OBJECTIVE TYPE QUESTION – FULL PORTION TEST
BIOLOGY
150 marks (botany-75 marks and zoology – 75 marks)

1. The normal BMI (Body mass index) range for adults is
   a) 10 – 15 b) 12 - 24 c)15 - 20 d. 19 – 25
2. The normal blood glucose level during fasting is
   a) 70 to 110 mg/dl b) 80 to 200 mg/dl c) 100 to 150 mg/dl d)200 to 250 mg/dl
3. During emulsification, the bile salts convert bigger fat particles into smaller globules called
   a)granules b)oil c) chilomicrons d) millimicrons
4. During root canal treatment, the cavity of the tooth is filled with a sealing paste made of
   a)chitin b)calcium carbonate c) iodized salt d) gutta-percha resin
5. The gall stones are formed of
   a)calcium b)growing infected tissue c)cholesterol d)sodium
6. An oily substance called sebum is secreted by
   a) sweat gland b)sebaceous c) glandthyroid d) gland tear gland
7. Albinism is an extreme degree of generalized
   a) hyperpigmentation b)hypopigmentation c) failure of pigmentation
   d) perioral pigmentation
8. Partial albinism causes
   a)leucoderma b)melanoma c) melanoma d)dermatitis.
9. Urea biosynthesis takes place in
   a)blood b)liver c)cerebro-spinal fluid d)kidney
10. Number of ATP molecules spent to convert ammonia to urea is
    a)four b)two c)three d)one
11. During glomerular filtration the malpighian body acts like a
    a) Structural unit b) biological filter c) Biological buffer d) acid-base balancer
12. The amount of blood supplied to the kidneys is about
    a) 20-25% of cardiac output b) 25-30%of cardiac output
    c) 30-35% of cardiac output d) 35-40% of cardiac out put
13. 13Net filtration force which is responsible for the filtration in glomerulus is
    a) 25mm Hg b) 50mm Hg c) 75mmHg d) 80 mm Hg
14. The amount of urea reabsorbed in the urinary tubules is
    a) 5gm b) 17gm c) 21gm d) 20gm
15. Who first developed vaccine for rabies in man?
    a) Robert Koch b) Joseph Lister c) Louis Pasteur d) Stanley
16. Which one of the following fields paved the sway for modern microbiology ?
    a) Development of vaccines b) technique of new viral strains
    c) discovery of new viral strains d) Development of pure culture technique

17. Which one of the following statements is incorrect regarding the structure of viruses?

a) Nucleic materials are covered by a protein coat, called capsid.
b) The capsid is made up of capsomeres c) Some animal viruses have an additional envelope d) The additional envelope is made up of glycoprotein

18. Virions contain only a single copy of nucleic acid, hence they are called
a) Incomplete viruses b) haploid viruses c) ploidy viruses d) complete viruses

19. Tumour inducing viruses are called
a) Pathogenic viruses b) oncogenic viruses c) Para viruses d) variola viruses

20. Which one of the following is a protozoan disease ?
a) African sleeping sickness b) Measles c) Cholera d) Taeniasis

21. Sexual reproduction of plasmodium takes place in
a) Liver cells of man b) RBCs of man c) Plasma of man d) body of mosquito

22. The pathogenic form of Entamoeba histolytica is
a) Encysted spores b) vegetative trophozoite c) merozoite d) schizont

23. Which one of the following is a trematode worm ?
a) Schistosomes b) Wuchereria c) Taenia d) Ascaris

24. Which of the following can induce immunity?
a) Bacteria b) viruses c) parasites d) all the above

25. Skin is a/an
a) Anatomical barrier b) physiological barrier c) phagocytic barrier
d) inflammatory barrier

26. Which among the following is anti-bacterial?
a) interferon b) lysozyme c) hormone d) protein

27. Which of the following is anti-viral?
a) lysozyme b) interferon c) protein d) hormone

28. Identity the phagocytic cells from the following combinations
a) Macrophage and neutrophil b) Lymphocyte and eosinophil
c) Macrophage and eosinophil d) Eosinophil and neutrophil

