

SAMPLE PAPER

2019 NEET

BIOLOGY

SET-2

Roll No.

--	--	--	--	--	--	--	--

General Instructions

- (1) This test consists of 90 question.
- (2) Each question is allotted 4 marks for correct response.
- (3) Candidates will be awarded marks as stated above in instruction no. 2 for correct response of each question. 1 mark will be deducted for indicating incorrect response of each question. No deduction from the total score will be made if no response is indicated for an item in the answer sheet.
- (4) There is only one correct response for each question. Filling up more than one response in any question will be treated as wrong response and marks for wrong response will be deducted according as per instructions.

1. Study the four statements (A - D) given below and select the two correct ones out of them :
- I. Definition of biological species was given by Ernst Mayr.
 - II. Photoperiod does not affect reproduction in plants.
 - III. Binomial nomenclature system was given by R. H. Whittaker.
 - IV. In unicellular organisms, reproduction is synonymous with growth.
- The two correct statements are
- (a) II and III
 - (b) III and IV
 - (c) I and IV
 - (d) I and II



MISOSTUDY.COM

The Best Online Coaching for IIT-JEE | NEET Medical | CBSE INQUIRY +91 8929 803 804

2. Employment of hereditary principles in the improvement of human race is
 - (a) Euthenics
 - (b) Eugenics
 - (c) Euphenics
 - (d) Ethnology

3. Bacterial leaf blight of rice is caused by a species of
 - (a) Xanthomonas
 - (b) Pseudomonas
 - (c) Alternaria
 - (d) Erwinia

4. Bacteria lack alternation of generation because there is
 - (a) neither syngamy nor reduction division
 - (b) no conjugation
 - (c) no distinct chromosomes
 - (d) no exchange of genetic material.

5. The chief advantage of encystment to an *Amoeba* is
 - (a) The chance to get rid of accumulated waste products
 - (b) The ability to survive during adverse physical conditions
 - (c) The ability to live for some time without ingesting food
 - (d) Protection from parasites and predators

6. What is true about *Trypanosoma*?
 - (a) Polymorphic
 - (b) Monogenetic
 - (c) Facultative parasite
 - (d) Non-pathogenic

7. During the formation of bread it becomes porous due to release of CO_2 by the action of
 - (a) yeast
 - (b) bacteria
 - (c) virus
 - (d) protozoans

8. *Puccinia* forms
 - (a) uredia and aecia on wheat leaves
 - (b) uredia and telia on wheat leaves
 - (c) uredia and aecia on barberry leaves
 - (d) uredia and pycnia on barberry leaves

9. Which of the following is responsible for peat formation?
 - (a) *Marchantia*
 - (b) *Riccia*
 - (c) *Funaria*
 - (d) *Sphagnum*



10. Seed habit first originated in

- (a) certain ferns
- (b) certain pines
- (c) certain monocots
- (d) primitive dicots

11. In which one of the following the genus name, its two characters and its phylum are not correctly matched, whereas the remaining three are correct?

Genus Name	Two characters	Phylum
(a) Pila	(i) Body segmented	Mollusca
	(ii) Mouth with Radula	
(b) Aesterias	(i) Spiny skinned	Echinodermata
	(ii) Water vascular system	
(c) Sycon	(i) Pore bearing	Porifera
	(ii) Canal System	
(d) Periplaneta	(i) Jointed appendages	Arthropoda
	(ii) Chitinous exoskeleton	

12. The simplest type of canal system in Porifera is

- (a) ascon type
- (b) leucon type
- (c) sycon type
- (d) radial type

13. Bird vertebrae are

- (a) acoelous
- (b) heterocoelous
- (c) amphicoelous
- (d) procoelous

14. Vivipary is

- (a) seed germination with subterranean cotyledons
- (b) seed germination with epiterranean cotyledons
- (c) fruit development without pollination
- (d) seed germination inside the fruit while attached to the plant

15. Floral formula of tomato/tobacco is

- (a) $\oplus \overset{\circ}{\underset{\circ}{\text{K}}}_{4-5} \text{A}_{10} \text{G}_{(2)}$
- (b) $\oplus \overset{\circ}{\underset{\circ}{\text{K}}}_{2+2} \text{C}_4 \text{A}_{2+4} \text{G}_1$
- (c) $\oplus \overset{\circ}{\underset{\circ}{\text{P}}}_2 \text{A}_3 \text{G}_1$
- (d) $\text{Br} \oplus \overset{\circ}{\underset{\circ}{\text{K}}}_{(5)} \text{C}_{(5)} \text{A}_5 \text{G}_{(2)}$

