

SAMPLE PAPER

2019 NEET

BIOLOGY

SET-1

Roll No.

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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. The UN conference of parties on climate change in the year 2011 was held in

- (a) Poland (c) Peru
(b) South Africa (d) Qatar

2. The anxiety and stress reactions are caused by

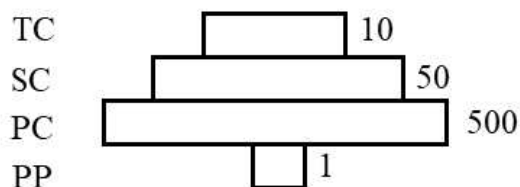
- (a) water pollution (c) noise pollution
(b) nuclear pollution (d) air pollution



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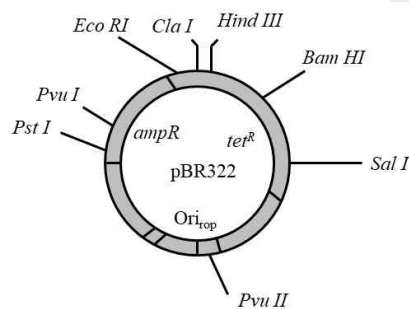
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3. Now a days, use of DDT as insecticide is banned because
- (a) it is less effective than other pesticides (c) production cost is very high
 (b) organisms develop resistance to it (d) it has long residual effect
4. Management of National Park is controlled by
- (a) State Government (c) United Nations
 (b) Central Government (d) Non-government Organisations
5. The government of India in 1980s has introduced a concept to work closely with the local communities for protecting and managing forests. The concept is
- (a) Forest Research Institutes (c) Joint Forest Management
 (b) Panel of Local Communities for Forest Management (d) Jhum Cultivation
6. Which one of the following is not used for *ex situ* plant conservation?
- (a) Seed banks (c) Botanical gardens
 (b) Shifting cultivation (d) Field gene banks
7. Given below is an imaginary pyramid of numbers. What could be one of the possibilities about certain organisms at some of the different levels?



- (a) Level PC is insects and level SC is small insectivorous birds
 (b) Level PP is phytoplanktons in sea and whale on top level TC
 (c) Level one PP is pipal trees and the level SC is sheep
 (d) Level PC is rats and level SC is cats
8. Which of the following statements regarding food chain is false?
- (a) In an aquatic ecosystem, grazing food chain is the major conduit for energy flow
 (b) In terrestrial ecosystems, a large fraction of energy flows through detritus food chain
 (c) The detritus food chain begins with dead organic matter
 (d) Primary consumers belong to the first trophic level
9. Which one of the following statements for pyramid of energy is incorrect, whereas the remaining three are correct?
- (a) It show energy content of different trophic level of organisms
 (b) It is inverted in shape
 (c) It is upright in shape
 (d) Its base is broad

10. Which of the following is correct for *r*-selected species?
- Large number of progeny with small size
 - Large number of progeny with large size
 - Small number of progeny with small size
 - Small number of progeny with large size
11. Which of the following is correctly matched
- Aerenchyma - *Opuntia*
 - Age pyramid - Biome
 - Parthenium hysterophorus* - Threat to biodiversity
 - Stratification - Population
12. The coralloid of *Cycas* has *Anabaena* (BGA), this type of association is called
- commensalism
 - parasitic
 - symbiotic
 - antibiosis
13. *In vitro* clonal propagation in plants is characterised by
- PCR and RAPD
 - Northern blotting
 - electrophoresis and HPLC
 - microscopy
14. 'cry' gene is obtained from
- Agrobacterium tumefaciens*
 - Bacillus thuringiensis*
 - Rhizobium leguminosarum*
 - Rhizobium phaseoli*
15. The figure below is the diagrammatic representation of the *E. coli* vector pBR322. Which one of the given options correctly identifies its certain components?



