

QUESTION BANK OF BOTANY FOR ADMISSION TEST

| | | | | |
|-----|--|----|---|----------------------|
| 1) | Fusion of two haploid cells, gametes or gamete nuclei to form a diploid zygote is | | C | |
| A. | Double fertilization on | B. | | Parthenogenesis |
| C. | Fertilization option | D. | | Fragmentation option |
| 2) | <i>Psilotum</i> is the only species whose gametophyte contain | | B | |
| A. | Root hairs | B. | | Vascular tissues |
| C. | Red pigment | D. | | Stem hairs |
| 3) | Asexual reproductive structure which develops into a new individual in bryophytes is: | | D | |
| A. | Elator | B. | | Holdfast |
| C. | Rhizoid | D. | | Gammae cup |
| 4) | Male reproductive organ of Charophyta is: | | B | |
| A. | Nucule | B. | | Globule |
| C. | Funicule | D. | | Basidium |
| 5) | Each aerial shoot of <i>Tmesipteris</i> exhibit ----- dichotomy | | A | |
| A. | one | B. | | two |
| C. | three | D. | | four |
| 6) | In Lycophytes, megaspore developed into | | A | |
| A. | Megagametophyte | B. | | Microgametophyte |
| C. | Spore | D. | | Filament |
| 7) | Entire division of Lycophytes consists of ----- genera | | C | |
| A. | two | B. | | four |
| C. | five | D. | | six |
| 8) | Water bodies such as pond or lake that do not flow are called as: | | B | |
| A. | Lotic | B. | | Lentic |
| C. | Benths | D. | | Plankton |
| 9) | A fungus containing symbiotic algae | | A | |
| A. | Lichen | B. | | Moss |
| C. | Liverwort | D. | | Mycorrhiza |
| 10) | A single spore formed from the contents of a cell | | A | |
| A. | Monospore | B. | | Haplospore |
| C. | Tetraspore | D. | | Zoospore |
| 11) | Scale-like outgrowth devoid of vascular tissues is known as | | C | |
| A. | Scale | B. | | bract |
| C. | enation | D. | | leaf |
| 12) | Fungus component of lichen partnership | | A | |
| A. | Mycobiont | B. | | Phycobiont |
| C. | Haplobiont | D. | | Diplobiont |
| 13) | Association between hyphae of a fungus and root of a plant is: | | C | |
| A. | Actimucetes | B. | | Parasite |
| C. | Mycorrhizae | D. | | Bryophyte |
| 14) | Sexual reproduction involving the fusion of a large non-motile egg with a small motile sperm is: | | C | |
| A. | Anisogamy | B. | | Isogamy |
| C. | Oogamy | D. | | Parthenogenesis |
| 15) | Number of orders in water ferns is | | B | |
| A. | one | B. | | two |
| C. | three | D. | | four |
| 16) | Distinct metabolically active intracellular structure surrounded by one or more envelops and have its own genome is: | | B | |
| A. | Contractile vacuole | B. | | Organelle |
| C. | Golgi body | D. | | Pyrenoid |
| 17) | Organisms that obtain energy by absorbing and metabolising nutrients are: | | C | |
| A. | Heterotrophs | B. | | Auxotrophs |
| C. | Osmotrophs | D. | | Phototrophs |
| 18) | The earliest known progymnosperms species with heterospory is | | C | |

| | | | | | |
|-----|--|------------------|----|----------------|---|
| | A. | Psilotum | B. | Fern | |
| | C. | Chauleria | D. | Tmesipteris | |
| 19) | Pollen grain formation is a key feature which make water----- for fertilization | | | | B |
| | A. | Necessary | B. | Un-necessary | |
| | C. | Available | D. | non of them | |
| 20) | Organism that lives on or inside the body of a different organism and obtains nutrients from it | | | | A |
| | A. | Parasite | B. | Auxotroph | |
| | C. | Autotroph | D. | Myxotroph | |
| 21) | A thallus comprised of unspecialized cells having the ability to grow in all planes is: | | | | A |
| | A. | Parenchymatous | B. | Trichomatous | |
| | C. | Sclerophyllos | D. | Chlorophyllous | |
| 22) | Complex carbohydrates found in the cell wall are: | | | | B |
| | A. | Middle lamella | B. | Pectin | |
| | C. | Cuticle | D. | Waxes | |
| 23) | In mosses the dominant generation is | | | | A |
| | A. | Gametophyte | B. | Sporophyte | |
| | C. | Vegetative stage | D. | Adult stage | |
| 24) | Mode of heterotrophic nutrition involving ingestion of particles | | | | D |
| | A. | Phototrophy | B. | Heterotrophy | |
| | C. | Auxotrophy | D. | Phagotrophy | |
| 25) | Organisms using light as a energy source and CO ₂ as principal carbon source | | | | C |
| | A. | Chemotrophs | B. | Heterotrophs | |
| | C. | Photoautotroph | D. | Parasites | |
| 26) | Movement of an organism towards the light source is called as: | | | | B |
| | A. | Chemotaxis | B. | Phototaxis | |
| | C. | Fluorotaxis | D. | Phyllotaxy | |
| 27) | Photoautotrophic component of lichen partnership is: | | | | A |
| | A. | Phycobiont | B. | Mycobiont | |
| | C. | Photobiont | D. | Skotobiont | |
| 28) | In Ferns the dominant generation is | | | | B |
| | A. | Gametophyte | B. | Sporophyte | |
| | C. | Vegetative stage | D. | Adult stage | |
| 29) | In Gymnosperms the dominant generation is | | | | B |
| | A. | Gametophyte | B. | Sporophyte | |
| | C. | Vegetative stage | D. | Adult stage | |
| 30) | Free floating microscopic organisms are popularly called as: | | | | D |
| | A. | Banthods | B. | Submerged | |
| | C. | Epipsemmic | D. | Plankton | |
| 31) | Fusion of protoplasts of two cells without fusion of nuclei | | | | C |
| | A. | Karyogamy | B. | Anisogamy | |
| | C. | Plasmogamy | D. | Isogamya | |
| 32) | Cytoplasmic, photosynthetic pigmented organelle or its non-photosynthetic derivative are called: | | | | A |
| | A. | Plastids | B. | Chromatids | |
| | C. | Spores | D. | Plasmids | |
| 33) | In Angiosperms the dominant generation is | | | | B |
| | A. | Gametophyte | B. | Sporophyte | |
| | C. | Vegetative stage | D. | Adult stage | |
| 34) | Cell or organism composed of cells lacking a membrane-bound nucleus, histones and organelles is called as: | | | | A |
| | A. | Prokaryote | B. | Eukaryote | |
| | C. | Mitochondrion | D. | Chloroplast | |
| 35) | Filamentous or plate-like structure produced by germinating spore is: | | | | B |
| | A. | Holdfast | B. | Protonema | |
| | C. | Rhizoid | D. | Capsule | |

