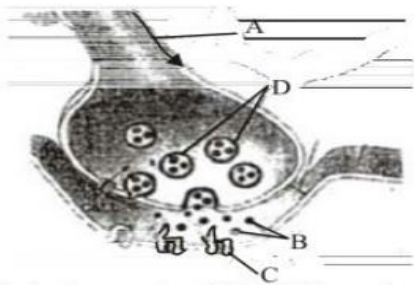
c) Fluid cartilage between two bones, limited movements Knee joint

d) Fluid filled between two joints, provides cushion Skull bones

26. In mammalian eye, the 'fovea' is the center of the visual field, where
- a) Only rods are present
 - b) More rods than cones are found
 - c) High density of cones occur but not rods
 - d) The optic nerve leaves the eye
27. which of the following region of brain is incorrectly paired with its function?
- a) corpus callosum – communication between the left and right cerebral cortices.
 - b) cerebrum – calculation and contemplation.
 - c) Medulla oblongata – homeostatic control.
 - d) cerebellum – language comprehension.
28. Which one of the following statement is not correct?
- a) Retinal is the light absorbing portion of visual photo pigments.
 - b) In retina the rods have the photopigment rhodopsin while cones have three different photopigments
 - c) Retinal is a derivative of vitamin C
 - d) Rhodopsin is the purplish red protein present in rods only

29. The most abundant intracellular cation is
- a) H^+
 - b) K^+
 - c) Na^+
 - d) Ca^+

30. Figure shows an axon terminal and synapse. Select the option giving correct identification of labels A – D.



- a) A-Action potential, C-Neurotransmitter.
 b) B-Neurotransmitter, D-Receptor capsules.
 c) C-Receptor, D-Synaptic vesicles.
 d) A-Axon terminal, B-serotonin complex .

31. Occurrence of Leydig's cells and their secretion is

- a) Ovary and estrogen.
 b) Liver and cholesterol.
 c) Pancreas and glucagon.
 d) Testis and testosterone.

32. Addition of a trace of thyroxine or iodine in water containing tadpoles will

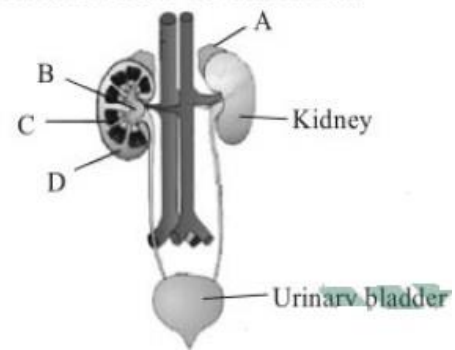
- a) Keep them in larval stage
 b) Hasten their metamorphosis
 c) Slow down their metamorphosis
 d) Kill the tadpoles

33. MSH of pars intermedia of middle pituitary is responsible for

- a) Darkening of skin in lower vertebrates.
 b) Light colouration of skin in lower vertebrates.
 c) Both A and B
 d) Darking of skin in human beings.

34. Figure shows human urinary system with structures labeled A to D. Select option

which correctly identifies them and gives their characteristic and/ or functions.



- a) C – Medulla – inner zone of kidney and contain complete nephrons.
 b) D – Cortex – outer part of kidney and do not contain any part of nephrons.
 c) A- Adrenal gland – located at the anterior part of kidney. Secrete catecholamines which stimulate glycogen breakdown.
 d) B – pelvis - broad funnel shaped space inner to hilum, directly connected to loops of Henle

35. Which one of the following statement is correct in relation to the endocrine system?

- a) Non – nutrient chemicals produced by the body in trace amounts that act as intercellular messenger are known as hormones.
 b) Releasing and inhibitory hormones are produced by the pituitary gland.
 c) Adenohypophysis is under direct neural regulation of the hypothalamus.
 d) Organs in the body like gastrointestinal tract, heart, kidney and liver do not produce any hormones.

36. 'Nothing lives forever, but life continues' what does it mean

- a) Older die but new are produced due to reproduction.
 b) Nothing can produce without death.

- c) Death has nothing to do with the continuation of life.
- d) Parthenogenesis is must for sexual reproduction.

37. Which one of the following generates new genetic combinations leading to variation?
- a) Vegetative reproduction
 - b) parthenogenesis
 - c) sexual reproduction
 - d) Nucellar polyembryony

38. Which of the following pairs is not correctly matched?

Mode of Reproduction	Example
a) Binary fission	<i>Sargassum</i>
b) Conidia	<i>Pencillium</i>
c) Offset	<i>Water hyacinth</i>
d) Rhizome	<i>Banana</i>

39. In oogamy, fertilization involves
- a) A small non-motile female generate and large motile male gamete
 - b) A large non-motile female generate and small motile male gamete
 - c) A large non-motile female generate and small non-motile male gamete
 - d) A large motile female generate and small non-motile male gamete

40. The process of series of changes from larva to adult after embryonic development is called?
- a) Regeneration
 - b) Growth
 - c) Metamorphosis
 - d) Ageing

41. The role of double fertilization in angiosperms is to produce
- a) Cotyledons
 - b) Endocarp
 - c) Endosperm
 - d) Integuments

42. The role of double fertilization in angiosperm is to produce
- a) Cotyledons
 - b) Endocarp
 - c) Endosperm.
 - d) Harmones

43. The anthesis is a phenomenon, which refers to
- a) Development of anthers
 - b) Opening of flower bed
 - c) Stigma receptors
 - d) All of these

44. The polyembryony commonly occurs in
- a) tomato
 - b) Potato
 - c) Citrus
 - d) Turmeric

45. Embryo sac represents
- a) megaspore.
 - b) geitonogamy.
 - c) xenogamy.
 - d) allogamy.

46. Which one of the following depicts the correct pathway of transport of sperms?
- a) Rete testis → Efferent ductules → Epididymis → Vas deferens
 - b) Rete testis → Epididymis → Efferent ductules → Vas deferens
 - c) Rete testis → Vas deferens → Efferent ductules → Epididymis
 - d) Efferent ductules → Rete testis → Vas deferens → Epididymis

47. Several hormones like hCG, hPL, estrogen, progesterone are produced by
- a) Ovary
 - b) Placenta
 - c) Fallopian tube
 - d) Pituitary

48. Fertilization in humans is practically feasible only if
- a) The ovum and sperms are transported simultaneously to ampullary-isthmic junction of cervix
 - b) The sperm are transported into cervix within 48hrs of release of ovum in uterus
 - c) The sperms are transported into vagina just after the release of ovum in fallopian tube
 - d) The ovum and sperm are transported simultaneously to ampullary-isthmic junction of fallopian tube
49. Identify the correct statement on 'inhibin'
- a) Is produced by granulosa cells in ovary and inhibits the secretion of LH
 - b) Is produced by nurse cells in testes and inhibits the secretion of LH
 - c) inhibits the secretion of LH, FSH and prolactin
 - d) Is produced by granulosa cells in ovary and inhibits the secretion of FSH
50. Capacitation occurs in
- a) Epididymis
 - b) Vas deferens
 - c) Female reproductive tract
 - d) Rete testis