29. Histamine is secreted by
a) Epithelial cell b) Mast cells c) Red blood cells d) white blood cells

30. Humoral immunity consists of
a) Normal cells b) pathological cells c) cytotoxic cells
d) immunoglobulin molecules

31. Which type of graft is used in plastic surgery?
a) xenograft b) allograft c) autograft d) isograft

32. SCID is due to
a) Adenosine deaminase deficiency b) Glucose oxidase deficiency
c) Phosphatase deficiency d) Lactate dehydrogenase deficiency

33. Which of the following causes AIDS?
a) Bacteria b) Fungus c) Retro virus d) TMV

34. Thymus growth occurs up to
a) 17 years b) 12 years c) 5 years d) 30 years

35. Which of the following secretes immunoglobulin?
a) T-lymphocyte b) B-lymphocyte c) Macrophage d) Mast cells
36. In which prokaryote has voluminous genetically works been made?
a) TMV virus b) Phage c) Escherichia coli d) coli form bacteria.
37.Who discovered the double helix DNA model ?
a) G.H. Khorana b) Mendel c) T.H.Morgan d) Watson and Crick
38. About how many hereditary diseases in human beings had been identified ?
a) more than 300 b) less than 300 c) about 400 d) about 100
39. To obtain information about genetic characters in man which of the following helps?
a) Biochemical test b) Hybridization c) Pedigree analysis d) Inbreeding
40. Sickle cell anaemia is due to
a) autosomal gene b) sex chromosomal gene
c) vitamin deficiency d) hormone imbalance
41. Albinism is due to
a) absence of melanin b) absence of vitamins
c) presence of melanin d) absence of hormone
42. Name the human disease due autosomal dominant gene
a) sickle cell anaemia b) thalasemia c) SCID d) huntington's chorea
43. Idiogram means
a) Diagrammatic representation of genes b) Diagrammatic representation of chromosome
c) Graph showing heart defect d) electro cardiogram
44. In human chromosome karyotyping the chromosomes 4 and 5 belong to group
a) A b) B c) C d) D
45. What is the name for mobile genetic elements?
a) Plasmids b) pili c) barr body d) transposons
46. What is the rate of growth of human population ?
a) 10 billion per year b) 90 billion per year c) 1 billion per year d) 80 billion per year
47. The present sudden acceleration of population is called as
a) population explosion b) population bomb
c) population trap d) all the above
48. Global warming is caused due to
a) lack of rainfall b) presence of a hole in ozone layer
c) human activities against nature d) extinction of animals and plants
49. The most abundant green house gas is
a) NO_2 b) CO_2 c) O_3 d) SO_2
50. Which of the following gas destroys ozone layer faster ?
a) chloroflurocarbons b) hydrochlorofluro carbons
c) both (a) and (b) d) sulphur dioxide.

51. Which is a better method to dispose large amounts of water carrying relatively small amounts of chemical wastes?
    a) land filling method b) Deep-well injection
    c) Surface impoundments d) incineration
52. Which one of the following organisms plays vital role in pollination of trees in tropical forest?
    a) mimic moths b) orchid bees
    c) Rhinocerous beetles d) Humming birds
53. Which is commonly considered as a biologists paradise?
    a) Gulf of Mannar Biosphere Reserve b) Nilgiri Biosphere Reserve
    c) Nanda Devi d) Great Nicobar
54. The amount of energy the earth receives from the sun, per year is
    a) 1000 K calories b) 10 X 10^{30}K calories c) 5 X 10^{20}K calories
    d) 15 X 10^{25} K calories
55. Which is considered as a future source of power, that can meet our unlimited demand ?
    a) Hydel power b) Hydrogen c) Thermal power d) Solar power
56. Of the total amount of water, how much is available as fresh water?
    a) 10 % b) 3% c) 15% d) 50%
57. Which of the following countries depend on desalination process for getting fresh water?
    a) Dubai b) Oman c) Bahrain d) all the above
58. The breeds of cattle now available in India are
    a) 29 b) 30 c) 26 d) 20
59. Which one of the following is not a draught breed?
    a) Kangayam b) Khillar c) Kankrej d) Hallikar
60. The other name for the cattle sindhi is
    a) Kongu b) Nellore c) Red karachi d) Decan
61. Kangayam originated from
    a) Punjab b) Coimbatore c) Karnataka d) Kathiawar
62. Which of the following is not an exotic breed?
    a) Jersey b) Gir c) Brown swiss d) Ayreshire
63. Which one of the following is a contagious disease of the cattle?
    a) Constipation b) milk fever c) cow pox d) diabetes
64. Feeding jaggery along with lime water is one of the first aid measures for
    a) Diarrhoea b) constipation c) milk-fever d) anthrax
65. Mating of closely related animals is called
    a) outbreeding b) artificial insemination c) cross breeding d) Inbreeding
66. The milk which the following cow is characterised by high carotene content?
    a)Sindhi b) Haryana c) Gir d) Jersy