| | | | | | |
|-----|--|--------------------|----|---------------------|---|
| 36) | Megasporegia produce megaspores that give rise to | | | | A |
| | A. | Female gametophyte | B. | Male gametophyte | |
| | C. | Sporophyte | D. | Resting spore | |
| 37) | Proteinaceous structure inside some plastids meant for starch formation is: | | | | A |
| | A. | Pyrenoid | B. | Inner membrane | |
| | C. | Grana | D. | Stroma | |
| 38) | Thick walled spores, which are resistant to extremes of environments are: | | | | C |
| | A. | Monospore | B. | Aplanospores | |
| | C. | Resting spore | D. | Akinetes | |
| 39) | Microsporegia produce megaspores that give rise to | | | | B |
| | A. | Female gametophyte | B. | Male gametophyte | |
| | C. | Sporophyte | D. | Resting spore | |
| 40) | A carotenoid unique to siphonaceous algae is: | | | | B |
| | A. | Violaxanthin | B. | Siphonoxanthin | |
| | C. | Neoxanthin | D. | Zeaxanthin | |
| 41) | Microorganisms capable of living and surviving in the soil is: | | | | C |
| | A. | Edaphophyte | B. | Epipsemmic | |
| | C. | Soil-borne | D. | Mesophyte | |
| 42) | Seed bearing plants which do not have flowers are known as | | | | B |
| | A. | Angiosperms | B. | Gymnosperms | |
| | C. | Pteridophytes | D. | Bryophytes | |
| 43) | A resistant spore surrounded by a silicified wall formed in members of Chrysophyta is: | | | | D |
| | A. | Aplanospore | B. | Akinete | |
| | C. | Polyspore | D. | Statospore | |
| 44) | Seed bearing plants which flowers are known as | | | | A |
| | A. | Angiosperms | B. | Gymnosperms | |
| | C. | Pteridophytes | D. | Bryophytes | |
| 45) | Gymnosperms have been originated about-----million years ago | | | | B |
| | A. | 300 | B. | 319 | |
| | C. | 335 | D. | 355 | |
| 46) | In Gymnosperms leaves are | | | | C |
| | A. | Wide | B. | Oval shape | |
| | C. | Needle like | D. | Round form | |
| 47) | In Gymnosperms male cone is found at----- of tree | | | | B |
| | A. | On top | B. | at bottom | |
| | C. | in middle | D. | Equally distributes | |
| 48) | Structure in which tetraspores are formed | | | | D |
| | A. | Carposporangium | B. | Antheridium | |
| | C. | Archegonium | D. | Tetrasporangium | |
| 49) | In Gymnosperms female cone is found at -----of tree | | | | A |
| | A. | On top | B. | at bottom | |
| | C. | in middle | D. | Equally distributes | |
| 50) | Hard covering enclosing the protoplasm of cell e.g. in Bacillariophyta is: | | | | C |
| | A. | Silicella | B. | Plasmalemma | |
| | C. | Theca | D. | Pectin | |
| 51) | Organisms that can tolerate high temperature (45-65 °C) is called as: | | | | A |
| | A. | Thermophilic | B. | Mesophilic | |
| | C. | Non-thermic | D. | Halophilic | |
| 52) | Aggregation of similar cells, which are structurally and functionally organized is: | | | | C |
| | A. | Colony | B. | Symbiosis | |
| | C. | Tissue | D. | Organ | |
| 53) | A row of cells without the sheath (in Cyanophyta) is called as: | | | | D |
| | A. | Filament | B. | Colony | |

| | | | | | |
|-----|---|--------------------------|----|-----------------------|---|
| | C. | Tissue | D. | Trichome | |
| 54) | Sporangium composed of a single cell producing zoospore | | | | A |
| | A. | Unilocular sporangium | B. | Bilocular sporangium | |
| | C. | Pleurilocular sporangium | D. | Monocarpic sporangium | |
| 55) | A structure containing uredospores is called as: | | | | C |
| | A. | Telidium | B. | Soridium | |
| | C. | Uredinium | D. | Basidium | |
| 56) | In angiosperms, sporophyte generation is | | | | B |
| | A. | Haploid | B. | Diploid | |
| | C. | Triploid | D. | Polyploid | |
| 57) | In gymnosperms, gametophyte generation is | | | | B |
| | A. | Haploid | B. | Diploid | |
| | C. | Triploid | D. | Polyploid | |
| 58) | The order of gymnosperms which contain all the fossils | | | | A |
| | A. | Bennettiales | B. | Cycadales | |
| | C. | Ginkgoales | D. | Coniferales | |
| 59) | Which of the following order contain single species? | | | | C |
| | A. | Bennettiales | B. | Cycadales | |
| | C. | Ginkgoales | D. | Coniferales | |
| 60) | Which of the following order contains all the living forms? | | | | D |
| | A. | Bennettiales | B. | Cycadales | |
| | C. | Ginkgoales | D. | Gnetales | |
| 61) | In cycadales the stems are | | | | C |
| | A. | Dichotomously branched | B. | Simple branched | |
| | C. | Unbranched | D. | Complex branching | |
| 62) | The tallest tree belongs to | | | | B |
| | A. | Angiosperms | B. | Gymnosperms | |
| | C. | Pteridophytes | D. | Bryophytes | |
| 63) | A flagellated asexual spore of algae is called as: | | | | C |
| | A. | Aplanospore | B. | Monospore | |
| | C. | Zoospore | D. | Nanospore | |
| 64) | Diploid nucleus or cell produced by the fusion of haploid cells and destined to develop into a new individual | | | | B |
| | A. | Protonema | B. | Zygote | |
| | C. | Aplanospore | D. | Haplospore | |
| 65) | The oldest tree belongs to | | | | B |
| | A. | Angiosperms | B. | Gymnosperms | |
| | C. | Pteridophytes | D. | Bryophytes | |
| 66) | Filamentous thallus showing differentiation into basal and erect more openly branched filaments on the substrate is called: | | | | C |
| | A. | Creeping | B. | Undifferentiated | |
| | C. | Heterotrichous | D. | Colony | |
| 67) | Characteristic shape or appearance of an individual is known as: | | | | B |
| | A. | Habit | B. | Morphology | |
| | C. | Development | D. | Growth | |
| 68) | Number of species in <i>Ephedra</i> is | | | | B |
| | A. | 50 | B. | 65 | |
| | C. | 75 | D. | 82 | |
| 69) | Number of wild gymnosperm species in Pakistan is | | | | B |
| | A. | 15 | B. | 17 | |
| | C. | 25 | D. | 32 | |
| 70) | Basal portion of sporophyte in bryophytes that attached to the gametophyte is: | | | | B |
| | A. | Seta | B. | Foot | |

| | | | | | |
|-----|--|------------------------|----|--------------------|---|
| | C. | Capsule | D. | Paraphysis | |
| 71) | Whorl of petals is known as | | | | B |
| | A. | Calyx | B. | Corolla | |
| | C. | Androecium | D. | Gynoecium | |
| 72) | Whorl of sepals is known as | | | | A |
| | A. | Calyx | B. | Corolla | |
| | C. | Androecium | D. | Gynoecium | |
| 73) | Pattern of arrangement of leaves on stem is called | | | | D |
| | A. | Stipule | B. | Adaxial | |
| | C. | Abaxial | D. | Phyllotaxy | |
| 74) | If leaf lamina is segmented into more than one plane then leaf is known as | | | | B |
| | A. | Simple leaf | B. | Compound leaf | |
| | C. | Bract leaf | D. | Cauline leaf | |
| 75) | Living organisms at organelle level of organization are | | | | A |
| | A. | a. Bacteria | B. | Lichens | |
| | C. | Bryophytes | D. | Pteridophytes | |
| 76) | Photosynthetic pigments that absorb light energy and transfer it to a reaction center of chlorophyll a: | | | | B |
| | A. | Primary pigments | B. | Accessory pigments | |
| | C. | Water soluble pigments | D. | Tertiary pigments | |
| 77) | A thick walled resting spore is called as: | | | | B |
| | A. | Zoospore | B. | Akinete | |
| | C. | Aplanospore | D. | Heterospore | |
| 78) | The protocists comprising several groups that are simple in form, producing energy through photosynthesis and lack true tissue differentiation of the body are called: | | | | C |
| | A. | Bacteria | B. | Viruses | |
| | C. | Algae | D. | Pteridophytes | |
| 79) | Male sexual structure in algae, fungi and bryophytes is: | | | | A |
| | A. | Anthredium | B. | Archegonium | |
| | C. | Soridium | D. | Codium | |
| 80) | Leaf like structures of the sporophyte that bear spores are called | | | | A |
| | A. | Sporophylls | B. | Sporophyte | |
| | C. | Sporangium | D. | Heterospore | |
| 81) | Union of two nuclei both derived from a single parent is called as: | | | | D |
| | A. | Heterogamy | B. | Polygamy | |
| | C. | Multigamy | D. | Autogamy | |
| 82) | Larger sporophylls are known as | | | | B |
| | A. | Microphylls | B. | Megaphylls | |
| | C. | Aplanospore | D. | Zoospore | |
| 83) | System of nomenclature introduced by Linnaeus, composed of two names; the first as genus and second the species is called as: | | | | B |
| | A. | Monomial | B. | Binomial | |
| | C. | Trinomial | D. | Polynomial | |
| 84) | Phenomenon of production of light by living organisms is: | | | | A |
| | A. | Bioluminescence | B. | Fluorescence | |
| | C. | Phosphorescence | D. | None of the above | |
| 85) | Yellow, orange or red light harvesting pigments soluble in organic solvents are: | | | | B |
| | A. | Chlorophylls | B. | Carotenoids | |
| | C. | Phycocyanins | D. | Phycocerythrin | |
| 86) | Diploid spore produced in carposporangium in red algae are: | | | | C |
| | A. | Teliospore | B. | Basidiospores | |
| | C. | Carpospore | D. | Tetraspores | |
| 87) | Larger sporophylls are known as | | | | B |
| | A. | Microphylls | B. | Megaphylls | |