16. An organised and differentiated cellular structure having cytoplasm but no nucleus is
- vessels
 - xylem parenchyma
 - sieve tubes
 - tracheids
17. What is not true about sclereids?
- These are parenchyma cells with thickened lignified walls
 - These are elongated and flexible with tapered ends
 - These are commonly found in the shells of nuts and in the pulp of guava, pear, etc.
 - These are also called the stone cells.
18. Sieve tubes are suited for translocation of food because they possess
- bordered pits
 - no ends walls
 - broader lumen and perforated cross walls.
 - no protoplasm
19. Basement membrane is made up of
- Only epidermal cell
 - Only endodermal cell
 - Both (b) and (c)
 - No cell at all, but is a product of epithelial cell
20. Characteristics of smooth muscle fibres are
- spindle-shaped, unbranched, unstriated, uninucleate and involuntary
 - spindle-shaped, unbranched, unstriated, multinucleate and involuntary
 - cylindrical, unbranched, unstriated, multinucleate and involuntary
 - cylindrical, unbranched, striated, multinucleate and voluntary
21. According to widely accepted fluid mosaic model cell membranes are semi-fluid, where lipids and integral proteins can diffuse randomly. In recent years, this model has been modified in several respects. In this regard, which of the following statements is incorrect?
- Proteins in cell membranes can travel within the lipid bilayer
 - Proteins can also undergo flip-flop movements in the lipid bilayer
 - Proteins can remain confined within certain domains of the membrane
 - Many proteins remain completely embedded within the lipid bilayer
22. Plasma membrane is made up of
- Proteins and carbohydrates
 - Proteins and lipids
 - Proteins, lipids and carbohydrates
 - Proteins, some nucleic acid and lipids

23. Lipids are insoluble in water because lipid molecules are
- (a) Hydrophilic
 - (b) Hydrophobic
 - (c) Neutral
 - (d) Zwitter Ions
24. Which of the following statements regarding enzyme inhibition is correct
- (a) Competitive inhibition is seen when a substrate with an enzyme for binding to inhibitor protein
 - (b) Competitive inhibition is seen when the substrate and the inhibitor compete for the active site on the enzyme
 - (c) Non-competitive inhibition of an enzyme can be overcome by adding large amount of substrate
 - (d) Non-competitive inhibitors often bind to the enzyme irreversibly
25. In double helix of DNA the two DNA strands are
- (a) coiled around a common axis
 - (b) coiled around each other
 - (c) coiled differently
 - (d) coiled over protein sheath
26. The complex formed by a pair of synapsed homologous chromosomes is called
- (a) Equatorial plate
 - (b) Kinetochore
 - (c) Bivalent
 - (d) Axoneme
27. In salivary gland chromosomes/polytene chromosomes pairing is
- (a) absent
 - (b) occasional
 - (c) formed between non-homologous
 - (d) formed between homologous chromosomes
28. Guttation is caused by
- (a) transpiration
 - (b) osmosis/DPD
 - (c) root pressure
 - (d) osmotic pressure
29. Root system in a plant is well developed
- (a) due to deficiency of auxins
 - (b) due to deficiency of cytokinins
 - (c) due to deficiency of minerals
 - (d) for increased absorption of water

30. The major portion of the dry weight of plants comprises of
- carbon, hydrogen and oxygen
 - nitrogen, phosphorus and potassium
 - calcium, magnesium and sulphur
 - carbon, nitrogen and hydrogen
31. The plants grown in magnesium deficient but urea sprayed soil would show
- deep green foliage
 - early flowering
 - yellowing of leaves
 - loss of pigments in petals
32. Formation of ATP in photosynthesis and respiration is an oxidation process which utilises the energy from
- Cytochromes
 - Ferredoxin
 - Electrons
 - Carbon dioxide
33. The substrate for photorespiration is
- ribulose bis-phosphate
 - glycolate
 - serine
 - glycine
34. Photosynthetic pigments found in the chloroplasts occur in
- thylakoid membranes
 - plastoglobules
 - matrix
 - chloroplast envelope
35. All enzymes of TCA cycle are located in the mitochondrial matrix except one which is located in inner mitochondrial membranes in eukaryotes and in cytosol in prokaryotes. This enzyme is:
- lactate dehydrogenase
 - isocitrate dehydrogenase
 - malate dehydrogenase
 - succinate dehydrogenase
36. How many ATP molecules are produced by aerobic oxidation of one molecule of glucose?
- 2
 - 4
 - 38
 - 34

