

NEET BIOLOGY 2018-19 - Chennai

Periodic Test : 01

Number of questions: 150

Name: _____

ID No: _____

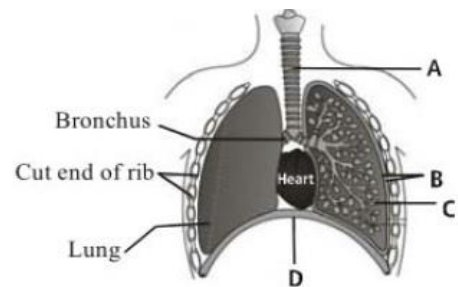
Test ID : 013

Test date: 20.03.2019

Time: 3HRS

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

- In the stomach, gastric acid is secreted by
 - Peptic cells
 - Acidic cells
 - Gastrin secretin cells
 - Parietal cells
- Fructose is absorbed into the blood through mucosa cells of intestine by the process called
 - active transport
 - facilitated transport
 - simple diffusion
 - co-transport mechanism
- Where do certain symbiotic microorganisms normally occur in human body?
 - Caecum
 - Oral lining and tongue surface
 - Vermiform appendix and rectum
 - Duodenum
- If for some reason our goblet cells are non-functional, this will adversely affect
 - Production of somatostatin
 - Secretion of sebum from the sebaceous glands
 - Maturation of sperms
 - Smooth movement of food down the intestine.
- Which one of the following pairs of food components in human reaches the stomach totally undigested ?
 - Starch and fat
 - Fat and cellulose
 - Starch and cellulose
 - Protein and starch
- Name the chronic respiratory disorder caused mainly by cigarette smoking.
 - Respiratory acidosis
 - Respiratory alkalosis
 - Emphysema
 - Asthma
- The figure shows a diagrammatic view of human respiratory system with labels A, B, C and D. Select the option which gives correct identification and main function and / or Characteristic.

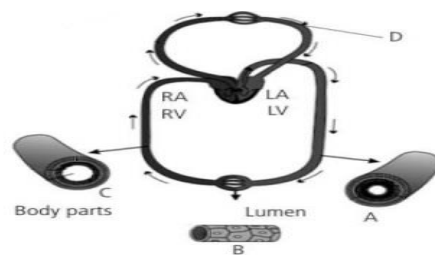


- C – Alveoli – thin walled vascular bag like structures for exchange of gases.

- b. D – Lower end of lungs – Diaphragm pulls it down during inspiration.
 - c. A- Trachea – Long tube supported by complete cartilaginous rings for conducting inspired air
 - d. B – Pleural membrane – surround rib on both sides to provide cushion against rubbing.
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. The haemoglobin of a human foetus
- a. has only 2 protein subunits instead of 4.
 - b. has a higher affinity for oxygen than that of an adult
 - c. has a lower affinity for oxygen than that of adult
 - d. its affinity for oxygen is same as that of adult.
10. When CO₂ concentration in blood increases, breathing becomes
- a. Shallower and slow
 - b. There is no effect on breathing
 - c. Slow and deep
 - d. Faster and deeper.
11. Serum differs from blood in
- a. Lacking globulins
 - b. Lacking albumins

- c. Lacking clotting factors
- d. Lacking antibodies

12. Doctors use stethoscope to hear the sounds produced during each cardiac cycle. The second sound is heard when
- a. AV node receives signal from SA node.
 - b. AV valves open up.
 - c. Ventricular walls vibrate due to gushing in of blood from atria.
 - d. Semilunar valves close down after the blood flows into vessels from ventricles.
13. Person with blood group AB is considered as universal recipient because he has
- a. Both A and B antigens on RBC no antibodies in the plasma.
 - b. Both A and b antibodies in the plasma
 - c. No antigen on RBC and no antibody in the plasma.
 - d. Both A and B antigens in the plasma but no antibodies.
14. The figure shows blood circulation in humans with labels A to D. Select the option which gives correct identification of label and functions of the part.



