

NEET BIOLOGY 2018-19 - Chennai

Periodic Test : 021

Test ID : 033

Number of questions: 50

Test date: 10.04.2019

Name: _____

Time: 2 HRS

ID No: _____

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

- Golden rice is a genetically modified crop plant where the incorporated gene is meant for biosynthesis of:
 - Vitamin C
 - Omega 3
 - Vitamin A
 - Vitamin B
- In Bt cotton, the Bt toxin present in plant tissue as pro-toxin is converted into active toxin due to
 - acidic Ph of the insect gut.
 - action of gut micro-organisms.
 - presence of conversion factors in insect gut.
 - alkaline pH of the insect gut.
- Pollen tablets are available in the market for:
 - In vitro fertilization
 - Breeding programmes
 - Supplementing food
 - Ex situ conservation
- Cry gene is obtained from
 - Bacillus thuringiensis
 - Bacillus subtilis
 - Clostridium welchii
 - E. coli
- RNA interference (RNAi) technique has been devised to protect the plants from nematode which is silenced by ---- produced by the host plant
 - dsDNA
 - ssDNA
 - dsRNA
 - target proteins
- which of the following Bt crops is being grown in India by the farmers?
 - Cotton
 - Brinjal
 - Soyabean
 - Maize
- Which of the following statement is correct about Bt toxin?
 - Bt protein exists as active toxin in the Bacillus
 - The activated toxin enters the ovaries of the pest to sterilize it and thus prevent its multiplication
 - The concerned Bacillus has antitoxins
 - The inactive protoxin gets converted into active form in the insect gut.
- Transgenic plants are the ones
 - Generated by introducing foreign DNA into a cell and regenerating a plant from the cell
 - Produced after protoplast fusion in artificial medium
 - Grown in artificial medium after hybridization in the field
 - Produced by a somatic embryo in artificial medium

9. Match column- I and column- II and choose the correct option

Column-I	column-II
A.Forensic science	I. AIDS
B.ELISA	II. Radio active DNA/RNA
C. Probes	III. Emphysema
D. α -1-antitrypsin	IV. DNA Fingerprinting

- (a) A-II,B-I,C-IV,D-III
 (b) A-II,B-I,C-III,D-IV
 (c) A-II,B-III,C-I,D-IV
 (d) A-IV,B-I,C-II,D-III

10. Alcoholic beverages are obtained with the help of:

- a) Penicillium
 b) Yeast
 c) Blue-green algae
 d) None of the above

11. Genes of interest can be selected from a genomic library by using:

- a) Restriction enzymes
 b) Cloning vectors
 c) DNA probes
 d) Gene targets

12. Strains of *Bacillus thuringiensis* are used in producing :

- a) Bioinsecticidal plants
 b) Biomineralization
 c) Biometallurgical techniques
 d) Biofertilisers

13. Which one of the following is the correctly matched pair of a product and the microorganism responsible for it?

- a) Ethyl alcohol – Yeast
 b) Acetic acid – *Lactobacillus*
 c) Cheese – *Nitrobacter*
 d) Curd – *Azotobacter*

14. mRNA silencing is called

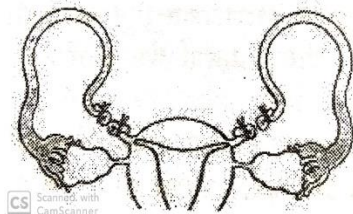
- a) RNAi
 b) RNA activation
 c) RNA without initiation codon
 d) RNA is not producing interferon

15. Column I contains different types of IUD's with their examples given in column II. Match the column and choose the correct option.