| | | | | | |
|------|---|-----------------------|----|---------------------|---|
| | C. | Aplanospore | D. | Zoospore | |
| 88) | Pteridophytes were originated about-----million years ago | | | | C |
| | A. | a. 300 | B. | 370 | |
| | C. | 420 | D. | 420 | |
| 89) | Number of phyla in Pteridophyta is | | | | B |
| | A. | 2 | B. | 4 | |
| | C. | 6 | D. | 8 | |
| 90) | Multinucleate condition of the filament without cross walls is known as: | | | | A |
| | A. | Coenocytic | B. | Septate | |
| | C. | Elongate | D. | Flattened | |
| 91) | Psilopsida is a group of living plants comprising of-----order | | | | A |
| | A. | one | B. | two | |
| | C. | three | D. | four | |
| 92) | Psilopsida is a group of living plants comprising of-----family | | | | A |
| | A. | one | B. | two | |
| | C. | three | D. | four | |
| 93) | Fusion of two non-flagellated gametes is called as: | | | | B |
| | A. | Heterogamy | B. | Conjugation | |
| | C. | Parthenogenesis | D. | Budding | |
| 94) | Psilopsida is a group of living plants comprising of-----genera | | | | B |
| | A. | One | B. | two | |
| | C. | Three | D. | four | |
| 95) | Hygroscopic cell or band usually attached to the spore e.g. in Bryophyta is called: | | | | A |
| | A. | Elator | B. | Venter | |
| | C. | Paraphysis | D. | Spore | |
| 96) | Colony of algal cells in a specific arrangement and number that does not increase once mature is: | | | | A |
| | A. | Coenobium | B. | Filamentous | |
| | C. | Uniseriate | D. | Multiseriate | |
| 97) | Plants inside another plant are called as: | | | | D |
| | A. | Exophytes | B. | Hydrophytes | |
| | C. | Mesophytes | D. | Endophytes | |
| 98) | Number of species is <i>Psilotum</i> is | | | | B |
| | A. | One | B. | two | |
| | C. | Three | D. | four | |
| 99) | Externally borne spore not necessarily resistant to adverse conditions is: | | | | C |
| | A. | Monospores | B. | Endospores | |
| | C. | Exospores | D. | Polyspores | |
| 100) | Gametophytes of <i>Psilotum</i> are | | | | B |
| | A. | long and branched | B. | Short and branched | |
| | C. | short and unbranched | D. | long and unbranched | |
| 101) | are the region of cells capable of division and growth in plants | | | | C |
| | A. | Pith | B. | Medulla | |
| | C. | Meristems | D. | Stroma | |
| 102) | In trees and shrubs is responsible for increase in girth | | | | B |
| | A. | Apical meristems | B. | Lateral meristems | |
| | C. | Intercalary meristems | D. | None of these | |
| 103) | In the monocots forms a protective tube around the emerging shoots | | | | B |
| | A. | Coleorrhizae | B. | Coleoptile | |
| | C. | Funicle | D. | Placentas | |
| 104) | Primary growth in plants is brought about by the | | | | A |
| | A. | Apical meristems | B. | Lateral meristems | |
| | C. | Intercalary meristems | D. | None of these | |

| | | | | | |
|------|--|---|----|---|---|
| 105) | forms between the xylem and phloem in vascular bundles | | | | A |
| | A. | Vascular cambium | B. | Cork cambium | |
| | C. | Both a & b | D. | None | |
| 106) | In plants, dermal system is composed of the _____ that forms the outer protective covering of the plant | | | | C |
| | A. | Cortex | B. | Pith | |
| | C. | Epidermis | D. | Endodermis | |
| 107) | _____ is the outermost layer of apical meristem which develops into epidermis or epidermal tissue system | | | | A |
| | A. | Protoderm | B. | Procambium | |
| | C. | Pericycle | D. | Pith | |
| 108) | Histogen theory was proposed by | | | | B |
| | A. |) Nagelli | B. | Henstein | |
| | C. | Hafmeister | D. | Schuepp | |
| 109) | Presence of casparian strips is characteristic of | | | | C |
| | A. | Cortex | B. | Pith | |
| | C. | Endodermis | D. | Epidermis | |
| 110) | The best method to determine the age of tree is | | | | B |
| | A. | to count the number of leaves | B. | to count the number of annual rings | |
| | C. | to measure its diameter | D. | to find out the number of branches | |
| 111) | Which of the following give rise to cork tissue? | | | | A |
| | A. | Phellogen | B. | Periblem | |
| | C. | Periderm | D. | Phelloderm | |
| 112) | Tunica corpus theory is connected with | | | | C |
| | A. | Root apex | B. | Root cap | |
| | C. | Shoot apex | D. | Secondary growth | |
| 113) | Cork cambium and vascular cambium are | | | | C |
| | A. | parts of secondary xylem and phloem | B. | parts of pericycle | |
| | C. | lateral meristem | D. | apical meristem | |
| 114) | Organisation of stem apex into corpus and tunica is determined mainly by | | | | A |
| | A. | planes of cell division | B. | regions of meristematic activity | |
| | C. | rate of cell growth | D. | rate of shoot tip growth | |
| 115) | What is true about a monocot leaf? | | | | C |
| | A. | Reticulate venation | B. | Absence of bulliform cells from epidermis | |
| | C. | Mesophyll not differentiated into palisade and spongy tissues | D. | Well differentiated mesophyll | |
| 116) | An organized and differentiated cellular structure having cytoplasm but no nucleus | | | | C |
| | A. | Vessels | B. | Xylem parenchyma | |
| | C. | Sieve tubes | D. | Tracheids | |
| 117) | Bordered pits are found in | | | | B |
| | A. | Sieve cells | B. | Vessel wall | |
| | C. | Companion cells | D. | Sieve tube wall | |
| 118) | Which of the following plant cells will show totipotency? | | | | C |
| | A. | sieve tubes | B. | xylem vessels | |
| | C. | meristem | D. | cork cells | |
| 119) | Sclerenchymatous bundle sheath is present in | | | | A |
| | A. | Grasses | B. | Mango | |
| | C. | Jaman | D. | None of these | |
| 120) | Vessels are found in | | | | B |
| | A. | all angiosperms and some gymnosperm | B. | most of angiosperms and few gymnosperms | |
| | C. | all angiosperms, all gymnosperms and some pteridophyta | D. | all pteridophyta | |
| 121) | Diffuse porous woods are characteristic of plants growing in | | | | D |

| | | | | | |
|------|--|---|----|---|---|
| | A. | a) alpine region | B. | cold winter regions | |
| | C. | temperature climate | D. | tropics | |
| 122) | The combination of a dye and its mordant is called | | | | D |
| | A. | Gelatin | B. | Paraffin | |
| | C. | Resin | D. | Lake | |
| 123) | The _____ preferentially stains lignified cell walls | | | | A |
| | A. | Safranin | B. | Fast green | |
| | C. | Sudan Black B | D. | None of these | |
| 124) | Which of the following is complex tissue? | | | | C |
| | A. | Xylem | B. | Phloem | |
| | C. | Both a & b | D. | None of these | |
| 125) | Pith and cortex do not differentiate in | | | | A |
| | A. | a) Monocot stem | B. | Dicot stem | |
| | C. | Monocot root | D. | Dicot root | |
| 126) | Bordered pits are found in | | | | B |
| | A. | Sieve cells | B. | Vessel wall | |
| | C. | Companion cells | D. | Sieve tube wall | |
| 127) | A seed is a mature | | | | C |
| | A. | Female gametophyte | B. | Ovary | |
| | C. | Ovule | D. | Ovulate cone | |
| 128) | In hydrophytes like <i>Eichhornia</i> , buoyancy is due to the presence of | | | | C |
| | A. | Collenchyma | B. | Sclerenchyma | |
| | C. | Aerenchyma | D. | Phloem | |
| 129) | _____ is a type of parenchyma where cells are elongated with tapering ends | | | | A |
| | A. | Prosenchyma | B. | Chlorenchyma | |
| | C. | Sclerenchyma | D. | Aerenchyma | |
| 130) | Death of protoplasm is a pre-requisite for a vital function like | | | | A |
| | A. | transport of sap | B. | transport of food | |
| | C. | absorption of water | D. | gaseous exchange | |
| 131) | Sieve tubes are suited for translocation of food because they possess | | | | D |
| | A. | bordered pits | B. | no ends walls | |
| | C. | no protoplasm | D. | broader lumen and perforated cross walls | |
| 132) | Out of diffuse porous and ring porous woods, which is correct? | | | | C |
| | A. | ring porous wood, carries more water for short period | B. | diffuse porous wood carries more water | |
| | C. | ring porous wood carries more water when need is higher | D. | diffuse porous wood is less specialised but conducts water rapidly throughout | |
| 133) | Monocot leaves possess | | | | A |
| | A. | intercalary meristem | B. | lateral meristem | |
| | C. | apical meristem | D. | mass meristem | |
| 134) | Vascular cambium produces | | | | B |
| | A. | primary xylem and primary phloem | B. | secondary xylem and secondary phloem | |
| | C. | primary xylem and secondary phloem | D. | secondary xylem and primary phloem | |
| 135) | A bicollateral vascular bundle is characterized by | | | | D |
| | A. | phloem being sand-witched between xylem | B. | transverse splitting of vascular bundle | |
| | C. | longitudinal splitting of vascular bundle | D. | xylem being sand-witched between phloem | |
| 136) | Abnormal/anomalous secondary growth occurs in | | | | A |
| | A. | Dracaena | B. | ginger | |
| | C. | wheat | D. | sunflower | |
| 137) | Which exposed wood will decay faster? | | | | A |