67. For anthrax one of the following symptom can be seen
    a) swelling of udder b) blood discharge from natural openings
    c) loss of appetite d) lack of chewing
68. The book 'Philosophie Zoologique' was published by
    a) Charles Darwin b) August Weismann
    c) Mc Dougall d) Jean Baptiste de Lamarck
69. The German scientist who segregated germplasm from somatoplasm for the first time was
    a) Lamarck b) Malthus c) Weismann d) Hugo de vries
70. Mc Dougall supported neo-lamarckism and proved the concept of
    a) Direct action of environment on organism
    b) Learning is an acquired character
    c) Speed of learning increased from generation to generation
    d) All the above
71. Darwin supported the following concepts for evolution
    a) arrival of the fittest b) survival of the fittest
    c) The differentiation of somatoplasm germplasm d) genetic recombinations
72. The book "Process of organic evolution" to support modern synthetic theory of evolution was provided by
    a) Dobzhansky b) Stebbins c) Hardy-weinberg d) Hugo de vries
73. The factor that enriches the genepool with new modified genes
    a) mutation b) somatic variation c) decrease in chromosomes d) increase in cytoplasm
74. A normal ECG the waves are designated from left to right as .....
    a)PQSTR b)PQRST c)QRSTP d)TQRSP
75. Which one of the following is a viral disease in cattle?
    a) Anthrax b) Mastitis c) Tuberculosis d)Rinderpest

BOTANY

1. Artificial system of classification of plants was proposed by a
    a. British botanist b. Swedish botanist
    c. German botanist d. Indian botanist
2. Which of the following classification is a sexual system of classification?
    a. Artificial system b. Natural system c. Phylogenetic system d. Natural selection
3. Genera plantarum of Bentham and Hooker was published in
    a. a single volume b. two volumes
    c. three volumes d. four volumes
4. In Bentham and Hooker classification of plants, the present day 'orders' were referred to by them as a. series b. cohorts c. orders d. families
5. Plants having flowers with free petals are placed under
    a. Monochlamydeae b. Monocotyledons c. Gamopetalae d. Polypetalae

6. Inferae includes
   a. 6 orders and 34 families b. 4 orders and 23 families
   c. 3 orders and 9 families d. 5 orders and 27 families
7.Thespesia populnea belongs to
   a. Solanaceae b. Euphorbiaceae c. Malvaceae d. Musaceae
8. Malvaceae is placed in the series
   a. Thalamiflorae b. Inferae c. Heteromerae d. Disciflorae