37. What will be the effect on phytochrome in a plant subjected to continuous red light?
- Level of phytochrome decreases
 - Phytochrome is destroyed
 - Phytochrome synthesis increases
 - Destruction and synthesis of phytochrome remain in equilibrium
38. Leaves of many grasses are capable of folding and unfolding because they
- are very thin
 - are isobilateral
 - have specialised bulliform cells
 - have parallel vascular bundles
39. Which one of the following is the correct matching of the site of action on the given substrate, the enzyme acting upon it and the end product?
- Duodenum : Triglycerides trypsin monoglycerides
 - Small intestine : Starch α -amylase disaccharide (maltose)
 - Small intestine : Proteins pepsin amino acids
 - Stomach : Fats, Lipase micelles
40. What will happen if the secretion of parietal cells of gastric glands is blocked with an inhibitor?
- Gastric juice will be deficient in chymosin
 - Gastric juice will be deficient in pepsinogen
 - In the absence of HCl secretion, inactive pepsinogen is not converted into the active enzyme pepsin
 - Enterokinase will not be released from the duodenal mucosa and so trypsinogen is not converted to trypsin
41. In frog, the surface of attachment of tongue is
- sphenoid
 - palatine
 - pterygoid
 - hyoid apparatus
42. The process of migration of chloride ions from plasma to RBC and of carbonate ions from RBC to plasma is
- chloride shift
 - ionic shift
 - atomic shift
 - Na^+ pump
43. At high altitude, the RBCs in the human blood will
- increase in size
 - decrease in size
 - increase in number
 - decrease in number

44. Antigens are present
- Inside the nucleus
 - on cell surface
 - inside the cytoplasm
 - on nuclear membrane
45. What is correct for blood group 'O'?
- No antigens but both a and b antibodies are present
 - A antigen and b antibody
 - Antigen and antibody both absent
 - A, B antigens and a, b antibodies
46. Which one of the following pairs of items correctly belongs to the category of organs mentioned against it?
- Thorn of Bougainvillea and tendrils of Cucurbita – Analogous organs
 - Nictitating membrane and blind spot in human eye – Vestigial organs
 - Nephridia of earthworm and malpighian tubules of cockroach – Excretory organs
 - Wings of honeybee and wings of crow – Homologous organs
47. Nitrogenous waste product are eliminated mainly as
- Urea in tadpole and ammonia in adult frog
 - Ammonia in tadpole and urea in adult frog
 - Urea in both tadpole and adult frog
 - Urea in tadpole and uric acid in adult frog
48. Which one of the following is a skull bone?
- Atlas
 - Coracoid
 - Arytenoid
 - Pterygoid
49. The contractile protein of skeletal muscle involving ATPase activity is
- Myosin
 - α -Actin
 - Troponin
 - Tropomyosin
50. One of the examples of the action of the autonomous nervous system is
- Knee-jerk response
 - Pupillary reflex
 - Swallowing of food
 - Peristalsis of the intestines

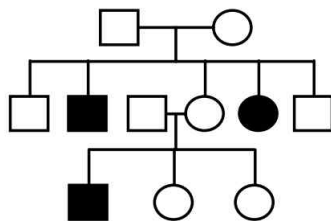
51. The sympathetic nerves, in mammals, arise from
- (a) sacral nerves
 - (b) cervical nerves
 - (c) thoraco-lumbar nerves
 - (d) III, VII, IX and X cranial nerves
52. Cornea transplantation is outstandingly successful because
- (a) Cornea is easy to preserve
 - (b) Cornea is not linked up with blood vascular and immune systems
 - (c) The techniques involved is very simple
 - (d) Cornea is easily available
53. Occurrence of Leydig's cells and their secretion is
- (a) ovary and oestrogen
 - (b) liver and cholesterol
 - (c) pancreas and glucagon
 - (d) testis and testosterone
54. Which one of the following hormones is a modified amino acid ?
- (a) Epinephrine
 - (b) Progesterone
 - (c) Prostaglandin
 - (d) oestrogen
55. Which one of the following organisms is correctly matched?
- (a) Onion : Bulb
 - (b) Ginger : Sucker
 - (c) Chlamydomonas : Conidia
 - (d) Yeast : Zoospores
56. Which one of the following generates new genetic combinations leading to variation?
- (a) Vegetative reproduction
 - (b) Parthenogenesis
 - (c) Sexual reproduction
 - (d) Nuclear polyembryony
57. Embryo sac occurs in
- (a) embryo
 - (b) axis part of embryo
 - (c) ovule
 - (d) endosperm
58. Which type of association is found in between entomophilous flower and pollinating agent
- (a) Mutualism
 - (b) Commensalism
 - (c) Cooperation
 - (d) Co-evolution



