

NOTE : DO NOT BREAK THE SEAL UNTIL YOU GO THROUGH THE FOLLOWING INSTRUCTIONS

COMMON ENTRANCE TEST - 2011

Question Booklet BIOLOGY

Roll No.

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(Enter your Roll Number in the above space)

Series

A

Booklet No.

301729

Time Allowed : 1.30 Hours

Max. Marks : 75

INSTRUCTIONS :

1. Use only BLACK or BLUE Ball Pen.
2. All questions are COMPULSORY.
3. Check the BOOKLET thoroughly.

IN CASE OF ANY DEFECT - MISPRINTS, MISSING QUESTION/S OR DUPLICATION OF QUESTION/S, GET THE BOOKLET CHANGED WITH THE BOOKLET OF THE SAME SERIES. NO COMPLAINT SHALL BE ENTERTAINED AFTER THE ENTRANCE TEST.

4. Before you mark the answer, fill in the particulars in the ANSWER SHEET carefully and correctly. Incomplete and incorrect particulars may result in the non-evaluation of your answer sheet by the technology.
5. Write the SERIES and BOOKLET NO. given at the TOP RIGHT HAND SIDE of the question booklet in the space provided in the answer sheet by darkening the corresponding circles.
6. Do not use any eraser, fluid pens, blades etc., otherwise your answer sheet is likely to be rejected whenever detected.
7. After completing the test, candidates are advised to hand over the OMR ANSWER SHEET to the Invigilator and take the candidate's copy with yourself.

US 10

1. The basic unit of classification is :
 - (1) Species
 - (2) Genus
 - (3) Family
 - (4) Phylum
2. The term taxonomy is introduced by :
 - (1) De Candolle
 - (2) Benthum and Hooker
 - (3) Linnaeus
 - (4) Huxley
3. The framework system of classification in which various taxonomic categories are arranged in order of logical sequence is called :
 - (1) Systematics
 - (2) Classification
 - (3) Hierarchy
 - (4) Taxon
4. Scientific study of diversity of organisms and their evolutionary relationships is :
 - (1) Morphology
 - (2) Anatomy
 - (3) Taxonomy
 - (4) Systematics
5. According to five kingdom classification bacteria belong to :
 - (1) Protista
 - (2) Monera
 - (3) Plantae
 - (4) Archaea
6. A virus differs from a bacterium as it contains :
 - (1) A cell wall
 - (2) Cytosol
 - (3) DNA as genetic material
 - (4) DNA or RNA as genetic material with no ribosomes

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7. Type of aestivation shown by *Pisum* is :
- (1) Imbricate (2) Vexillary
(3) Twisted (4) Quincuncial
8. A tree that has strong erect stem with hollow internodes and solid nodes is known as :
- (1) Caudex (2) Deliquescent
(3) Scape (4) Culm
9. Vascular bundle having phloem at the centre encircled by xylem is known as :
- (1) Bicollateral (2) Conjoint collateral
(3) Amphivasal (4) Amphicribal
10. Caryopsis is found in :
- (1) Sunflower (2) Maize
(3) Pea (4) Datura
11. Allelism refers to :
- (1) Genic interactions controlling a character
(2) Multiple genes controlling a character
(3) Expression of many characters by a single gene
(4) Alternative forms of a gene at a given locus
12. Mendelian principles are not applicable in case of :
- (1) Sex linked alleles (2) Asexually reproducing forms
(3) Sexually interbreeding forms (4) Diploid homozygous forms

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13. Cleistogamous flower is found in :

- | | |
|----------------------|-----------------------|
| (1) <i>Tobacco</i> | (2) <i>Viola</i> |
| (3) <i>Mirabilis</i> | (4) None of the above |

14. The ovule in which the funicle, chalaza and micropyle lie in one vertical plane, is called :

- | | |
|--------------------|------------------|
| (1) Campylotropous | (2) Amphitropous |
| (3) Orthotropous | (4) Anatropous |

15. Undifferentiated mass of plant cells grown on nutrient medium is called :

- | | |
|------------|-----------|
| (1) Callus | (2) Bud |
| (3) Clone | (4) Scion |

16. In porogamy pollen tube enters the ovule through the :

- | | |
|------------------|----------------|
| (1) Chalazal end | (2) Integument |
| (3) Micropyle | (4) Ovary wall |

17. Testa of a seed is produced from :

- | | |
|-------------------------------|-------------|
| (1) Ovary wall | (2) Hilum |
| (3) Outer integument of ovule | (4) Funicle |

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18. Bolting may be induced by :

