

NEET BIOLOGY 2018-19 - Chennai

Periodic Test : 04

Test ID : 016

Number of questions: 150

Test date: 23.03.2019

Name: _____

Time: 3HRS

ID No: _____

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

- Which one of the following organisms is scientifically correctly named, correctly printed according to the International Rules of Nomenclature and correctly described?
 - Musca domestica* – the common house lizard, a reptile
 - Plasmodium falciparum* – a protozoan pathogen causing the most serious type of malaria.
 - Felis tigris* – the Indian tiger, well protected in Gir forests.
 - E.coli* – full name *Entamoeba coli*, a commonly occurring bacterium in human intestine.
- Which one of the following animals is correctly matched with its particular taxonomic category?
 - Tiger – *Tigris*, species
 - Cuttlefish – mollusca, class
 - Humans - primate, family
 - Housefly – *Musca*, order
- Which one of the following aspects is an exclusive characteristic of living things?
 - Isolated metabolic reactions occur *in vitro*
 - Increase in mass from inside only
 - Perception of events happening in the environment and their memory
 - Increase in mass by accumulation of material both on surface as well as internally
- ICBN stands for
 - International Code of Botanical Nomenclature
 - International Congress of Biological Names
 - Indian Code of Botanical Nomenclature
 - Indian Congress of Biological Names
- The living organisms can be unexceptionally distinguished from the non-living things on the basis of their ability for
 - Interaction with the environment and progressive evolution
 - Reproduction
 - Growth and movement
 - Responsiveness to touch
- Methanogens belong to
 - eubacteria
 - archaeobacteria
 - dinoflagellates
 - slime moulds
- Select the wrong statement.
 - The walls of diatoms are easily destructible.
 - ‘Diatomaceous earth ‘ is formed by the cell walls of diatoms.
 - Diatoms are chief producers in the oceans.
 - Diatoms are microscopic and float passively in water.
- The primitive prokaryotes responsible for the production of biogas from the dung of ruminant animals, include the
 - methanogens
 - eubacteria
 - halophiles
 - thermoacidophiles
- Which one of the following statements is wrong?
 - Eubacteria are also called false bacteria.

- b) Phycomycetes are also called algal fungi.
- c) Cyanobacteria are also called blue-green algae.
- d) Golden algae are also called desmids.

10. Which of the following is wrong for virioids?

- a) They cause infections.
- b) Their RNA is of high molecular weight.
- c) They lack a protein coat.
- d) They are smaller than viruses.

11. Select the correct statement

- a) *Sequoia* is one of the tallest trees.
- b) The leaves of gymnosperms are not well adapted to extremes of climate.
- c) Gymnosperms are both homosporous and heterosporous
- d) *Salvinia*, *Ginkgo* and *Pinus* all are gymnosperms.

12. In bryophytes and pteridophytes, the transport of male gametes requires

- a) Birds
- b) Water
- c) Wind
- d) Insects

13. Which one of the following statement is wrong?

- a) *Chlorella* and *Spirulina* are used as space food.
- b) Mannitol is stored food in Rhodophyceae.
- c) Algin and carrageenan are products of algae.
- d) Agar-agar is obtained from *Gelidium* and *Gracilaria*

14. In which of the following, gametophyte is not independent free living?

- a) *Pteris*
- b) *Pinus*
- c) *Funaria*
- d) *Marchantia*

15. Read the following five statements (A to E) and select the option with all correct statements.

- A. Mosses and lichens are the first organisms to colonise a bare rock
- B. *Selaginella* is a homosporous pteridophyte
- C. Coralloid roots in *Cycas* have VAM.

