

BOTANY
MODEL TEST PAPER - 7

MTP - 7

1. Cell was discovered by
 (a) Swanson (b) Leeuwenhock
 (c) Robert Hooke (d) Robert Brown
2. The most simple amino acid is
 (a) glycine (b) lysine (c) tyrosine (d) aspartic acid
3. The common feature amongst nucleus, chloroplast and mitochondria is
 (a) lamellae (b) DNA (c) cristae (d) all of these
4. Enzymes are basically made of
 (a) nucleic acid (b) proteins
 (c) fats (d) vitamins
5. Net gain of ATP in glycolysis
 (a) 6 (b) 2 (c) 4 (d) 8
6. Glycolysis is
 (a) $C_6H_{12}O_6 + 6 O_2 \longrightarrow 6 CO_2 + 6 H_2O$
 (b) $C_6H_{12}O_6 \longrightarrow 2 C_2H_5OH + 2 CO_2$
 (c) $C_6H_{12}O_6 \longrightarrow 2 C_3H_4O_3 + 4 H$
 (d) $C_3H_4O_3 + NADH \longrightarrow C_2H_5OH + CO_2 + NAD$
7. Average thickness of unit membrane is
 (a) 75Å (b) 250Å (c) 25 Å (d) 5Å
8. Ribosomes are the centre for
 (a) respiration (b) photosynthesis
 (c) protein synthesis (d) fat synthesis
9. Cell organelle taking part in photorespiration is
 (a) glyoxisome (b) peroxisome
 (c) dictyosome (d) endoplasmic reticulum
10. Crossing over occurs during
 (a) leptotene (b) pachytene
 (c) diplotene (d) diakinesis
11. Pasteurisation frees food stuffs of
 (a) all bacteria (b) all living organisms
 (c) vegetative forms of bacteria
 (d) vegetative forms of all pathogenic bacteria
12. Photosynthetic bacteria have
 (a) pigment system I (b) pigment system II
 (c) both of these (d) some other types
13. Currently bacteria are included in
 (a) thallophyta (b) mycota (c) monera (d) protista
14. In prokaryotes the ribosomes are
 (a) 50 S (b) 80 S (c) 70 S (d) 30 S
15. Lichens show symbiotic relationship between
 (a) fungus and roots of higher plants
 (b) fungus and alga
 (c) two algae (d) two fungi
16. Ergot is obtained from
 (a) Claviceps purpurea (b) puccinia graminis
 (c) alternaria solanii (d) fusarium oxysporum
17. Gills are found in
 (a) agaricus (b) puccinia
 (c) aspergillus (d) deuteromycetes
18. Late blight of potato is due to
 (a) Alternaria solani (b) Albugo candida
 (c) Fusarium moniliforme (d) Phytophthora infestans
19. Spirogyra differs from moss protonema in possessing
 (a) branches (b) discoid chloroplasts
 (c) rhizoidal branches (d) pyrenoids
20. The plant group that produces spores and embryo but lacks vascular tissues and seeds is
 (a) pteridophyta (b) rhodophyta
 (c) bryophyta (d) phaeophyta
21. Azolla/Marsilea is a
 (a) liver wort (b) moss
 (c) tree fern (d) water fern
22. Cycas has the largest
 (a) ovule (b) egg (c) sperm (d) all of these
23. Agar-agar commonly used in bacterial cultures and medication is obtained from
 (a) sargassum (b) gelidium
 (c) ulothrix (d) ulva
24. Formation of gametophyte directly from sporophytic tissue without spores is
 (a) apogamy (b) apospory
 (c) apocarpny (d) parthenogenesis
25. A plant growing on another plant without drawing any nourishment is
 (a) ectoparasite (b) epiphyte
 (c) symbiont (d) saprophyte
26. Cuscuta is
 (a) total root parasite (b) total stem parasite
 (c) partial stem parasite (d) epiphyte
27. A polycarpic plant is
 (a) agave (b) wheat (c) rice (d) pear
28. Edible part of sweet potato is
 (a) stem tuber (b) unripe fruit
 (c) adventitious root tuber (d) rhizome
29. Pneumatophores or breathing roots occur in
 (a) hydrophytes (b) epiphytes
 (c) xerophytes (d) mangrove plants
30. Black pepper is a
 (a) tree (b) climber (c) shrub (d) herb
31. Phylloclade is a modification of
 (a) leaf (b) root (c) flower (d) stem
32. Hook climbers occur in
 (a) gloriosa (b) artabotrys
 (c) asparagus (d) lathyrus
33. Vegetative reproduction occurs by bulbil in
 (a) agave (b) colocasia (c) zingiber (d) vallisneria
34. Swollen petiole eichhornia has
 (a) collenchyma (b) chlorenchyma
 (c) paranchyma (d) aerenchyma