- | | |
|------------------|---------------|
| (1) Gibberellins | (2) ABA |
| (3) Auxin | (4) Cytokinin |

19. Day neutral plant relates to :

- (1) Loss of activity during day time
- (2) Over active during daytime
- (3) Flowering in all possible photoperiod
- (4) No flowering in any photoperiod

20. Auxanometer is used to measure :

- (1) The growth in length of a plant organ
- (2) The growth in breadth of a plant organ
- (3) Population of the pests attacking a plant
- (4) Both (1) and (2)

21. Water in the soil available to plants is :

- | | |
|-------------------------|---------------------|
| (1) Gravitational water | (2) Capillary water |
| (3) Hygroscopic water | (4) None of above |

22. When a cell is plasmolysed, it becomes :

- (1) Flaccid and its TP becomes 0
- (2) Turgid and its TP becomes 0
- (3) Turgid and TP becomes equal to OP
- (4) Flaccid and DPD becomes 0

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23. The Factor most important in regulating transpiration is :
(1) Temperature (2) Light
(3) Wind (4) Relative humidity
24. Which one of the following is a micronutrient in plants?
(1) Magnesium (2) Zinc
(3) Potassium (4) Calcium
25. Light reaction of photosynthesis occurs inside :
(1) Stroma (2) Grana
(3) Endoplasmic reticulum (4) Cytoplasm
26. A reduction in the quantity of oxygen evolution during photosynthesis may be observed at :
(1) Light having wave length more than 680 nm
(2) Light having wave length less than 680 nm
(3) Light having wave length 560 nm
(4) Light having wave length less than 360 nm
27. Plants requiring low light intensity for optimum photosynthesis is called :
(1) Heliophytes (2) Pteridophytes
(3) Sciophytes (4) Bryophytes
28. Sunken stomata are usually found in :
(1) C₃ plants (2) CAM plants
(3) Insectivorous plants (4) Phanerogams

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29. Hydroponics is the method of :
- (1) Water conservation
 - (2) Plant development in water without soil
 - (3) Plant development without soil
 - (4) Plant development in saline soil
30. The aquatic organisms that can actively swim at will against the water current is :
- (1) Neuston
 - (2) Plankton
 - (3) Nekton
 - (4) Benthos
31. Pedology refers to :
- (1) Study of soil
 - (2) Study of water
 - (3) Study of population
 - (4) Study of fossils
32. The study of the relation of an organism with its environment is called :
- (1) Synecology
 - (2) Bionomics
 - (3) Autecology
 - (4) Herpetology
33. Major ecological community of plants and animals extending over large natural areas is known as :
- (1) Bioregion
 - (2) Biosphere
 - (3) Biota
 - (4) Biome
34. Standing crops refers to :
- (1) All the photosynthetic living forms in an area
 - (2) All the living forms in an area
 - (3) The amount of living matter in a component population of an ecosystem at any time
 - (4) All the crop plants in an area

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35. Which one of the following is denitrifying bacteria?
(1) Nitrosomonas (2) Pseudomonas
(3) Azotobacter (4) Nostoc
36. Black foot disease occurs due to :
(1) Cadmium (2) Mercury
(3) Arsenic (4) Copper
37. Somatic-embryo can be developed in plant tissue culture from :
(1) A somatic cell (2) Single germ line cell
(3) Any type of fertilized cell (4) Anthers
38. Among the following which one is not a deuterostome?
(1) Sea Urchin (2) Earthworm
(3) Sand dollar (4) Ichthyophis
39. One animal that does not perform locomotion is :
(1) Sycon (2) Nereis
(3) Sepia (4) Euglena
40. The most recently discovered animal phylum is :
(1) Concentricycloidea (2) Pogonophora
(3) Loricifera (4) Ctenophora

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41. Chondrichthyes is characterized by :
- (1) Placoid scale (2) Ventral mouth
(3) Ctenoid scale and ventral mouth (4) Placoid scale and ventral mouth
42. Animals of class Mammalia have
- (1) Seven cervical vertebrae (2) Seven cranial nerve
(3) Single ventricular chamber (4) Fourteen cervical vertebrae
43. Secondary body cavity with segmented mesodermal lining is called :
- (1) Haemocoel (2) Neurocoel
(3) True coelom (4) Pseudocoelom
44. Vertebrate brain differentiates from :
- (1) Endoderm (2) Mesoderm
(3) Ectoderm (4) Blastoderm
45. Stratified epithelium is found in :
- (1) Seminiferous tubule (2) Fallopian tube
(3) Nasal cavity (4) Kidney tubules
46. Dead space air in man is :
- (1) 500 ml (2) 150 ml
(3) 250 ml (4) 1.5 lt