D. Main plant body in bryophytes is gametophytic, whereas in pteridophytes it is sporophytic.

E. In gymnosperms, male and female gametophytes are present within sporangia located on sporophyte

- a) A, D and E
- b) B, C and E
- c) A, C and D
- d) B, C and D

16. Which of the following characteristic features always holds true for the corresponding group of animals?

a)	Possess a mouth with an upper and a lower jaw	Chordata
b)	3-chambered heart with one incompletely divided ventricle	Reptilia
c)	Cartilaginous endoskeleton	Chondrichthyes
d)	Viviparous	Mammalia

17. Which of the following features is not present in Phylum Arthropoda?

- a) Parapodia
- b) Jointed appendages
- c) Chitinous exoskeleton
- d) Metameric segmentation

18. Body having meshwork of cells, internal cavities lined with food filtering flagellated cells and indirect development are the characteristics of Phylum

- a) Mollusca
- b) Protozoa
- c) Coelenterata
- d) Porifera

19. Metagenesis refers to

- a) Occurrence of a drastic change in form during post-embryonic development.
- b) Presence of a segmented body and parthenogenetic mode of reproduction.
- c) Presence of different morphic forms.
- d) Alternation of generation between asexual and sexual phases of an organism

20. A jawless fish, which lays eggs in fresh water and whose ammocoetes larvae after metamorphosis return to the ocean is
- Neomyxine*
 - Petromyzon*
 - Eptatretus*
 - Myxine*
21. Free-central placentation is found in
- Dianthus*
 - Argemone*
 - Brassica*
 - Citrus*
22. Which of the following is not a stem modification?
- Tendrils of cucumber
 - Flattened structures of *Opuntia*
 - Pitcher of *Nepenthes*
 - Thorns of citrus
23. Stems modified into flat green organs performing the functions of leaves are known as
- phyllodes
 - scales
 - cladodes
 - phyllodes
24. Cotyledon of maize grain is called
- coleoptile
 - scutellum
 - plumule
 - coleorrhizae
25. Tricarpellary, syncarpous gynoecium is found in flowers of
- Fabaceae
 - Poaceae
 - Liliaceae
 - Solnaceae
26. Specialized epidermal cells surrounding the guard cells are called
- bulliform cells
 - lenticels
 - complementary cells
 - subsidiary cells
27. Read the different components from (i) to (iv) in the list given below and tell the correct order of the components with reference to their arrangement from outer side to inner side in a woody dicot stem.
- Secondary cortex
 - Wood
 - Secondary phloem
 - Phellum
- The correct order is
- (iv), (i) (iii), (ii)
 - (iv), (iii), (i), (ii)
 - (iii), (iv), (ii), (i)
 - (i), (ii), (iv), (iii)
28. A major characteristic of monocot root is the presence of
- Vasculature without cambium
 - Cambium sandwiched between phloem and xylem along the radius
 - Open vascular bundles
 - Scattered vascular bundles
29. Vascular bundles in monocotyledons are considered closed because
- there are no vessels with perforations
 - xylem is surrounded all around by phloem
 - a bundle sheath surrounds each bundle
 - cambium is absent
30. You are given a fairly old piece of dicot stem and a dicot root. Which of the following anatomical structures will you use to distinguish between the two?
- Secondary Xylem
 - Secondary Phloem
 - Protoxylem
 - Cortical cells
31. The body cells in cockroach discharge their nitrogenous waste in the haemolymph mainly in the form of
- Urea
 - Calcium carbonate
 - Ammonia
 - Potassium urate

32. The function of the gap junction is to
- Separate two cells from each other.
 - Stop substance from leaking across a tissue.
 - Performing cementing to keep neighbouring cells together.
 - Facilitate communication between adjoining cells by connecting the cytoplasm for rapid transfer of ions, small molecules and some large molecules.

33. The terga, sterna and pleura of cockroach body are joined by
- arthrodial membrane
 - cartilage
 - cementing glue
 - muscular tissue

34. Choose the correctly matched pair.
- Tendon – Specialized connective tissue
 - Adipose tissue – Dense connective tissue
 - Areolar tissue – Loose connective tissue
 - Cartilage – loose connective tissue

35. Choose the correctly matched pair.
- Inner lining of salivary ducts – ciliated epithelium
 - Moist surface of buccal cavity – Glandular epithelium
 - Tubular parts of nephrons – Cuboidal epithelium
 - Inner surface of bronchioles – Squamous epithelium

36. Which one of the following cell organelles is enclosed by a single membrane?
- Lysosomes
 - Nuclei
 - Mitochondria
 - Chloroplasts