- Ori* – original restriction enzyme
 - rop* – reduced osmotic pressure
 - Hind III*, *Eco RI* – selectable markers
 - amp^R*, *tet^R* – antibiotic resistance genes
16. Plasmids are suitable vectors for gene cloning because these
- are small circular DNA molecules, which can integrate with host chromosomal DNA
 - are small circular DNA molecules with their own replication origin site
 - can shuttle between prokaryotic and eukaryotic cells
 - often carry antibiotic resistance genes



17. Which of the following is correctly matched?
- (a) *Agrobacterium tumefaciens* – Tumour
 - (b) *Thermus aquaticus* – Bt gene
 - (c) pBR322 – Enzyme
 - (d) Ligase – Molecular scissors
 - (e) *Hind II* – Plasmid vector
18. An organism used as a biofertiliser for raising soybean crop production is
- (a) *Azospirillum*
 - (b) *Rhizobium*
 - (c) Nostoc
 - (d) *Azotobacter*
19. During sewage treatment biogas produced includes
- (a) hydrogen sulphide, nitrogen, methane
 - (b) methane, oxygen, hydrogen sulphide
 - (c) methane, hydrogen sulphide, carbon dioxide
 - (d) hydrogen sulphide, methane, sulphur oxide
20. Choose the set of bacterial diseases in poultry.
- (a) Ranikhet and Marek's
 - (b) Ranikhet and Fowl cholera
 - (c) Fowl cholera and infectious coryza
 - (d) Aflatoxicosis and Trush
21. Fish selected for culture practices must possess some features to make culture profitable. Identify the wrong one.
- (a) Fast growth rate
 - (b) Late maturity
 - (c) Disease resistance
 - (d) High nutritious value
22. Hisardale is obtained by crossing
- (a) horse with donkey
 - (b) marino ewes with Bikaneri rams
 - (c) superior bull with superior cow
 - (d) Bikaneri ewes with Merino Rams
23. Which of the following sets of diseases is caused by bacteria?
- (a) Cholera and tetanus
 - (b) Typhoid and smallpox
 - (c) Tetanus and mumps
 - (d) Herpes and influenza
24. The colostrum provides
- (a) naturally acquired active immunity
 - (b) naturally acquired passive immunity
 - (c) artificially acquired active immunity
 - (d) artificially acquired passive immunity



25. Genetic drift operates in

- (a) small isolated population
- (b) large isolated population
- (c) non-reproductive population
- (d) slow reproductive population

26. Which one of the following is the first in allopatric speciation?

- (a) Geographic isolation
- (b) Hybridisation
- (c) Genetic drift
- (d) Polyploidy

27. Which of the following species are restricted to an area?

- (a) Sibling species
- (b) Endemic species
- (c) Allopatric species
- (d) Sympatric species

28. If one strand of DNA has the nitrogenous base sequence as ATCTG, what would be the complementary RNA strand sequence?.

- (a) TTAGU
- (b) UAGAC
- (c) AACTG
- (d) ATCGU

29. What are the structures called that give an appearance as 'beads on string' in the chromosomes when viewed under electron microscope?

- (a) Genes
- (b) Nucleotides
- (c) Nucleosomes
- (d) Base pairs

30. In pea flower, how many stamens are free and how many are fused?

- 1) 1, 9
- 2) 2, 8
- 3) 5, 5
- 4) 4, 6

31. The law of dominance is illustrated in the garden pea by

- (a) heterozygous tall × heterozygous tall
- (b) homozygous tall × homozygous tall
- (c) pure short × pure dwarf
- (d) homozygous tall × pure dwarf

32. Hysterectomy is surgical removal of

- (a) uterus
- (b) prostate gland
- (c) vas deference
- (d) mammary glands

33. Ectopic pregnancies are referred to as

- (a) Pregnancies with genetic abnormality
- (b) Implantation of embryo at site other than uterus
- (c) Implantation of defective embryo in the uterus
- (d) Pregnancies terminated due to hormonal imbalance