| | | | | | |
|------|--|---|----|------------------------------------|---|
| | A. | sapwood | B. | softwood | |
| | C. | wood with lot of fibres | D. | heartwood | |
| 138) | Closed vascular bundles lack | | | | A |
| | A. | cambium | B. | Pith | |
| | C. | Ground tissue | D. | Epidermis | |
| 139) | Companion cells are closely associated with | | | | C |
| | A. | Trichomes | B. | Guard cells | |
| | C. | Sieve elements | D. | Vessel elements | |
| 140) | Placentation in tomato and lemon is | | | | D |
| | A. | Parietal | B. | Free central | |
| | C. | Marginal | D. | Axile | |
| 141) | Ground tissue includes | | | | A |
| | A. | All tissues except epidermis and vascular bundles | B. | All tissues external to endodermis | |
| | C. | All tissues internal to endodermis | D. | Epidermis and cortex | |
| 142) | The ladder-like lignin thickenings are | | | | B |
| | A. | a) reticulate | B. | Scalariform | |
| | C. | Annular | D. | Spiral | |
| 143) | The guard cells of stoma are | | | | D |
| | A. | irregular in shape | B. | convex in shape | |
| | C. | long and cylindrical in shape | D. | kidney- shaped | |
| 144) | There are extensive stomata on the upper surface of leaves in | | | | C |
| | A. | Geophytes | B. | bryophytes | |
| | C. | Hydrophytes | D. | xerophytes | |
| 145) | The only gaps in the epidermis are due to the presence of | | | | A |
| | A. | stomata | B. | cortex | |
| | C. | lignin | D. | pith | |
| 146) | The pore, guard cell and subsidiary cell form | | | | B |
| | A. | stomatal apparatus | B. | stomatal complex | |
| | C. | both a & b | D. | None of these | |
| 147) | In _____ stomatal type, the stomata are surrounded by two subsidiary cells which are parallel to the longitudinal axis of pore and guard cells | | | | A |
| | A. | a) paracytic | B. | diacytic | |
| | C. | Aniocyctic | D. | anomocytic | |
| 148) | Parenchyma cells perform which of following functions? | | | | D |
| | A. | meristematic | B. | storage | |
| | C. | Transport | D. | all of these | |
| 149) | Fibers associated with the xylem elements are known as | | | | B |
| | A. | extraxylary fibers | B. | xylary fibers | |
| | C. | both a & b | D. | None of these | |
| 150) | Sclereids are sometimes called _____ cells | | | | B |
| | A. | hard | B. | Stone | |
| | C. | soft | D. | Fiber | |
| 151) | Bulliform cells are present in members of family _____ | | | | c |
| | A. | Brassicaceae | B. | Myrtaceae | |
| | C. | Poaceae | D. | Euphorbiaceae ption | |
| 152) | Sunken stomata are present in | | | | B |
| | A. | hydrophytes | B. | xerophytes | |
| | C. | mesophytes | D. | haleophytes | |
| 153) | Shape of guard cells may be | | | | C |
| | A. | kidney shaped | B. | dumbbell shaped | |
| | C. | both a & b | D. | None of these | |

| | | | |
|------|---|---------------------|---|
| 154) | is not present in roots | | B |
| | A. cortex | B. medullary rays | |
| | C. endodermis | D. Pith | |
| 155) | The protosteles in which xylem is in the form of parallel plates is called | | C |
| | A. Haplostele | B. actinostele | |
| | C. plectostele | D. solenostele | |
| 156) | Siphonostele types are common in _____ stems | | A |
| | A. Fern | B. mosses | |
| | C. rice | D. none | |
| 157) | _____ stele is found in monocots | | A |
| | A. Atectostele | B. Dictyostele | |
| | C. Eustele | D. Protostele | |
| 158) | _____ cavity is formed by the breakdown of inner protoxylem vessel and the nearby _____ cells | | C |
| | A. Shizogenous | B. Lysigenous | |
| | C. Shizolysigenous | D. None | |
| 159) | Conjunctive tissue forms _____ cambium | | B |
| | A. Cork | B. Vascular | |
| | C. Both a & b | D. None | |
| 160) | _____ is the outermost layer of root with large number of hairs | | A |
| | A. Epiblema | B. Epidermis | |
| | C. Endodermis | D. Trichomes | |
| 161) | Presence of chloroplast is the characteristic of _____ | | C |
| | A. Epidermis | B. Endodermis | |
| | C. Guard cells | D. Subsidiary cells | |
| 162) | In dicots which type of stele is present? | | C |
| | A. atactostele | B. siphonostele | |
| | C. eustele | D. both a & c | |
| 163) | The leaves in which palisade layer is restricted to the upper side is | | A |
| | A. Bifacial | B. Isolateral | |
| | C. Centric | D. None | |
| 164) | Cortex is formed from _____ | | C |
| | A. Plerome | B. Dermatogen | |
| | C. Periblem | D. None | |
| 165) | The number of xylem or phloem bundles in monocot is from _____ | | A |
| | A. 12 to 20 | B. 15 to 20 | |
| | C. 17 to 20 | D. 12 to 30 | |
| 166) | Mucilaginous parenchyma are found in _____ | | B |
| | A. a) Palms | B. Succulents | |
| | C. Grasses | D. Rushes | |
| 167) | Sudan Black-B is used to stain the _____ | | C |
| | A. Proteins | B. Carbohydrates | |
| | C. Lipids | D. All of these | |
| 168) | Polysaccharide materials are often stained with _____ | | A |
| | A. Schiff reagent | B. Gelatin | |
| | C. Sudan reagent | D. Fast green | |
| 169) | Which of the following is an embedding reagent? | | B |
| | A. Schiff reagent | B. Gelatin | |
| | C. Sudan reagent | D. Fast green | |
| 170) | Instrument used for sectioning is known as _____ | | C |
| | A. Microscope | B. Flame photometer | |
| | C. Microtome | D. All of these | |
| 171) | The Orange-G has an affinity for _____ tissues | | A |
| | A. Lignified | B. Non-lignified | |

| | | | | | |
|------|---|----------------|----|-----------------|---|
| | C. | Both a & b | D. | None | |
| 172) | is a layer secreted between adjacent plant cells which "glues" plant cells together | | | | C |
| | A. | Primary wall | B. | Secondary wall | |
| | C. | Middle lamella | D. | None | |
| 173) | The main component of primary wall is | | | | C |
| | A. | Pectin | B. | Cellulose | |
| | C. | Hemicellulose | D. | All of these | |
| 174) | Which one of the following is dermal tissue? | | | | D |
| | A. | a) Trichomes | B. | Glands | |
| | C. | Root hairs | D. | All of these | |
| 175) | The walls of dividing and growing cells are called | | | | A |
| | A. | Primary walls | B. | Secondary walls | |
| | C. | Both a & b | D. | None | |
| 176) | Secondary wall is composed of _____ layers | | | | B |
| | A. | 2 | B. | 3 | |
| | C. | 4 | D. | 5 | |
| 177) | Interruptions in the _____ are called pits | | | | B |
| | A. | Primary wall | B. | Secondary wall | |
| | C. | Middle lamella | D. | None | |
| 178) | Wood of conifers consists of | | | | B |
| | A. | Vessels | B. | Tracheids | |
| | C. | All of these | D. | None | |
| 179) | _____ is a common plant adaptation to aquatic environments. | | | | B |
| | A. | Parenchyma | B. | Aerenchyma | |
| | C. | Collenchyma | D. | Sclerenchyma | |
| 180) | For the stomatal studies which stain is used? | | | | A |
| | A. | Safranine | B. | Fast green | |
| | C. | Both a & b | D. | None | |
| 181) | Anatomical adaptations involved in salt tolerance include | | | | D |
| | A. | Glands | B. | Sclerification | |
| | C. | Succulence | D. | All of these | |
| 182) | In _____ roots, pericycle is multilayered and sclerenchymatous | | | | B |
| | A. | Eichhornia | B. | Smila | |
| | C. | Cyperus | D. | Cynodon | |
| 183) | In roots, xylem is | | | | A |
| | A. | Exarch | B. | Endarch | |
| | C. | Both a & b | D. | None | |
| 184) | In stem, xylem is | | | | B |
| | A. | Exarch | B. | Endarch | |
| | C. | Both a & b | D. | None | |
| 185) | When xylem and phloem are present on the same radius then its known as | | | | B |
| | A. | Radial | B. | Conjoint | |
| | C. | Concentric | D. | All of these | |
| 186) | Bicollateral vascular bundles are found in families | | | | C |
| | A. | Poaceae | B. | Myrtaceae | |
| | C. | Solanaceae | D. | Euphorbiaceae | |
| 187) | The term xylem was introduced by | | | | A |
| | A. | Nagelli | B. | Schupp | |
| | C. | Schiff | D. | Leuwenhook | |
| 188) | Tracheids develop from | | | | C |
| | A. | Early wood | B. | Late wood | |
| | C. | Sapwood | D. | Heartwood | |
| 189) | In _____, albuminous cells are present in place of companion cells | | | | B |