59. Anemophily type of pollination is found in
- Salvia
 - Bottle brush
 - Vallisneria
 - Coconut
60. The testes in humans are situated outside the abdominal cavity inside a pouch called scrotum. The purpose served is for
- escaping any possible compression by the visceral organs
 - providing more space for the growth of epididymis
 - providing a secondary sexual feature for exhibiting the male sex
 - maintaining the scrotal temperature lower than the internal body temperature
61. Which one of the following statements about human sperm is correct
- Acrosome has a conical pointed structure used for piercing and penetrating the egg, resulting in fertilisation
 - The sperm lysins in the acrosome dissolve the egg envelope facilitating fertilisation
 - Acrosome serves as a sensory structure leading the sperm towards the ovum
 - Acrosome serves no particular function
62. The part of Fallopian tube closest to the ovary is
- Isthmus
 - Infundibulum
 - Cervix
 - Ampulla
63. Human population growth in India
- tends to follow a sigmoid curve as in case of many other animal species
 - tends to reach zero population growth as in case of some animal species
 - can be reduced by permitting natural calamities and enforcing birth control measure
 - can be regulated by following the National programme of family planning
64. Which of the following is hormone-release IUD?
- LNG-20
 - Multiload-375
 - Lippes loop
 - Cu-7
65. Haemophilia is more commonly seen in human males than in human females because
- This disease is due to an X-linked dominant mutation
 - A greater proportion of girls die in infancy
 - This disease is due to an X-linked recessive mutation
 - This disease is due to a Y-linked recessive mutation



66. Study the pedigree chart given below



What does it show ?

- (a) Inheritance of a sex-linked inborn error of metabolism like phenylketonuria
 - (b) Inheritance of a condition like phenylketonuria as an autosomal recessive trait
 - (c) The pedigree chart is wrong as this is not possible
 - (d) Inheritance of a recessive sex-linked disease like haemophilia
67. A man and a woman, who do not show any apparent signs of a certain inherited disease, have seven children (2 daughters and 5 sons). Three of the sons suffer from the given disease but none of the daughters are affected. Which of the following mode of inheritance do you suggest for this disease
- (a) Autosomal dominant
 - (b) Sex-linked dominant
 - (c) Sex-limited recessive
 - (d) Sex-linked recessive
68. DNA fingerprinting refers to
- (a) Molecular analysis of profiles of DNA samples
 - (b) Analysis of DNA samples using imprinting devices
 - (c) Techniques used for molecular analysis of different specimens of DNA
 - (d) Techniques used for identification of fingerprints of individuals
69. Due to discovery of which of the following in 1980, the evolution was termed as RNA world
- (a) *m*-RNA, *t*-RNA- *r*-RNA synthesise proteins
 - (b) In some virus RNA is genetic material
 - (c) Some RNAs have enzymatic property
 - (d) RNA is not found in all cells
70. A nucleotide is formed of
- (a) Purine, pyrimidine and phosphate
 - (b) purine, sugar and phosphate
 - (c) nitrogen base, sugar and phosphate
 - (d) pyrimidine, sugar and phosphate
71. Which one of the following sequences was proposed by Darwin and Wallace for organic evolution?
- (a) Variations, natural selection, overproduction, constancy of population size
 - (b) Overproduction, variations, constancy of population size, natural selection
 - (c) Variations, constancy of population size, overproduction, natural selection
 - (d) Overproduction, constancy of population size, variations, natural selection