Column –I	column –II
A. Non medicated IUDs	I. lippes loop
B.Hormone releasing IUDs	II. Multiload 375
C. Copper releasing IUDs	III. CuT
	IV. Cu7
	V. LNG -20
	VI. PROgestasert

- a) A-I; B-II; C-III;IV;V
 b) A-I;B-V;VI;C-II;III;IV
 c) A-II;B-III;VI;C-I;V;IV
 d) A-II;B-I;VI;C-III;IV;V

16. The process done in the given figure:

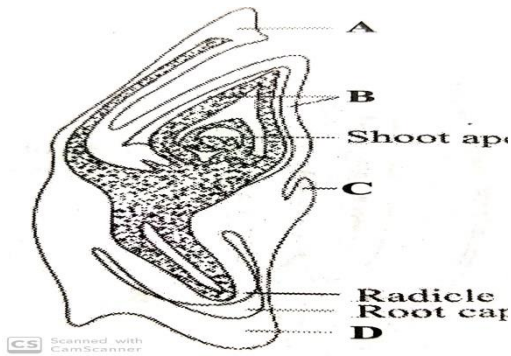


- a) Prevents egg from reaching the uterus for implantation.
 b) Avoid insemination
 c) Inhibits the process of ovulation
 d) Increase contraceptive efficiency

17. To avoid transmission of STDs, we should:

- (i) Avoid sex with multiple partners.
 (ii) Always have unprotected sex.
 (iii) Use condoms during coitus.
 (iv) Avoid sex with unknown partners.
 (v) Avoid sharing of needles

- Choose the correct option:
- (i),(ii),(iii) and (v)
 - (i),(iii),(iv) and (v)
 - (i),(ii) and (iii)
 - (i),(ii) and (iv)
18. The technique called gamete intra fallopian transfer (GIFT) is recommended for those females:
- Who cannot produce an ovum
 - Who cannot retain the foetus inside uterus
 - Whose cervical canal is too narrow to allow passage for the sperms
 - Who cannot provide suitable environment for fertilization
19. Identify the incorrect statement regarding ZIFT
- ZIFT is zygote intra fallopian transfer
 - It is one of the techniques known as assisted reproductive technologies
 - Through this process embryo is formed by injecting ovum into the sperm
 - Zygote or embryo up to 8 blastomeres is collected and transferred into the fallopian tube
20. Identify the correct reasons for infertility and choose the option
- Drugs
 - Diseases
 - congenital
 - Use of contraceptives
 - Immunological or psychological
 - Assisted reproductive technology
- (i),(ii) and (iii)
 - (iii),(iv) and (vi)
 - (i),(ii),(iii) and (v)
 - All of these
21. Flowers which have single ovule in the ovary and are packed into inflorescence are usually pollinated by:
- Bee
 - Wind
 - Bat
 - Water
22. Functional megaspore is an angiosperm develops into
- Endosperm
 - Embryo sac
 - Embryo
 - Ovule
23. Which one of the following may require pollinators, but is genetically similar to autogamy
- Xenogamy
 - Apogamy
 - Cleistogamy
 - Geitonogamy
24. Geitonogamy involves
- Fertilization of a flower by the pollen from another flower of the same plant
 - Fertilization of a flower by the pollen from the same flower
 - Fertilization of a flower by the pollen from a flower of another plant in the same population
 - Fertilization of a flower by the pollen from a flower of another plant belonging to a distant population
25. The given figure shows the L.S of a monocot embryo choose the correct labeling for A,B,C and D marked in the figure from the options given below



- (a) A – coleoptile; B – scutellum ; C – epiblast; D – coleorhiza
- (b) A – scutellum; B – coleoptile; C- coleorhiza; D – epiblast
- (c) A – scutellum; B – epiblast; C – coleoptile; D – coleorhiza
- (d) A – scutellum; B – coleoptile; C- epiblast; D – coleorhiza

26. Receptor sites for neurotransmitters are present on

- (a) Pre – synaptic membrane
- (b) Tips of axons
- (c) Post – synaptic membrane
- (d) Membrane of synaptic vesicles

27. Injury localist to the hypothalamus would most likely disrupt

- (a) Short – term memory
- (b) Coordination during locomotion
- (c) Executive functions, such as decision making
- (d) Regulation of body temperature.