37. Match the columns and identify the correct option.

	Column I	Column II
A.	Thylakoids	(i). Disc-shaped sacs in golgi apparatus
B.	Cristae	(ii). Condensed structure of DNA
C.	Cisternae	(iii). Flat membranous sacs in

		stroma
D.	Chromatin	(iv). Infoldings in mitochondria

- A-(iii), B-(i), C-(iv) , D-(ii)
- A-(iii), B-(iv), C-(ii), D-(i)
- A-(iv), B-(iii), C-(i), D-(ii)
- A-(iii), B-(iv), C-(i), D-(ii)

38. Which of the following structures is not found in a prokaryotic cell?

- Mesosome
- Plasma membrane
- Nuclear Envelope
- Ribosome

39. Cellular Organelles with membranes are

- endoplasmic reticulum, ribosomes and nuclei
- lysosomes, Golgi apparatus and mitochondria
- nuclei, ribosomes and mitochondria
- chromosomes, ribosomes and endoplasmic reticulum

40. Which of the following are not membrane-bound?

- Lysosomes
- Mesosomes
- Vacuoles
- Ribosomes

41. Which one of the following statements is wrong?

- Uracil is a pyrimidine.
- Glycine is a sulphur containing amino acid
- Sucrose is a disaccharide
- Cellulose is a polysaccharide

42. The chitinous exoskeleton of arthropods is formed by the polymerization of

- N-acetyl glucosamine
- lipoglycans
- keratin sulphate and chondroitin sulphate
- D-glucosamine

43. Which of the following biomolecules does have a phosphodiester bond?

- Amino acids in a polypeptide

- b) Nucleic acids in a nucleotide
- c) Fatty acids in a diglyceride
- d) Monosaccharides in a polysaccharide

44. Which one of the following statements is correct?

- a) The competitive inhibitor does not affect the rate of breakdown of the enzyme-substrate complex.
- b) The presence of the competitive inhibitor decreases the K_m of the enzyme for the substrate.
- c) A competitive inhibitor reacts reversibly with the enzyme to form an enzyme-inhibitor complex.
- d) In competitive inhibition, the inhibitor molecule is not chemically changed by the enzyme.

45. Select the option which is not correct with respect to enzyme action.

- a) Substrate binds with enzyme at its active site.
- b) Addition of lot of succinate does not reverse the inhibition of succinic dehydrogenase by malonate
- c) A non-competitive inhibitor binds the enzyme at a site distinct from that which binds the substrate.
- d) Malonate is a competitive inhibitor of succinic dehydrogenase.

46. Which of the following is not a characteristic feature during mitosis in somatic cells?

- a) Chromosome movement
- b) Synapsis
- c) Spindle fibres
- d) Disappearance of nucleolus

47. In meiosis, crossing over is initiated at

- a) Zygotene
- b) Diplotene
- c) Pachytene
- d) Leptotene

48. Arrange the following events of meiosis in correct sequence

- (i). crossing over

- (ii). synapsis
- (iii). Terminalisation of chiasmata
- (iv). Disappearance of nucleolus

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

49. A somatic cell that has just completed the S phase of its cell cycle, as compared to gamete of the same species, has

- a) twice the number of chromosomes and four times the amount of DNA
- b) four times the number of chromosomes and twice the amount of DNA
- c) twice the number of chromosomes and twice the amount of DNA
- d) same number of chromosomes but twice the amount of DNA

50. Select the correct option

	COLUMN I	COLUMN II
A.	Synapsis aligns homologous chromosomes	(i). Anaphase II
B.	Synthesis of RNA and protein	(ii). Zygotene
C.	Action of enzyme recombinase	(iii). G_2 – phase
D.	Centromeres do not separate but chromatids move towards opposite poles	(iv). Anaphase I
		(v). Pachytene

- a) A-(i), B-(ii), C-(v), D-(iv)
- b) A-(ii), B-(iii), C-(iv), D-(v)
- c) A-(ii), B-(i), C-(iii), D-(iv)
- d) A-(ii), B-(iii), C-(v), D-(iv)