- a. B – Capillary – Thin without muscle layer and wall two cell layers thick.
- b. C – Vein – Thin walled and blood flows in jerks/spurts.
- c. D- Pulmonary vein – takes oxygenated blood to heart, PO₂ = 95 mmHg

- d. A – Artery – thick walled and blood flows evenly.
15. “Bundle of His” is a part of which one of the following organs in humans?
- Brain
 - Heart
 - Kidney
 - Pancreas
16. The part of nephron involved in active reabsorption of sodium is
- Distal convoluted tubule
 - Proximal convoluted tube
 - Bowman’s capsule
 - Descending limb of henle’s loop
17. Removal of proximal convoluted tubule from the nephron will result in
- No change in quality or quantity of urine.
 - No urine formation
 - More diluted urine
 - More concentrated urine
18. The maximum amount of electrolytes and water (70 – 80 percent) from the glomerular filtrate is reabsorbed in which part of the nephron?
- Ascending limb of loop of Henle
 - Distal convoluted tubule.
 - Proximal convoluted tubule.
 - Descending limb of loop of Henle.
19. Which one of the following characteristics is common both in humans and adult frogs?
- Four chambered heart
 - Internal fertilization
 - Nucleated RBCs
 - Ureotelic mode of excretion
20. Which one of the following statements is correct with respect to kidney function regulation?
- When someone drinks lot of water, ADH release is suppressed.
 - Exposure to cold temperature stimulates ADH release
 - An increase in glomerular blood flow stimulates formation of angiotensin II
 - During summer when body loses lot of water by evaporation, the release of ADH is suppressed.
21. Out of ‘X’ pairs of ribs in humans only ‘Y’ pairs are true ribs. Select the option that correctly represents values of X and Y and provides their explanation.
- X= 12, Y =5 True ribs are attached dorsally to vertebral column and sternum on the two ends.
 - X=24, Y=2 True ribs are dorsally attached to the vertebral column but are free on ventral side.
 - X=12, Y=12 True ribs are dorsally attached to the vertebral column but are free on ventral side
 - X=12, Y=7 True ribs are attached to the dorsally to vertebral column and ventrally to the sternum.
22. Osteoporosis, an age-related disease of skeletal system, may occur due to
- Immune disorder affecting neuromuscular junction leading to fatigue.

- b. High concentration of Ca^{++} and Na^+
- c. Decreased level of estrogen
- d. Accumulation of uric acid leading to inflammation of joints.

23. 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.

24. Sliding filament theory can be best explained as

- a. Actin and myosin filaments do not shorten but rather slide pass 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.

25. 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 carpels

26. Myelin sheath is produced by
- a. Astrocytes and Schwann cells
 - b. Oligodendrocytes and Osteoclasts
 - c. Osteoclasts and astrocytes
 - d. Schwann cells and oligodendrocytes.

27. Receptor sites for neuro transmitters are present on

- a. Pre-synaptic membrane
- b. Tips of axon
- c. Post-synaptic membrane
- d. Membranes of synaptic vesicles.

28. Good vision depends on adequate intake of carotene rich food.

Select the best option from the following statements.

- (1). Vitamin A derivatives are formed from carotene.
- (2). The photopigments are embedded in the membrane discs of the inner segment.
- (3). Retinal is a derivative of vitamin A
- (4). Retinal is a light absorbing part of all the visual photopigments.

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

29. Choose the correct statement.

- a. Nociceptors respond to change in pressure.
- b. Meissner's corpuscles are thermoreceptors.
- c. Photoreceptors in the human eye are depolarized during darkness and become hyperpolarized in response to light stimulus.
- d. Receptors do not produce graded potentials.

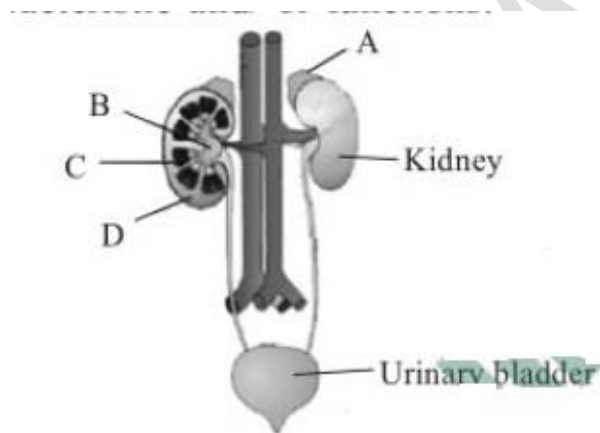
30. Photo sensitive compound in human eye is made up of

- a. Opsin and retinol
- b. Transducin and retinene
- c. Guanosine and retinol
- d. Opsin and retinal

31. Which of the following pairs of hormones are not antagonistic (having opposite effects) to each other?

- a. Aldosterone Atrial Natriuretic factor
- b. Relaxin Inhibin
- c. Parathormone calcitonin
- d. Insulin Glucagon

32. 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 .

33. A person entering an empty room suddenly finds a snake right in front on opening the door. Which one of the following is likely to happen in his neuro-hormonal control system?