| | | | |
|------|--|--|---|
| | A. Angiosperms | B. Gymnosperm | |
| | C. Both a & b | D. None | |
| 190) | Epidermis is multilayered in----- plants | | B |
| | A. Temperate | B. Tropical | |
| | C. Both a & b | D. None | |
| 191) | Collenchyma occurs in the stem and petioles of | | C |
| | A. xerophytes | B. monocots | |
| | C. dicot herbs | D. hydrophytes | |
| 192) | Collenchyma occurs is | | C |
| | A. herbaceous climbers | B. woody climbers | |
| | C. climbing stems | D. water plants | |
| 193) | For union between stock and scion in grafting which one is the first to occur | | A |
| | A. formation of callus | B. production of plasmodesmata | |
| | C. differentiation of new vascular tissues | D. regeneration of cortex and epidermis | |
| 194) | Angular collenchyma occurs in | | A |
| | A. Cucurbita | B. Helianthus | |
| | C. Althaea | D. Salvia | |
| 195) | A narrow layer of thin walled cells found between phloem/bark and wood of a dicot is | | B |
| | A. cork cambium | B. vascular cambium | |
| | C. endodermis | D. pericycle | |
| 196) | Which of the following is not true about 'sclereids'? | | A |
| | A. these are groups of living cells | B. these are found in nut shells, guava pulp, pear | |
| | C. these are also called stone cells | D. these are form of sclerenchyma with fibres | |
| 197) | In plants inulin and pectin are | | A |
| | A. reserved material | B. wastes | |
| | C. excretory material | D. insect attracting material | |
| 198) | Four radial vascular bundle are found in | | A |
| | A. dicot root | B. monocot root | |
| | C. dicot stem | D. monocot stem | |
| 199) | Axillary bud and terminal bud derived from the activity of | | C |
| | A. lateral meristem | B. intercalary meristem | |
| | C. apical meristem | D. parenchyma | |
| 200) | Diffuse porous woods are characteristic of plants growing in | | D |
| | A. alpine region | B. cold winter regions | |
| | C. temperate climate | D. tropics | |
| 201) | Immature vegetative or floral shoot or both, often covered by scales: | | A |
| | A. Bud | B. Flower | |
| | C. Fruit | D. Seed | |
| 202) | Matured ovule of seed plants. | | D |
| | A. Bud | B. Flower | |
| | C. Fruit | D. Seed | |
| 203) | Matured ovary of flowering plants, with or without accessory Parts | | C |
| | A. Bud | B. Seed Flower | |
| | C. Fruit | D. | |
| 204) | A usually low, soft, or coarse plant with annual aboveground stems | | D |
| | A. Liana | B. Shrub | |
| | C. Vine | D. Herb | |
| 205) | An immature shoot. | | A |
| | A. Bud | B. Flower | |
| | C. Fruit | D. Seed | |
| 206) | A pore in the bark. | | A |
| | A. Lenticel | B. Node | |
| | C. Leaf Scar | D. Bud | |

| | | | | | |
|------|--|----------------------------|----|----------------------------|---|
| 207) | A short shoot on which flowers and fruits or leaves are borne. | | | | A |
| | A. | Spur | B. | Scape | |
| | C. | Sclerocauly | D. | None of these | |
| 208) | System of plant taxonomy presents "taxonomic systems" used mostly in plant classification | | | | D |
| | A. | Adanson system | B. | Lindley system | |
| | C. | de Jussieu system | D. | Linnaeus systems | |
| 209) | Vegetation types in the Punjab can broadly be divided into: | | | | D |
| | A. | Indus Plain Region | B. | Upland Plateau | |
| | C. | Mountainous Region | D. | All of these | |
| 210) | <i>Schools of Thought in Evolutionary Biology</i> | | | | D |
| | A. | Classical Evolutionary | B. | Phenetic | |
| | C. | Cladistic | D. | All of these | |
| 211) | Comparison of ontogeny: | | | | D |
| | A. | Root development | B. | seed development | |
| | C. | Biogeography | D. | embryo development | |
| 212) | A character that is not much changed from the same character in an ancestral form is said to be primitive, and also: | | | | D |
| | A. | synapomorphy | B. | symplesiomorphy | |
| | C. | apomorphy | D. | plesiomorphy | |
| 213) | Poaceae family is: | | | | A |
| | A. | Grass Family | B. | Orchid Family | |
| | C. | Pine Family | D. | Legumes | |
| 214) | some plants hybridize and are fertile, also known as: | | | | A |
| | A. | nothotaxa | B. | hybridtaxa | |
| | C. | neotaxa | D. | athotaxa | |
| 215) | relationships between plants and their evolution, especially at the higher levels | | | | B |
| | A. | Plant taxonomy | B. | plant systematics | |
| | C. | plant evolutionary biology | D. | none of these | |
| 216) | Salicaceae family is also called | | | | D |
| | A. | Pink Family | B. | Goosefoot Family | |
| | C. | Caper family | D. | Willow Family | |
| 217) | Inflorescence of family Cucurbitaceae is: | | | | A |
| | A. | Solitary | B. | cyathium | |
| | C. | Catkin | D. | Spike | |
| 218) | organisms are ranked and classified SOLELY on the basis of | | | | C |
| | A. | recency of common ancestry | B. | recency of shared ancestry | |
| | C. | a&b | D. | none of these | |
| 219) | Analogous characters are also called: | | | | A |
| | A. | homoplasies | B. | Anaplasies | |
| | C. | a&b | D. | none of these | |
| 220) | Chenopodiaceae family is also called | | | | B |
| | A. | Pink Family | B. | Goosefoot Family | |
| | C. | Caper family | D. | Willow Family | |
| 221) | A derived character shared between two or more taxa is known as a: | | | | B |
| | A. | symplesiomorphy | B. | synapomorphy | |
| | C. | a&b | D. | none of these | |
| 222) | A primitive character shared between two or more taxa is known as a: | | | | A |
| | A. | symplesiomorphy | B. | synapomorphy | |
| | C. | a&b | D. | none of these | |
| 223) | Following family is not an economically significant family: | | | | C |
| | A. | Chenopodiaceae | B. | Trochodendraceae | |
| | C. | Magnoliaceae | D. | Ranunculaceae | |
| 224) | Unlike most angiosperms, whose flower parts are in whorls (rings), the following family have their stamens and pistils in spirals on a conical receptacle: | | | | C |