72. Which one of the following sets includes only the vestigial structures in man?
- (a) Body hair, olecranon process, coccyx, patella
 - (b) Wisdom teeth, mammary glands, coccyx, patella
 - (c) Coccyx, nictitating membrane, vermiform appendix, ear muscles
 - (d) Coccyx, body hair, ear ossicles, vermiform appendix
73. Which of the following will be curable in next two decades?
- (a) tuberculosis
 - (b) cancer
 - (c) polio myelitis
 - (d) None of these
74. Retroviruses are implicated as a causes for cancer in humans because they
- (a) Carry gene for reverse transcriptase
 - (b) May carry cellular protooncogenes in their genome
 - (c) May carry ν -oncogenes in their genome
 - (d) Carry single stranded RNA as their genetic material
75. Why is vivipary an undersirable character for annual crop plants
- (a) It reduces the vigour of the plant
 - (b) The seeds cannot be stored under normal conditions for the next season
 - (c) The seeds exhibit long dormancy
 - (d) It adversely affects the fertility of the plant
76. Most of our crop plants are
- (a) autopolyploid in origin
 - (b) allopolyploid in origin
 - (c) mixed genotypic in origin
 - (d) heterozygous in origin
77. Which one of the following statements is correct ?
- (a) Extensive use of chemical fertilizers may lead to eutrophication of nearby water bodies
 - (b) Both *Azotobacter* and *Rhizobium* fix atmospheric nitrogen in root nodules of plants
 - (c) Cyanobacteria such as *Anabaena* and *Nostoc* are important mobilizers of phosphates and potassium for plant nutrition in soil
 - (d) At present it is not possible to grow maize without chemical fertilizers
78. Farmers have reported over 50% higher yields of rice by sing which of the following biofertiliser?
- (a) Mycorrhiza
 - (b) *Azolla pinnata*
 - (c) Cyanobacteria
 - (d) *Legume-Rhizobium symbiosis*

79. Restriction endonucleases are enzymes which
- Make cuts at specific positions within the DNA molecule
 - Recognize a specific nucleotide sequence for binding of DNA ligase
 - Restrict the action of the enzyme DNA polymerase
 - Remove nucleotides from the ends of the DNA molecule
80. In bacteria, plasmid is
- Extra chromosomal material
 - Main DNA
 - Non functional DNA
 - Repetitive gene
81. Some of the characteristics of *Bt* cotton are
- Long fibre and resistance to aphids
 - Medium yield, long fibre and resistance to beetle pests
 - High yield and production of toxic protein crystals which kill dipteran pests
 - High yield and resistance to bollworms
82. Production of a human protein in bacteria by genetic engineering is possible because
- Bacterial cell can carry out the RNA splicing reactions
 - The human chromosome can replicate in bacterial cell
 - The mechanism of gene regulation is identical in humans and bacteria
 - The genetic code is universal
83. Special kinds of roots called pneumatophores are characteristics of the plants growing in
- Sandy soils
 - Saline soils
 - Marshy places and salt lakes
 - Dryland regions
84. A fertile agricultural soil appears dark coloured at the surface as compared to soil one metre down. The reason for colour of top soil is
- more moisture
 - rich in organic matter
 - rich in iron, calcium and magnesium
 - recent formation
85. The chemiosmotic coupling hypothesis of oxidative phosphorylation proposes that Adenosine Triphosphate (ATP) is formed because
- high energy bonds are formed in mitochondrial proteins
 - ADP is pumped out of matrix into the intermembrane space
 - a proton gradient forms across the inner membrane
 - there is a change in the permeability of the inner mitochondrial membrane toward Adenosine Diphosphate (ADP)

86. If the forest cover is reduced to half, what is most likely to happen on a long term basis?
- Tribals living in these areas will starve to death
 - Cattle in these and adjoining areas will die due to lack of fodder
 - Large areas will become deserts
 - Crop breeding programmes will suffer due to a reduced availability of variety of germplasm
87. Which of the following is expected to have the highest value ($\text{gm/m}^2/\text{yr}$) in a grassland ecosystem
- Secondary production (SP)
 - Tertiary production (TP)
 - Gross production (GP)
 - Net production (NP)
88. The endangered largest living lemur Idri idri is inhabitant of:
- Madagascar
 - Mauritius
 - Sri Lanka
 - India
89. According to IUCN Red List, what is the status of Red Panda (*Ailurus fulgens*)?
- Vulnerable species
 - Critically endangered species
 - Extinct species
 - Endangered species
90. A lake near a village suffered heavy mortality of fishes within a few days. Consider the following reasons for this?
- Lots of urea and phosphate fertilizer were used in the crops in the vicinity
 - the area was sprayed with DDT by an aircraft
 - The lake water turned green and stinky
 - Phytoplankton populations in the lake declined initially thereby greatly reducing photosynthesis
- Which two of the above were the main causes of fish mortality in the lake?
- II, III
 - III, IV
 - I, III
 - I, II