9. Anthers are monothecous in
   a. Solanaceae b. Euphorbiaceae c. Malvaceae d. Musaceae
10.Solanaceae is placed under
   a. Malvales b. Polemoniales c. Unisexuales d. Ranales.
11. In which of the following plants the midrib and veins are found with yellowish spines
   a. *Solanum melongena* b. *Datura metal*
   c. *Solanum xanthocarpum* d. *Petunia hybrid*
12. Euphorbiaceae includes about
   a. 82 genera. b. 90 genera c. 300 genera d. 254 genera.
13. Ricinus communisis a
   a. herb b. shrub c. tree d. cladode.
14. The phyllotaxy in Musais
   a. alternate b. opposite c. distichous d. spiral
15. In inflorescence in Ravenala madagascariensisis
   a. compound cyme b. compound raceme c. branched spadix d. simple raceme
16. The change from meristematic tissue to permanent tissue is called
   a. differentiation. b. self perpetuating c. photosynthesis. d. cell division.
17. The type of tissue presents in the petioles of banana and Canna, is
   a. stellate parenchyma b. prosenchyma c. aerenchyma d. chlorenchyma.
18. The tissue generally present in all organs of plant is
   a. parenchyma b. chlorenchyma c. collenchyma d. sclerenchyma
19. The lamellar collenchyma is seen in the hypodermis of
   a. Datura b. Helianthus c. Ipomoea d. Nicotiana
20. The root hairs are produced from
   a. rhizodermis b. trichomes c. accessory cells d. trichoblasts
21. The osteosclereids are seen in
   a. seed coat of Crotalaria b. see coat of Pisum c. pulp of Pyrus d. petioles of banana
22. The casparian strips are found in the endodermis of
   a. dicot stem b. dicot root c. monocot stem d. dicot leaf.
23. The passage cells are found in endodermis of
   a. dicot stem b. monocot stem c. dicot root d. dicot leaf.
24. The polyarch condition is found in
   a. monocot leaf b. dicot leaf c. dicot stem d. monocot root

25. The inner most layer of the cortex is
    a. epidermis b. hypodermis c. endodermis d. pericycle.
26. The vascular bundle with protoxylem facing centre of the stem is
    a. exarch b. endarch c. tetrarch d. polyarch
27. When the xylem and the phloem lie in the same radius, the vascular bundle is called
    a. conjoint b. radial c. open d. closed.
28. The vascular bundles are skull shaped in
    a. dicot root b. monocot root c. dicot stem d. monocot stem.

29. The protoxylem lacuna is present in the vascular bundles of
    a. dicot root b. monocot root c. dicot stem d. monocot stem.
30. Isobilateral leaf is present in
    a. grass b. Cucurbita c. sunflower d. bean
31. The vascular bundle in the leaf is
    a. collateral and open b. collateral and closed.
    c. bicollateral and open d. collateral and exarch
32. Who had first proved that the genes are carried by the chromosome?
    a. Bridges b.Waldeyer c. Balbiani d. Flemming
33. Recombination of chromosome takes place in _____ stage of prophase I of meiosis.
    a. leptotene b. zygotene c. pachytene d. diplotene
34. Biochemical mutants of _____ failed to synthesize certain amino acids.
    a. Sorghum b. Neurospora c. Cicer arietinum d. Cicer gigas
35. The gametes of Drosophila melanogaster carry
    a. three chromosomes b. four chromosomes
    c. seven chromosomes d. eight chromosomes
36. Nullisomy is represented by
    a. 2n – 1 b. 2n + 1 c. 2n + 2 d. 2n – 2.
37. Double helix DNA model was proposed by _____
    a. Watson and Crick b. O.T. Avery et al. c. Griffith d. Stinberg
38. mRNA is about _____ of the RNA content of the cell
    a. 10 - 20% b. 5 - 10% c. 3 - 5% d. 20 - 30%
39. In bacterial cell, there are more than _____ tRNAs
    a. 200 b. 70 c. 300 d. 400
40. Restriction enzymes are synthesized by
    a. bacteria only b. yeast and bacteria only
    c. eukaryotic cells only d. all kinds of cells
41. Each restriction enzyme cleaves a molecule only at
    a. the ends of genes b. methyl groups c. nucleotide sequence
    d. the time of DNA replication
42. The number of transgenic plants available to-day is approximately
    a. Six b. two c. twelve d. fifty