| | | | | | |
|------|---|-----------------------------|----|------------------------|---|
| | A. | Chenopodiaceae | B. | Trochodendraceae | |
| | C. | Magnoliaceae | D. | Ranunculaceae | |
| 225) | Two living species of the following family have secondary xylem without vessel elements, which is quite rare in angiosperms | | | | A |
| | A. | Trochodendraceae | B. | Chenopodiaceae | |
| | C. | Ranunculaceae | D. | All of these | |
| 226) | Ranunculaceae family is also called | | | | C |
| | A. | buttercup family | B. | crowfoot family | |
| | C. | a&b | D. | none of these | |
| 227) | Fruticose is: | | | | A |
| | A. | Shrubby | B. | Upright | |
| | C. | a&b | D. | none of these | |
| 228) | Fastigiate is: | | | | C |
| | A. | Shrubby | B. | Upright | |
| | C. | Strictly erect and parallel | D. | none of these | |
| 229) | Eramous is: | | | | D |
| | A. | Shrubby | B. | Upright | |
| | C. | Strictly erect and parallel | D. | With unbranched stems. | |
| 230) | Creeping or lying flat and rooting at the nodes | | | | D |
| | A. | Trailing | B. | Prostrate | |
| | C. | Ramose | D. | Repent | |
| 231) | Reclining or lying on the ground with the tips ascending | | | | A |
| | A. | Decumbent | B. | Prostrate | |
| | C. | Ramose | D. | Repent | |
| 232) | Wand-like; long, slender, and straight. | | | | C |
| | A. | Decumbent | B. | Prostrate | |
| | C. | Virgate | D. | Repent | |
| 233) | Small corm produced at base of parent corm. | | | | C |
| | A. | Culm | B. | Caudex | |
| | C. | Cormel | D. | Cladode | |
| 234) | A short, thick, vertical or branched perennial stem usually subterranean, or at ground level. | | | | B |
| | A. | Culm | B. | Caudex | |
| | C. | Cormel | D. | Cladode | |
| 235) | Flowering and fruiting stems of grasses and sedges. | | | | A |
| | A. | Culm | B. | Caudex | |
| | C. | Cormel | D. | Cladode | |
| 236) | Small corm produced at base of parent corm. | | | | C |
| | A. | Culm | B. | Caudex | |
| | C. | Cormel | D. | Cladode | |
| 237) | An over-wintering bud, as in Lemna | | | | A |
| | A. | Turion | B. | Tuber | |
| | C. | Tiller | D. | Underground Stolon | |
| 238) | A determinate, elongate, underground propagative stem with long internodes forming a bulb or tuber at the tip. | | | | D |
| | A. | Turion | B. | Tuber | |
| | C. | Tiller | D. | Underground Stolon | |
| 239) | A grass shoot produced from the base of the stem | | | | C |
| | A. | Turion | B. | Tuber | |
| | C. | Tiller | D. | Underground Stolon | |
| 240) | A thick storage stem, usually not upright. | | | | B |
| | A. | Turion | B. | Tuber | |
| | C. | Tiller | D. | Underground Stolon | |
| 241) | Annual rings with vessels or pores more or less evenly distributed | | | | C |

| | | | | | |
|------|--|---------------------|----|-----------------|---|
| | A. | Ring Porous Wood | B. | Non-porous Wood | |
| | C. | Diffuse Porous Wood | D. | None of these | |
| 242) | Annual rings with vessels or pores usually in the spring wood, in a well defined circular band | | | | A |
| | A. | Ring Porous Wood | B. | Non-porous Wood | |
| | C. | Diffuse Porous Wood | D. | None of these | |
| 243) | Annual rings with tracheids only, no vessels produced in spring or summer wood. | | | | B |
| | A. | Ring Porous Wood | B. | Non-porous Wood | |
| | C. | Diffuse Porous Wood | D. | None of these | |
| 244) | Apical growing or meristematic tissue that gives rise to other bud parts. | | | | D |
| | A. | Scale | B. | Primordium | |
| | C. | Bud Primordium | D. | Promeristem | |
| 245) | Protective leaf on outside of bud. | | | | A |
| | A. | Scale (b) (c) (d) | B. | Leaf Primordium | |
| | C. | Bud Primordium | D. | Promeristem | |
| 246) | Axillary bud surrounded by base of petiole. | | | | C |
| | A. | Infrapetiolar | B. | Subpetiolar | |
| | C. | a&b | D. | none of these | |
| 247) | Bud appearing apical but is lateral near apex, developing with death or nondevelopment of terminal bud | | | | C |
| | A. | Infrapetiolar | B. | Subpetiolar | |
| | C. | Pseudo-terminal | D. | none of these | |
| 248) | The main axis of a pinnately compound leaf. | | | | D |
| | A. | Rachilla | B. | Ligule | |
| | C. | Stipels | D. | Rachis | |
| 249) | An outgrowth or projection from the top of the sheath, as in the Poaceae | | | | B |
| | A. | Rachilla | B. | Ligule | |
| | C. | Stipels | D. | Rachis | |
| 250) | Paired scales, spines, glands, or blade-like structures at the base of a petiole | | | | C |
| | A. | Rachilla | B. | Ligule | |
| | C. | Stipules | D. | Rachis | |
| 251) | Flowers with radial symmetry and parts arranged at one level; with definite numbers of parts and size | | | | A |
| | A. | Actinomorphic | B. | Paleomorphic | |
| | C. | Zygomorphic | D. | Haplomorphic | |
| 252) | Flowers with bilateral symmetry; parts usually reduced in number and irregular | | | | C |
| | A. | Actinomorphic | B. | Paleomorphic | |
| | C. | Zygomorphic | D. | Haplomorphic | |
| 253) | Actinomorphic with numbers of parts reduced | | | | B |
| | A. | Actinomorphic | B. | Paleomorphic | |
| | C. | Zygomorphic | D. | Haplomorphic | |
| 254) | Sterile stamen, may be modified as a nectary or petaloid structure | | | | A |
| | A. | Staminodium | B. | Staminal Disc | |
| | C. | Male sporophyll | D. | none of these | |
| 255) | With fused stamens and carpels (stigma and style) as in the Orchidaceae | | | | C |
| | A. | Gynostemial | B. | Gynandrial | |
| | C. | Both a and b | D. | none of these | |
| 256) | With filaments fused to corolla, anthers free. | | | | C |
| | A. | Gynostemial | B. | Gynandrial | |
| | C. | Petalostemonous | D. | none of these | |
| 257) | With several groups of stamens connate by their filaments. | | | | D |
| | A. | Gynostemial | B. | Gynandrial | |
| | C. | Petalostemonous | D. | Polydelphous | |
| 258) | With filaments fused to corolla, anthers free. | | | | A |
| | A. | Petalostemonou | B. | Gynandrial | |
| | C. | Petalostemonous | D. | Polydelphous | |

| | | | | | |
|------|---|-----------------------|----|----------------------|---|
| 259) | Anther attached dorsally and medially to apex of filament. | | | | A |
| | A. | Dorsifixed | B. | Subbasifixed | |
| | C. | Basifixed. | D. | none of these | |
| 260) | Anther attached near its base to apex of filament | | | | B |
| | A. | Dorsifixed | B. | Subbasifixed | |
| | C. | Basifixed. | D. | none of these | |
| 261) | Anther attached at its base to apex of filament. | | | | C |
| | A. | Dorsifixed | B. | Subbasifixed | |
| | C. | Basifixed. | D. | none of these | |
| 262) | Outermost layer of pericarp | | | | C |
| | A. | Ectocarp | B. | Exocarp | |
| | C. | Both a and b | D. | none of these | |
| 263) | Floral axis extension between adjacent carpels, as in the Apiaceae. | | | | D |
| | A. | Ectocarp | B. | Exocarp | |
| | C. | Mericarp | D. | Carpophore | |
| 264) | A portion of fruit that seemingly matured as a separate fruit. | | | | C |
| | A. | Ectocarp | B. | Exocarp | |
| | C. | Mericarp | D. | Carpophore | |
| 265) | Persistent septum after dehiscence of fruits, as in the Brassicaceae. | | | | A |
| | A. | Replum | B. | Exocarp | |
| | C. | Mericarp | D. | Carpophore | |
| 266) | A persistent indurated, hook-like funiculus in the fruits of Acanthaceae | | | | B |
| | A. | Replum | B. | Retinaculum | |
| | C. | Mericarp | D. | Carpophore | |
| 267) | An achene derived from a one-loculed, inferior ovary. | | | | A |
| | A. | Cypsela | B. | Achene | |
| | C. | Caryopsis | D. | Balausta | |
| 268) | Many-seeded, many- loculed indehiscent fruit with a tough, leathery pericarp, as in Punica | | | | D |
| | A. | Cypsela | B. | Achene | |
| | C. | Caryopsis | D. | Balausta | |
| 269) | A one-seeded, dry, indehiscent fruit with seed attached to fruit wall at one point only, derived from a one-loculed superior ovary. | | | | B |
| | A. | Cypsela | B. | Achene | |
| | C. | Caryopsis | D. | Balausta | |
| 270) | A hard one-loculed dry fruit derived from an inferior ovary, as in Quercus. | | | | D |
| | A. | Cypsela | B. | Achene | |
| | C. | Caryopsis | D. | Calybium | |
| 271) | Fruits on a common axis that are usually coalesced and derived from the ovaries of several flowers, as in Morus | | | | a |
| | A. | Sorosis | B. | Bibacca | |
| | C. | Etaerio | D. | Syconium | |
| 272) | Fruits derived from simple or compound ovaries and some non-ovarian tissues | | | | A |
| | A. | Accessory Fruit Types | B. | Multiple Fruit Types | |
| | C. | Aggregate Fruit Types | D. | Conocarpium | |
| 273) | taxonomy was a system of grouping unrelated plant species by a common criteria | | | | B |
| | A. | Natural | B. | Artificial | |
| | C. | evolutionary taxonomy | D. | none of these | |
| 274) | : classification reflects evolutionary relationships | | | | A |
| | A. | Natural | B. | Artificial | |
| | C. | evolutionary taxonomy | D. | none of these | |
| 275) | Method of classifying plants based on a limited number of their physical and sexual characteristics | | | | B |
| | A. | Natural | B. | Artificial | |
| | C. | evolutionary taxonomy | D. | none of these | |
| 276) | Plants that perform their entire life cycle from seed to flower to seed within a single growing season | | | | D |