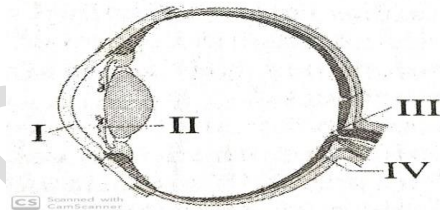
28. During conduction of nerve impulse

- (a) Na^+ moves into axoplasm
- (b) Na^+ moves out of axoplasm
- (c) K^+ moves into axoplasm
- (d) Ca^{++} moves into axoplasm

29. Clusters of neuron cell bodies embedded in the white matter of the brain are referred to us

- (a) Nuclei
- (b) Gyri
- (c) Sulci
- (d) Ganglia

30. Refer the given figure of eye in which few parts are labeled as I,II, III and IV select the option which shows the correct identification of the part with its characteristics.

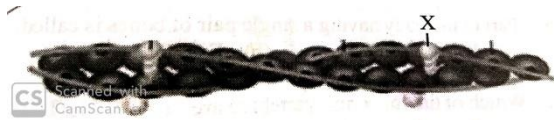


- (a) I: choroid, it contains ganglion cells and photoreceptor cells
- (b) II: Iris, it is responsible for controlling the diameter and size of the pupil and thus the amount of light reaching the retina
- (c) III : Bling spot, it is a yellowish pigmented spot called macula lutea with a central pit called the fovea
- (d) Iv : Cornea, it is a transparent front part of the eye that covers the iris, pupil, and anterior chamber.

31. Which of the following joints would allow no movement?

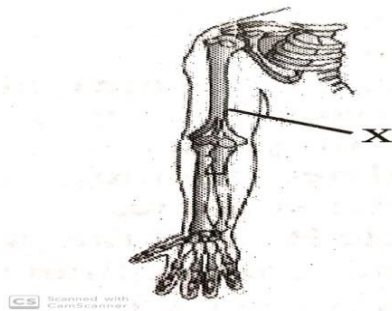
- (a) Cartilaginous joint
- (b) Synovial joint
- (c) Ball and socket joint
- (d) Fibrous joint

32. The label 'X' in the given figure of an actin filament represents:



- (a) Actin
- (b) Myosin
- (c) Tropomyosin
- (d) Troponin

33. The given figure shows the structure of pectoral girdle and upper arm. Identify the structure marked as "X" and its feature



	X	Features
a)	Humerus	Longest bone of upper extremity and is characterized by presence of deltoid tuberosity for the attachment of muscles
b)	radius	It is a smaller bone and formed by sesamoid bone
c)	ulna	The bone extending from the elbow to the wrist on the side opposite to the thumb in humans
d)	femur	Longest and largest bone of body

34. All or none law is associated with :

- (a) Skeletal muscle fibre
- (b) Neuron
- (c) Cardiac muscle fibre
- (d) All of the above

35. Which of the following structures are correctly organized from large to small?

- (a) Muscle, Muscle cell, Myofibril, Sarcomeres, Filaments
- (b) Muscle, Muscle fibre, sarcomeres, Filaments, Myofibrils
- (c) Muscle, Sarcolemma, Myofibrils, Actin filaments, Myosin filaments.
- (d) Muscle cells, Myofibrils, Filaments, Sarcoplasm

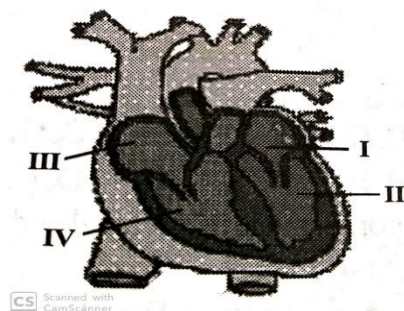
36. Blood pressure in the pulmonary artery is

- (a) Same as that in the aorta
- (b) More than that in the carotid
- (c) More than that in the pulmonary vein
- (d) Less than that in the venae cavae

37. Erythropoiesis starts in :

- (a) Liver
- (b) Spleen
- (c) Red bone marrow
- (d) Kidney

38. The given diagram represents human heart with four chambers labeled as I, II, III & IV?



Which labeled structure receives carbon-dioxide rich blood from the body?