35. Phyllotaxis is (a) mode of leaf arrangement on stem (b) types of roots (c) arrangement of sepals and petals in a flower. (d) types of ovary	52. Active K^+ exchange mechanism from opening and closing of stomata was given by (a) Darwin (b) Levitt (c) Scarth (d) Khorana
36. The flowers of a raceme are arranged (a) acropetally (b) basipetally (c) centripetally (d) centrifugally	53. The most widely accepted theory for ascent of sap in trees is (a) capillaryly (b) role of atmospheric pressure (c) pulsating action of living cells (d) transpiration pull and cohesion theory of Dixon and Joly
37. Spadix inflorescence occurs in (a) mulberry (b) banana (c) coriander (d) delonix	54. The oxygen in photosynthesis is released from (a) CO_2 (b) H_2O (c) both CO_2 and H_2O (d) chlorophyll
38. Largest flower is that of (a) sunflower (b) rafflesia (c) nelumbo (d) drosera	55. The CO_2 acceptor in calvin cycle/ C_3 plant is (a) phospho-enol pyruvate (PEP) (b) ribulose 1-5 diphosphate (RuBP) (c) phosphoglyceric acid (PGA) (d) ribulose monophosphate (RMP)
39. Arrangement of sepals and petals with respect to each other is (a) venation (b) vernation (c) aestivation (d) phyllotaxy	56. Hormone primarily connected with cell division is (a) IAA (b) NAA (c) cytokinin/zeatin (d) gibberellic acid
40. Stamens attached to petals are (a) antipetalous (b) epipetalous (c) epiphyllous (d) episepalous	57. Movements of leaves of the sensitive plant mimosa pudica are due to (a) thersonasty (b) seisonarty (c) hydrotropism (d) chemonasty
41. Marginal placentation is found in (a) Solanaceae (b) Cruciferae (c) Fabaceae/Leguminosae (d) asteraceae/Compositae	58. When two hybrids $rRtT$ and $Rrtt$ are crossed, the phenotypic ratio of offspring shall be (a) 3 : 1 (b) 1 : 1 : 1 : 1 (c) 1 : 1 (d) 9 : 3 : 3 : 1
42. Beauty of bogainvillea flower is due to (a) corolla (b) calyx (c) bracts (d) androecium	59. Wheat plant is $6n = 42$. What will be the number of chromosomes in its monosomic, haploid and monoploid ? (a) 43, 21 and 7 (b) 41, 21 and 7 (c) 15, 7 and 7 (d) 13, 7 and 7
43. Diadelphous stamens occur in (a) gramineae (b) cucurbitaceae (c) papilionaceae (d) malvaceae	60. The codon for anticodon $3' UUU - 5'$ is (a) $5' AAAU - 3'$ (b) $5' UAAA - 3'$ (c) $3' UAAD - 5'$ (d) $3' AAAU - 5'$
44. Bisexual flower which never opens is (a) homogamous (b) heterogamous (c) dichogamous (d) cleistogamous	
45. Edible part of mango is (a) pericarp (b) mesocarp (c) endocarp (d) epicarp	
46. Total number of meiotic division required for forming 100 zygote/100 grains of wheat is (a) 100 (b) 75 (c) 125 (d) 50	
47. Which one increases girth of stem or root (a) xylem (b) phloem (c) cambium (d) cortex	
48. Latex vessels occur in (a) calotropis (b) banana (c) papaver/poppy (d) euphorbia	
49. Where do the casparin bands occur ? (a) epidermis (b) endodermis (c) pericycle (d) phloem	
50. Age of a tree can be determined by counting (a) number of nodes and internodes (b) number of annual rings near the base (c) number of annual rings near the tip of trunk (d) number of branches	
51. Cell (A) with osmotic pressure 10 atm. and turgor pressure 5 atm. is in contact with cell (B) having osmotic pressure 15 atm. and turgor pressure 12 atm. The flow of water will be (a) from A to B (b) equal flow (c) from B to A (d) no flow	

--	--	--	--