| | | | |
|------|---|------------------------------------|---|
| | A. Annual/Perennial | B. Biennials | |
| | C. Perennials | D. Annuals | |
| 277) | A plant can behave as an annual or a perennial depending on local climatic and geographic growing conditions | | B |
| | A. Annual/Perennial | B. Biennials | |
| | C. Perennials | D. Annuals | |
| 278) | Plants which require two years to complete their life cycle. | | D |
| | A. Annual/Perennial | B. Biennials | |
| | C. Perennials | D. Annuals | |
| 279) | This family have a cosmopolitan distribution, and are found everywhere except Antarctica and the extreme Arctic | | B |
| | A. Chenopodiaceae | B. Asteraceae | |
| | C. Magnoliaceae | D. Ranunculaceae | |
| 280) | Family name, Compositae, comes from the fact that what appears to be a single flower, is actually a | | A |
| | A. composite of smaller flowers | B. composite of single flowers | |
| | C. composite of many flowers | D. none of these | |
| 281) | The older family name, of family Asteraceae is: | | b |
| | A. Chenopodiaceae | B. Compositae | |
| | C. Magnoliaceae | D. Ranunculaceae | |
| 282) | The cluster of flowers that may appear to be a single flower, is called a | | B |
| | A. composit | B. head | |
| | C. rays | D. star | |
| 283) | Euphorbiaceae family is: | | A |
| | A. spurge family | B. Orchid Family | |
| | C. Pine Family | D. Legumes | |
| 284) | some Euphorbiaceae family members are succulent and resemble cacti because of | | A |
| | A. convergent evolution | B. divergent evolution | |
| | C. coevolution | D. none of these | |
| 285) | Lamiaceae family is: | | D |
| | A. Labiatae | B. mint | |
| | C. deadnettle | D. all of these | |
| 286) | In family _____ flowers typically have petals fused into an upper lip and a lower lip | | C |
| | A. Chenopodiaceae | B. Compositae | |
| | C. Lamiaceae | D. Ranunculaceae | |
| 287) | The seeds bear a u-shaped line (pleurogram) in family: | | C |
| | A. Chenopodiaceae | B. Compositae | |
| | C. Fabaceae | D. Ranunculaceae | |
| 288) | The Cyperaceae are a family of monocotyledonous graminoid flowering plants known as | | B |
| | A. grasses | B. sedges | |
| | C. rushes | D. none of these | |
| 289) | Features distinguishing members of the sedge family from grasses or rushes are stems with | | D |
| | A. quadangular | B. hexagonal | |
| | C. pentagonal | D. triangular | |
| 290) | Features distinguishing members of the sedge family from grasses or rushes are leaves that are | | A |
| | A. spirally arranged in three ranks | B. alternate in three ranks | |
| | C. alternate arranged in five ranks | D. spirally arranged in many ranks | |
| 291) | Grasses have : | | B |
| | A. alternate leaves in one ranks | B. alternate leaves in two ranks | |
| | C. alternate leaves in five ranks | D. alternate leaves in many ranks | |
| 292) | The stems are usually 3-angled and solid in family | | D |
| | A. Chenopodiaceae | B. Compositae | |
| | C. Fabaceae | D. Cyperaceae | |
| 293) | The fruit is a peculiar kind of capsule named siliqua in family: | | D |

| | | | |
|------|--|----------------------|---|
| | A. Chenopodiaceae | B. Compositae | |
| | C. Fabaceae | D. Brassicaceae | |
| 294) | A close relationship between Brassicaceae and Capparaceae, because members of both groups produce: | | A |
| | A. glucosinolate | B. glucoside | |
| | C. Asparticacis | D. salicylic acid | |
| 295) | Which family is characterized by commonly having 5-angled stems and coiled tendrils | | D |
| | A. Chenopodiaceae | B. Compositae | |
| | C. Fabaceae | D. Cucurbitaceae | |
| 296) | The fruit is a type of berry called a pepo in family | | C |
| | A. Chenopodiaceae | B. Compositae | |
| | C. Cucurbitaceae | D. Fabaceae | |
| 297) | Cotton is the only member of this family with documented poisonous properties. | | B |
| | A. Chenopodiaceae | B. Malvaceae | |
| | C. Cucurbitaceae | D. Fabaceae | |
| 298) | Flower: $K^{3-5} Co^5 S^{\infty} P^{(5-8)}$ | | B |
| | A. Chenopodiaceae | B. Malvaceae | |
| | C. Cucurbitaceae | D. Fabaceae | |
| 299) | Sugar beet is source of sugar. About sugar of the world is extracted from sugar beet | | A |
| | A. 1/3 | B. 1/4 | |
| | C. 1/2 | D. 1/7 | |
| 300) | Quinoa seed is sold as a hot cereal at many health food stores; it comes from a species of | | A |
| | A. Chenopodium | B. Suaeda | |
| | C. Kochia | D. Suaeda | |
| 301) | Which of the following is not an igneous rock | | b |
| | A. Granite | B. Slate | |
| | C. option Basalt | D. None of these | |
| 302) | Which of the following component of environment is static | | D |
| | A. Lithosphere | B. Hydrosphere | |
| | C. Atmosphere | D. None of these | |
| 303) | The sphere of life on earth | | D |
| | A. Ecosphere | B. Lifosphere | |
| | C. Geosphere | D. Biosphere | |
| 304) | The layer of land following the earth surface | | A |
| | A. Lithosphere | B. Hydrosphere | |
| | C. Atmosphere | D. Biosphere | |
| 305) | The coolest layer of atmosphere. | | D |
| | A. Thermosphere | B. Troposphere | |
| | C. Stratosphere | D. Mesosphere | |
| 306) | Oligotrophic lakes have good----- | | C |
| | A. Nutrient status | B. Biodiversity | |
| | C. Water quality | D. Both A & B | |
| 307) | The pollution caused by plastic bags are an example of | | C |
| | A. PIPs | B. Primary pollutant | |
| | C. POPs | D. NIPS | |
| 308) | Fungicides are taken up and redistributed through the xylem vessels to the upper parts of the plant. | | C |
| | A. Systemic | B. Contact | |
| | C. Translaminar | D. All of these | |
| 309) | The fixation of atmospheric CO ₂ into wood | | D |
| | A. Quenching | B. Requisitioning | |