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34. The main function of mammalian corpus luteum is to produce
- (a) estrogen only
 - (b) progesterone
 - (c) human chorionic gonadotropin
 - (d) relaxin only
35. Signals for parturition originate from
- (a) both placenta as well as fully developed foetus
 - (b) oxytocin released from maternal pituitary
 - (c) placenta only
 - (d) fully developed foetus only
36. Advantage of cleistogamy is
- (a) higher genetic variability
 - (b) more vigorous offspring
 - (c) no dependence on pollinators
 - (d) vivipary
37. The arrangement of the nuclei in a normal embryo sac in the dicot plants is
- (a) 3 + 2 + 3
 - (b) 2 + 3 + 3
 - (c) 3 + 3 + 2
 - (d) 2 + 4 + 2
38. The 'Eyes' of the potato tuber are
- (a) flower buds
 - (b) shoot buds
 - (c) axillary buds
 - (d) root buds
39. Why is vivipary an undesirable character for annual crop plants?
- (a) It reduces the vigour of the plant
 - (b) It adversely affects the fertility of the plant
 - (c) The seeds exhibit long dormancy
 - (d) the seeds cannot be stored under normal conditions for the next season
40. Fight or flight reactions cause activation of
- (a) the parathyroid glands, leading to increased metabolic rate
 - (b) the kidney, leading to suppression of renin-angiotensin-aldosterone pathway
 - (c) the adrenal medulla, leading to increased secretion of epinephrine and norepinephrine
 - (d) the pancreas leading to reduction in the blood sugar levels
41. Which one of the following pairs of hormones are the examples of those that can easily pass through the cell membrane of the target cell and bind to a receptor inside it (mostly in the nucleus)?
- (a) Insulin and glucagon
 - (b) Thyroxin and insulin
 - (c) Somatostatin and oxytocin
 - (d) Cortisol and testosterone



42. Foetal ejection reflex in human female is induced by
- (a) pressure exerted by amniotic fluid
 - (b) release of oxytocin from pituitary
 - (c) fully developed foetus and placenta
 - (d) differentiation of mammary glands
43. Which part of the human ear plays no role in hearing as such but is otherwise very much required?
- (a) Eustachian tube
 - (b) Organ of Corti
 - (c) Vestibular apparatus
 - (d) Ear ossicles
44. The purplish red pigment rhodopsin contained in the rods type of photoreceptor cells of the human eyes is a derivative of
- (a) vitamin-C
 - (b) vitamin-D
 - (c) vitamin-A
 - (d) vitamin-B
45. The nerve centres which control the body temperature and the urge for eating are contained in
- (a) hypothalamus
 - (b) pons
 - (c) cerebellum
 - (d) thalamus
46. Total number of bones in the hind limb of man is
- (a) 14
 - (b) 30
 - (c) 24
 - (d) 21
47. The lower jaw in mammals is made up of
- (a) mandible
 - (b) dentary
 - (c) maxilla
 - (d) angulars
48. The number of floating ribs, in the human body, is
- (a) 6 pairs
 - (b) 5 pairs
 - (c) 3 pairs
 - (d) 2 pairs
49. If Henle's loop were absent from mammalian nephron, which of the following is to be expected?
- (a) The urine will be more concentrated
 - (b) The urine will be more dilute
 - (c) There will be no urine formation
 - (d) There will be hardly any change in the quality and quantity to urine formed