- (a) I-Left atrium
- (b) II- Left ventricle
- (c) III-Right atrium
- (d) IV- Right ventricle

39. The blood returning to the heart through pulmonary vein has more

- (a) RBC
- (b) haemoglobin
- (c) oxygen
- (d) nutrient

40. Mother-foetus Rh blood type incompatibility disorder can occur if the mother is ---- and her foetus is -----.

- (a) Rh positive; Rh positive
- (b) Rh positive; Rh negative
- (c) Rh negative; Rh positive
- (d) Rh negative; Rh negative

41. Which of the following gastric cells indirectly help in erythropoiesis?

- (a) Chief cells
- (b) Mucous cells
- (c) Parietal cells
- (d) Goblet cells

42. Which cells of "Crypts of Lieberkuhn" secrete antibacterial lysozyme?

- (a) Paneth cells
- (b) Zymogen cells
- (c) Kupffer cells
- (d) Argentaffin cells

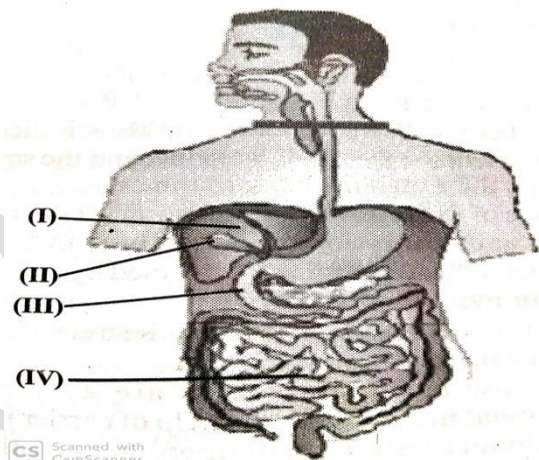
43. A baby boy aged two years is admitted to play school and passes through a dental check-up. The dentist observed that the boy had twenty teeth. Which teeth were absent?

- (a) Canines
- (b) Pre-molars
- (c) Molars
- (d) Incisors

44. Gastric juice of infants contains

- (a) nuclease, pepsinogen, lipase.
- (b) pepsinogen, lipase, rennin.
- (c) amylase, rennin, pepsinogen.
- (d) maltase, pepsinogen, rennin.

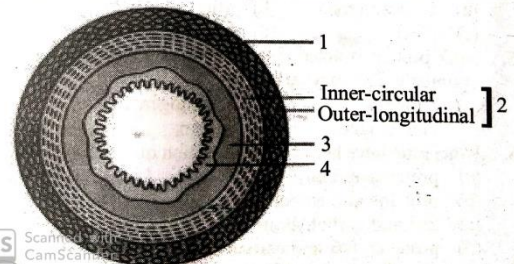
45. The diagram given below shows the human digestive system. Few structures are marked as I, II, III and IV. Which region of the human digestive system releases bile juice?



- (a) I
- (b) II
- (c) III
- (d) IV

46. Sphincter of oddi controls the flow of digestive juice by guarding which duct?

Directions (Qs. 23 and 24): Refer the given figure and answer the questions. This figure shows the diagrammatic representation of T.S of gut with few structures marked as 1, 2, 3 and 4



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

47. Digestive enzymes responsible for breaking down disaccharides includes
- (a) pepsin, trypsin, and trypsinogen
 - (b) amylase, pepsin, and lipase.
 - (c) sucrase, lactase, and maltase.
 - (d) pepsin, trypsin, and chymotrypsin.
48. The disaccharidases are secreted with:
- (a) Saliva
 - (b) Gastric juice
 - (c) Intestinal juice
 - (d) Pancreatic juice
49. Enzyme trypsin is secreted by:
- (a) Duodenum
 - (b) Liver
 - (c) Chyle
 - (d) Stomach
50. Milk protein is acted upon by a gastric enzyme in infant mammals. The enzyme is ----
- (a) rennin
 - (b) caesinogen
 - (c) pepsinogen
 - (d) pepsin