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47. Amount of CO₂ in expired air is about :
- (1) 0.04% (2) 0.03%
(3) 4.5% (4) 21%
48. Emphysema is a :
- (1) Cardiovascular disease (2) Pulmonary disease
(3) Neural disease (4) Renal disease
49. Erythropoietin is secreted from :
- (1) Pituitary gland (2) Pancreas
(3) Adrenal gland (4) Kidney
50. ADH deficiency shows the following condition :
- (1) Only polydipsia (2) Polyuria
(3) Polydipsia and Polyuria (4) Glucosuria
51. Which one is not a placental hormone?
- (1) HCG (2) HCS
(3) Progesterone (4) Melatonin
52. Pellagra is caused due to deficiency of :
- (1) Niacin (2) Pantothenic acid
(3) Tocopherol (4) Cyanocobalamine

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53. Net gain of ATP from one molecule of glucose in glycolysis is :
(1) 3 (2) 6
(3) 8 (4) 2
54. Zone of exclusion surrounds :
(1) Golgi apparatus (2) Centriole
(3) Nucleus (4) Lysosome
55. Cell organelle without a membrane is :
(1) Mitochondria (2) Liposomes
(3) Ribosome (4) Microsome
56. Genotypic and phenotypic ratio in mono-hybrid cross remains same in case of :
(1) Sex linked genes (2) Pseudoallelic genes
(3) Intermediate inheritance (4) Dominant and recessive genes
57. Mendel was successful in discovering the principles of inheritance as :
(1) He took pea plants for his experiments
(2) He did not encounter linkage between the genes for the characters he considered
(3) He had an in-depth knowledge on hybridization
(4) He was a famous mathematician
58. Crossing over is the exchange of genetic material between :
(1) Non-sister chromatids of the homologous chromosomes
(2) Sister chromatids of the homologous chromosome
(3) Chromatids of non-homologous chromosomes
(4) The genes those are completely linked

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59. Which of the following radioisotope is not suitable for DNA labelling based studies?
(1) H^3 (2) P^{32}
(3) N^{15} (4) S^{35}
60. Histone octamer contains:
(1) Eight types of histones (2) Eight histones of four different types
(3) Five histones (4) Six types of histones
61. Sperm acrosome is derived from :
(1) Golgi bodies (2) Endoplasmic reticulum
(3) Lysosome (4) Mesosome
62. Glycocalyx is associated with :
(1) Nucleolus (2) Plasma Membrane
(3) Nucleus (4) Nucleosome
63. First life on the earth originated from non-living matters has been explained by :
(1) Theory of biogenesis (2) Theory of abiogenesis
(3) Theory of special creation (4) Theory of extraterrestrial origin
64. Fossilized fecal materials of animals are known as :
(1) Coprolites (2) Compressions
(3) Moulds (4) Casts
65. Age of fishes is also known as :
(1) Permian Era (2) Silurian Era
(3) Devonian Era (4) Ordovician Era

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66. The theory of random genetic drift was proposed by :
(1) Sewall Wright (2) Hardy-Weinburg
(3) R.A. Fisher (4) Mayer
67. The concept of inheritance of acquired character in support of evolution was proposed by :
(1) Darwin (2) Cuvier
(3) Lamarck (4) de Vries
68. Wings of birds and wings of flies perform similar functions so they are examples of :
(1) Homologous organ (2) Analogous organ
(3) Evolutionary organ (4) Paralogous organ
69. Maximum survival and reproductive capacity shown by a population under optimal environmental conditions is called :
(1) Carrying capacity (2) Natality
(3) Biotic potential (4) Vitality
70. A hereditary disease which is never passed on from father to son is :
(1) X – chromosomal linked disease (2) Autosomal linked disease
(3) Y – chromosomal linked disease (4) None of the above

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71. Dipsomania is
- (1) A type of depression
 - (2) Insanity due to psychosis
 - (3) Severe addiction to alcohol
 - (4) Tendency to take much water
72. Alcoholism may leads to :
- (1) Skin cancer
 - (2) Liver Cirrhosis
 - (3) Viral disease
 - (4) Eye infections
73. *Canabis sativa* is the source of :
- (1) Opium
 - (2) LSD
 - (3) Marijuana
 - (4) Cocaine
74. Sir Godfrey Hounsfield developed the diagnostic technique of
- (1) CT scanning
 - (2) MRI
 - (3) Endoscopy
 - (4) Bronchoscopy
75. Vaccine for tuberculosis is known as :
- (1) PAS vaccine
 - (2) BCG vaccine
 - (3) OPV
 - (4) DPT

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