50. A person is undergoing prolonged fasting. His urine will be found to contain abnormal quantities of
- (a) fats (c) amino acids
(b) ketones (d) glucose
51. Pulmonary artery is different from pulmonary vein because it has
- (a) larger lumen (c) no endothelium
(b) thick muscular walls (d) valves
52. During seed germination its stored food is mobilised by
- (a) ethylene (c) ABA
(b) cytokinin (d) gibberellin
53. Proteinaceous pigment which control activities concerned with light
- (a) phytochrome (c) anthocyanin
(b) chlorophyll (d) carotenoids
54. Klinostat is employed in the study of
- (a) osmosis (c) photosynthesis
(b) growth movements (d) respiration
55. *Planaria* possess high capacity of
- (a) metamorphosis (c) alternation of generation
(b) regeneration (d) bioluminescence
56. *Pheretima* and its close relatives derive nourishment from
- (a) sugarcane roots
(b) decaying fallen leaves and soil organic matter
(c) soil insects
(d) small pieces of fresh fallen leaves of maize
57. Compared to those of humans, the erythrocytes in frog are
- (a) without nucleus but with haemoglobin (c) very much smaller and fewer
(b) nucleated and with haemoglobin (d) nucleated and without haemoglobin
58. An alga which can be employed as food for human being is
- (a) Ulothrix (c) Spirogyra
(b) Chlorella (d) Polysiphonia



59. Besides paddy fields, cyanobacteria are also found inside vegetative part of

- (a) Pinus
- (b) Cycas
- (c) Equisetum
- (d) Psilotum

60. Select the wrong statement.

- (a) Isogametes are similar in structure, function and behaviour
- (b) Anisogametes differ either in structure, function and behaviour
- (c) In oomycetes female gamete is smaller and motile, while male gamete is larger and non-motile
- (d) Chlamydomonas exhibits both isogamy and anisogamy and Fucus shows oogamy

61. To which of the following categories does adipose tissue belong.

- (a) epithelial
- (b) connective
- (c) muscular
- (d) neural

62. Collagen is

- (a) lipid
- (b) fibrous protein
- (c) globular protein
- (d) carbohydrate

63. Name the organs lined by transitional epithelium tissue

- (a) uterus and urinary bladder
- (b) lung
- (c) intestine
- (d) heart

64. Polyarch condition is found in

- (a) monocot root
- (b) dicot root
- (c) monocot stem
- (d) dicot stem

65. Which of these characters does/do not apply to the vascular bundles of monocot stems?

- I. Conjoint
- II. Endarch protoxylem
- III. Open
- IV. Phloem parenchyma is absent

Select the correct answer using the codes given below

- (a) I and II
- (b) II and III
- (c) III and IV
- (d) Only III
- (e) I and IV



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66. In dicotyledonous stem, which of the following is the sequence of tissues from inside to outside?
- (a) Pith, phloem, cambium, protoxylem, metaxylem, pericycle, parenchyma, collenchyma, endodermis and epidermis
 - (b) Pith, cambium, phloem, protoxylem, metaxylem, pericycle, endodermis, parenchyma, collenchyma and epidermis
 - (c) Pith, phloem, protoxylem, metaxylem, cambium, pericycle, endodermis, parenchyma, collenchyma and epidermis
 - (d) Pith, protoxylem, metaxylem, cambium, phloem pericycle, endodermis, parenchyma, collenchyma and epidermis
67. When one wood is lighter in colour with a lower density, the other wood is darker with a higher density. They are
- (a) spring wood and autumn wood
 - (b) heart wood and late wood
 - (c) sapwood and spring wood
 - (d) autumn wood and spring wood
68. Some hyperthermophilic organisms that grow in highly acidic habitats belong to the two groups called
- (a) eubacteria and archaea
 - (b) cyanobacteria and diatoms
 - (c) protists and mosses
 - (d) liverworts and yeasts
69. Interferons are
- (a) antiviral proteins
 - (b) antibacterial proteins
 - (c) anticancer proteins
 - (d) complex proteins
70. Temperature tolerance of thermal blue-green algae is due to
- (a) cell wall structure
 - (b) cell organisation
 - (c) mitochondrial structure
 - (d) homopolar bonds in their proteins
71. When the margins of sepals or petals overlap one another without any particular direction, the condition is termed as
- (a) vexillary
 - (b) imbricate
 - (c) twisted
 - (d) valvate
72. In China rose the flowers are
- (a) actinomorphic, hypogynous with twisted aestivation
 - (b) actinomorphic epigynous with valvate aestivation
 - (c) zygomorphic, hypogynous with imbricate aestivation
 - (d) zygomorphic, epigynous with twisted aestivation