- a. Sympathetic nervous system is activated releasing epinephrine and norepinephrine from adrenal medulla.
- b. Neurotransmitters diffuse rapidly across the cleft and transmit a nerve impulse.
- c. Hypothalamus activates the parasympathetic division of brain.
- d. Sympathetic nervous system is activated releasing epinephrine and norepinephrine from adrenal cortex.

34. Low Ca^{++} in the body fluid may be the cause of

- a. Tetany
- b. Anemia
- c. Angina pectoris
- d. Gout

35. Feeling the tremors of an earthquake, a scared resident of seventh floor of a multistoried building starts climbing down the stairs rapidly. Which hormone initiated this action.

- a. Adrenaline
- b. Glucagon
- c. Gastrin
- d. Thyroxine

36. The process of series of changes from larva to adult after embryonic development is called

- a. Regeneration
- b. Growth
- c. Metamorphosis
- d. Ageing

37. During regeneration, modification of an organ to other organ is known as

- a. Morphogenesis
- b. Epimorphosis
- c. Morphallaxis
- d. Accretionary growth.

38. In oogamy, fertilization involves

- a. a small non-motile female gamete and a large motile male gamete.
- b. a large non-motile female gamete and a small motile male gamete.
- c. a large non-motile female gamete and a small non-motile male gamete.
- d. large motile female gamete and a small non-motile male gamete.

39. In ginger, vegetative propagation occurs through

- a. Bulbils
- b. Runners
- c. Rhizome
- d. Offsets

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

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

41. The coconut water from tender cocconut represents

- a. Free nuclear proembryo
- b. Free nuclear endosperm
- c. Endocarp
- d. Fleshy mesocarp

42. Which one of the following fruits is Parthenocarpic?

- a. Jackfruit
- b. Banana

c. Brinjal

d. Apple

43. An aggregate fruit is one which develops from

- a. Multicarpellary syncarpous gynoecium
- b. Multicarpellary apocarpus gynoecium
- c. Complete inflorescence
- d. Multicarpellary superior ovary.

44. Which one of the following statements is correct?

- a. Endothecium produces the microspores
- b. Tapetum nourishes the developing pollen
- c. Hard outer layer of pollen is called intine.
- d. Sporogenous tissue is haploid.

45. Which one of the following is correctly matched?

- a. Onion – Bulb
- b. Ginger – Sucker
- c. Chlamydomonas – Conidia
- d. Yeast – Zoospores

46. Which of the following layers in an antral follicle is acellular?

- a. Stroma
- b. Zona Pellucida
- c. Granulosa
- d. Theca interna

47. What is the correct sequence of sperm formation?

- a. Spermatogonia, spermatozoa, Spermatocytes, spermatids.
- b. Spermatogonia, Spermatocytes, spermatids, spermatozoa.
- c. Spermatids, Spermatocytes, Spermatogonia, spermatozoa.

- d. Spermatogonia, Spermatocytes, spermatozoa, spermatids.

48. Identify the human developmental stage shown below as well as the related right place of its occurrence in a normal pregnant woman, and select the right option for the two, together.



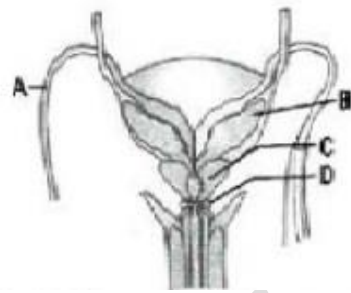
Developmental Stage Site of occurrence

- | | |
|--------------------|----------------------------------|
| a. Late morula | Middle part of fallopian tube |
| b. Blastula | End part of fallopian tube |
| c. Blastocyst | Uterine wall |
| d. 8-celled morula | Starting point of fallopian tube |

49. The first movements of the foetus and appearance of hair on its head are usually observed during which month of pregnancy?

- a. Fourth mnth
- b. Fifth month
- c. Sixth month
- d. Third month

50. Given below is a diagrammatic sketch of a portion of human male reproductive system. Select the correct set of names of the parts labeled A, B, C, D.



- a. A- Vas deferens, B- Seminal Vesicle, C- Prostrate, D- Bulbourethral gland.
- b. A – Vas deferens, B – Seminal Vesicle, C – Bulbourethral gland, D – Prostrate.
- c. A- Ureter, B- Seminal vesicle, C – prostrate, D- Bulbourethral gland.
- d. A- Ureter, B- Prostrate, C - Seminal Vesicle, D- Bulbourethral gland.