43. The function of cytokinin is to increase
    a. cell elongation b. fruit initiation c. cell division d. differentiation
44. By the application of tissue culture, one important product is formed
    a. artificial synthetic seeds b. many seeded fruit
    c. triploid endosperm d. induction of flowers.
45. The two protoplasts are fused with a fusogen called
    a. polyethylene glycol (PEG) b. Polyvinyl chloride (PVC)
    c. Polyethane glycol (PEG) d. Phosphoric ethane
46. Somatic hybrids are produced through
    a. asexual fusion b. protoplasmic fusion c. vegetative propagation d. grafting
47. Photosynthesis takes place in
    a. mitochondria b. peroxisomes c. chloroplasts d. ribosomes
48. During cyclic electron transport, which one of the following is produced
    a. $NADPH_2$ only b. ATP only c. $NADH_2$ only d. both ATP and $NADPH_2$
49. Which one of the following is a five carbon compound?
    a. fructose b. erythrose c. ribose d. DHAP
50. Which one of the following is a C4plant?
    a. rice b. wheat c. sugarcane d. potato
51. The essential component for the formation of chlorophyll
    a. Mg b. Fe c. Cl d. Mn
52. The pigment which is highly efficient in absorbing solar energy is
    a. phycobilins b. chlorophyll c. carotinoids d. xanthophyll
53. Which of the following bacterium oxidizes ammonia to nitrate
    a. Nitrosomonas b. Rhizobium c. Closteridium d. E. coli
54. Which of the following is a total parasite
    a. Cuscuta b. Viscum c. Drosera d. Monotropa
55. Which of the following wavelengths of light is most effective for photosynthesis
    a. 100 nm to 200 nm b. 200 nm to 300 nm
    c. 400 nm to 700 nm d. 700 nm to 900 nm
56. Dark respiration is the function of
    a. peroxisomes b. mitochondria c. chloroplast d. ribosomes
57. The gas evolved during photosynthesis is
    a. carbondioxide b. nitrogen c. hydrogen d. oxygen
58. Which of the following is a 5C compound?
    a. Glucose b. Fructose c. Phosphoglyceric acid d. RuBP
59. In C_3plants light reactions and dark reactions occur in
    a. bundle sheath cells b. mesophyll cells c. epidermal cells d. vascular cells.
60. Which of the following are not accessory pigments?
    a. Phycobilins b. Chlorophylls c. Carotenoids d. Xanthophylls
61. The photosynthetic pigments are located in
    a. Cristae b. Cisternae c. Thylakoid d. Stroma

62. Complete oxidation of one molecule of glucose yields
    a. 38 ATP b. 36 ATP c. 35 ATP d. 2 ATP
63. Oxidative decarboxylation of pyruvic acid is catalysed by
    a.pyruvic dehydrogenase b. pyruvic kinase
    c.pyruvic mutase d. pyruvic isomerase
64. Respiratory quotient of glucose is
    a. zero b. unity c. more than one d. less than one
65. Bakanae disease in paddy is caused by
    a. abscissic acid b. phenyl acetic acid c naphthelene acetic acid d. gibberellic acid
66. In sigmoid curve the rapid growth phase is designated as
    a. lag phase b. log phase c. dormant phase d. steady state phate
67. Auxin prevents
    a. apical dominance b. ageing process c. parthinocarpy d. abscission.
68. Photoperiodic response in flowering was first observed in
    a. wheat b. Maryland Mammoth c. Oats d. Chrysanthemum.
69. Which pathogen causes the blast disease of rice?
    a. *Cercospora personata* b. *Pyricularia oryzae*
    c. *Xanthomonas citri* d. *Tungro virus*
70. What is the collateral host plant of Pyricularia oryzae?
    a.*Oryza sativa* b. *Digitaria marginata*
    c. *Arachis hypogea* d. *Citrus plant*
71. Which pathogen causes Tikka disease of groundnut?
    a. *Cercospora personata* b. *Pyricularia oryzae*
    c. *Xanthomonas citri* d. *Tungro virus*
72. Acalyphine is extracted from
    a. Acalypha indica *b. Aegle marmelos*
    c. Cissus quadrangularis *d. Mimosa pudica*
73. Binomial of ‘vilvum’ is
    a. Acalypha indica *b. Aegle marmelos*
    c. Cissus quadrangularis *d. Mimosa pudica*
74. Which of the following is a long day plant?
    a. tobacco b. sunflower c. maize d. wheat.
75. Which of the following is a short day plant?
    a. wheat b. tobacco c. sunflower d. maize.