73. Placentation in tomato and lemon is

- (a) parietal
- (b) free central
- (c) marginal
- (d) axile

74. A process that makes important difference between C_3 and C_4 -plants is

- (a) transpiration
- (b) glycolysis
- (c) photosynthesis
- (d) photorespiration

75. Of the total incident solar radiation the proportion of PAR is

- (a) about 60%
- (b) less than 50%
- (c) more than 80%
- (d) about 70%

76. Natural insecticide which is obtained from neem is

- (a) azadirachtin
- (b) nicotine
- (c) DDT
- (d) Both (a) and (b)

77. The most abundant molecule in cell, is

- (a) water
- (b) carbohydrate
- (c) lipid
- (d) protein

78. Select the correct option with respect to mitosis.

- (a) Chromatids start moving towards opposite poles in telophase
- (b) Golgi complex and endoplasmic reticulum are still visible at the end of prophase
- (c) Chromosomes move to the spindle equator and get aligned along equatorial plate in metaphase
- (d) Chromatids separate, but remain in the centre of the cell in anaphase

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

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

80. How many chromosomes will the cell have at G_1 , after S and after M-phase respectively, if it has 14 chromosomes at interphase?

- (a) 14, 14, 7
- (b) 14, 14, 14
- (c) 7, 7, 7
- (d) 7, 14, 14

81. Carbohydrates the most abundant biomolecules on earth, are produced by
- (a) all bacteria, fungi and algae
 - (b) fungi, algae and green plant cells
 - (c) some bacteria, algae and green plant cells
 - (d) viruses, fungi and bacteria
82. There is no life on moon due to the absence of
- (a) O_2
 - (b) water
 - (c) light
 - (d) temperature
83. First life on earth was
- (a) cyanobacteria
 - (b) chemoheterotrophs
 - (c) autotrophs
 - (d) photoautotrophs
84. Which of the metabolites is common to respiration mediated breakdown of fats, carbohydrates and proteins
- (a) Glucose-6 phosphate
 - (b) Fructose 1, 6-bisphosphate
 - (c) Pyruvic acid
 - (d) Acetyl Co-A
85. The chemiosmotic coupling hypothesis of oxidative phosphorylation proposes that Adenosine Triphosphate (ATP) is formed because
- (a) high energy bonds are formed in mitochondrial proteins
 - (b) ADP is pumped out of matrix into the intermembrane space
 - (c) a proton gradient forms across the inner membrane
 - (d) there is a change in the permeability of the inner mitochondrial membrane toward Adenosine Diphosphate (ADP)
86. Site of respiration in bacteria is
- (a) episome
 - (b) ribosome
 - (c) mesosome
 - (d) microsome
87. What is the vital capacity of our lungs?
- (a) Inspiratory reserve volume plus tidal volume
 - (b) Total lung capacity minus expiratory reserve volume
 - (c) Inspiratory reserve volume plus expiratory reserve volume
 - (d) Total lung capacity minus residual volume

88. Blood analysis of a patient reveals an unusually high quantity of carboxyhaemoglobin content. which of the following conclusions is most likely to be correct?
- (a) The patient has been inhaling polluted air containing unusually high content of carbon disulphide
 - (b) The patient has been inhaling polluted air containing unusually high content of chloroform
 - (c) The patient has been inhaling polluted air containing unusually high content of carbon dioxide
 - (d) The patient has been inhaling polluted air containng unusually high content of carbon monoxide
89. Which of the following is not caused by deficiency of mineral nutrition?
- (a) Necrosis
 - (b) Chlorosis
 - (c) Etiolation
 - (d) Shortening of internodes
90. In plants inulin and pectin are
- (a) reserved food material
 - (b) wastes
 - (c) secretory material
 - (d) insect attracting material