| | | | | | |
|------|---|-----------------|----|-----------------|---|
| | C. | Obstaculation | D. | Sequestration | |
| 310) | Which of the following nutrient is lost through volatilization if soil temperature exceeds 25 °C | | | | B |
| | A. | P | B. | N | |
| | C. | Na | D. | K | |
| 311) | Which of the following is an example of fog desert | | | | B |
| | A. | Sonora | B. | Naimb | |
| | C. | Gobi | D. | Sahara | |
| 312) | The permanent clearing of forests from land surface | | | | A |
| | A. | Deforestation | B. | Reforestation | |
| | C. | Noforestation | D. | Afforestation | |
| 313) | According to the UNESCO definition, extreme deserts are classified with D value of | | | | D |
| | A. | > 1 | B. | ≥ 3.4 | |
| | C. | ≤10 | D. | ≥ 10 | |
| 314) | The average rainfall in hyper-arid region is | | | | C |
| | A. | 250-500 mm/year | B. | 100-250 mm/year | |
| | C. | <100 mm/year | D. | >1000 mm/year | |
| 315) | Thal desert is located in | | | | D |
| | A. | Balochistan | B. | KP | |
| | C. | Sindh | D. | Punjab | |
| 316) | The movement of soil particles of size less tha 1.0 to 1.0 mm by wind is called | | | | D |
| | A. | Siltation | B. | Salinization | |
| | C. | Seltation | D. | Saltation | |
| 317) | Strip cropping is practiced on the slopes with the slope greater than | | | | B |
| | A. | >1.5 degree | B. | > 15 degree | |
| | C. | <15 degree | D. | >25 degree | |
| 318) | In wind erosion, a particle of size 15 mm is likely to move by | | | | b |
| | A. | Siltation | B. | Surface creep | |
| | C. | Suspension | D. | Plucking | |
| 319) | Deeper and wider channels cut by running water streams in more uneven areas with moderate slope | | | | A |
| | A. | Gullies | B. | Rills | |
| | C. | Banks | D. | Waterfall | |
| 320) | Trees plantation along with shrubs in one to ten parallel rows | | | | B |
| | A. | Shelter belts | B. | Wind breaks | |
| | C. | Wind throws | D. | Strip breaks | |
| 321) | After harvesting of crops for one or few years, land is left without any crop for a few years during which it regains its fertility by natural processes. | | | | C |
| | A. | Crop Rotation | B. | Sheet flow | |
| | C. | Fallowing | D. | None of these | |
| 322) | Splash Erosion is a type of ----- | | | | A |
| | A. | Water erosion | B. | Wind erosion | |
| | C. | Glacial erosion | D. | None of these | |
| 323) | A horizontal shelf or bench on the side of a hill or on sloping ground | | | | A |
| | A. | Terracing | B. | Basin Listing | |
| | C. | Leveling | D. | None of these | |
| 324) | Soil erosion due to water can be controlled by mechanical methods which include----- | | | | D |
| | A. | Pan Breaking | B. | Leveling | |
| | C. | Terracing | D. | All of these | |
| 325) | The cultivated variety of grasses like <i>Saccharum munja</i> and <i>Cynodon dactylon</i> is | | | | B |
| | A. | 0 | B. | 90-97% | |
| | C. | 1 | D. | 30-50% | |
| 326) | The wetland having acidic, peaty soil with the soil too soft to support heavy objects like trees | | | | D |
| | A. | Fens | B. | Marshes | |
| | C. | Swamps | D. | Bogs | |
| 327) | Wetland are often located as between the two ecosystems | | | | A |

| | | | | | |
|------|--|-------------------|----|-----------------|---|
| | A. | Ecotones | B. | Marginal lands | |
| | C. | Wetlands | D. | Barren lands | |
| 328) | A wetland essentially without trees, associated with flowing water and highly productive in nature | | | | B |
| | A. | Fens | B. | Marshes | |
| | C. | Swamps | D. | Bogs | |
| 329) | A system also called as "Biological Supermarkets" because of the extensive food chain and rich in biodiversity | | | | D |
| | A. | Rangelands | B. | Grasslands | |
| | C. | Forests | D. | Wetlands | |
| 330) | Which of the followings is not a Wetland | | | | A |
| | A. | Dune | B. | Lake | |
| | C. | Pothole | D. | Pond | |
| 331) | The term "telmatology" describes the study of | | | | D |
| | A. | Deserts | B. | Forests | |
| | C. | Environment | D. | Wetlands | |
| 332) | Very cold areas in Arctic regions or meadows at high elevations. | | | | D |
| | A. | Leys | B. | Grassland | |
| | C. | Wetlands | D. | Tundra | |
| 333) | A rainfall range of 25 to 75 cm/year supports -----. | | | | D |
| | A. | Pastures | B. | Tundra | |
| | C. | Wetlands | D. | Grasslands | |
| 334) | An areas where the rainfall is either too low or too variable for dryland crop production. | | | | A |
| | A. | Rangelands | B. | Wetlands | |
| | C. | Farmlands | D. | All of these | |
| 335) | The average area covered by rangelands in Punjab Province, Pakistan | | | | D |
| | A. | 4.9 million ha | B. | 28.5 million ha | |
| | C. | 12.6 m million | D. | 5.8 million ha | |
| 336) | Surface waterlogging is caused when pans are formed below | | | | B |
| | A. | A horizon | B. | B Horizon | |
| | C. | O Horizon | D. | R Layer | |
| 337) | A condition characterized by continuous flooding. | | | | A |
| | A. | Wetland | B. | Grassland | |
| | C. | Tundra | D. | None of these | |
| 338) | Sorghum plant, being able to tolerate a wide range of salinity, may be classified as | | | | A |
| | A. | Euryhaline | B. | Hyper-saline | |
| | C. | Stenohaline | D. | Hypo-saline | |
| 339) | The current level of CO ₂ in atmosphere is approximately | | | | D |
| | A. | 250 ppm | B. | 300 ppm | |
| | C. | 350 ppm | D. | 410 ppm | |
| 340) | Reconstruction of the previous communities from historic data | | | | A |
| | A. | Paleo-climatology | B. | Eco-climatology | |
| | C. | Pedology | D. | Morphology | |
| 341) | Eutrophic Lakes are rich in | | | | A |
| | A. | Nutrients | B. | Toxins | |
| | C. | Oxygen | D. | CFCs | |
| 342) | The largest dessert on the earth is | | | | C |
| | A. | Gobi | B. | Arctic | |
| | C. | Antarctic | D. | Sahara | |
| 343) | High concentration of plant nutrients can causeof water bodies | | | | A |
| | A. | Eutrophication | B. | Plant growth | |
| | C. | Pollution | D. | Good effects | |
| 344) | Unit of electrical conductivity is | | | | B |
| | A. | ECe | B. | dS/m | |

| | | | | | |
|------|---|-------------------------|----|--------------------------|---|
| | C. | m/dM | D. | None of these | |
| 345) | The coldest layer of the atmosphere is | | | | B |
| | A. | Stratosphere | B. | Mesosphere | |
| | C. | Thermosphere | D. | Troposphere | |
| 346) | Where water bodies have the lowest level of biological productivity | | | | B |
| | A. | Oligotrophic | B. | Mesotrophic | |
| | C. | Eutrophic | D. | Hyper-eutrophic | |
| 347) | Which is the example of metamorphic rock | | | | B |
| | A. | Lime stone | B. | Marble | |
| | C. | Sand stone | D. | Granite | |
| 348) | Which is the primary air pollutant | | | | D |
| | A. | Carbon mono-oxide | B. | Carbon dioxide | |
| | C. | Nitrogen | D. | All of these | |
| 349) | Secondary air pollutant is | | | | A |
| | A. | Ozone | B. | Nitrogen | |
| | C. | Carbon dioxide | D. | Carbon monoxide | |
| 350) | Specific gravity of cadmium is | | | | B |
| | A. | 7.65 | B. | 8.65 | |
| | C. | 8.85 | D. | 8.34 | |
| 351) | A plant growing in a plastic bottle containing nutrient solution is an example of | | | | D |
| | A. | Humidfiring | B. | Ebb and flow | |
| | C. | Run to waste | D. | Fogponics | |
| 352) | A soil with 90% silt, 5% clay and 5% sand is classified as | | | | D |
| | A. | Sandy | B. | Clay-Loam | |
| | C. | Loam | D. | Silty | |
| 353) | Expanded clay aggregates are | | | | B |
| | A. | Triangular | B. | Spherical | |
| | C. | Irregular | D. | Square | |
| 354) | Soil with higher base saturation is considered as: | | | | B |
| | A. | Infertile | B. | Fertile | |
| | C. | Acidic | D. | Silty soil | |
| 355) | The E _{Ce} of normal soil is | | | | A |
| | A. | < 2 | B. | > 2 | |
| | C. | < 0.5 | D. | > 32 | |
| 356) | Total number of negatively charged exchangeable sites on clay mineral is its | | | | B |
| | A. | Exchangeable acidity | B. | Cation exchange capacity | |
| | C. | Percent base saturation | D. | Isomorphic substitution | |
| 357) | Which of the following aspects is NOT the function of artificial growing media | | | | C |
| | A. | Aeration | B. | Unrestricted root growth | |
| | C. | Nutrient supply | D. | Support | |
| 358) | Which of the following is a biological growing media? | | | | D |
| | A. | Brick Shard | B. | Soil | |
| | C. | Sand | D. | Rice Husk | |
| 359) | Aeroponic growth refers | | | | A |
| | A. | Air culture | B. | Land culture | |
| | C. | Rotary | D. | None | |
| 360) | All method of growing plants with nutrients solutions are known as : | | | | B |
| | A. | Aeroponic | B. | Hydroponics | |
| | C. | Fogponics | D. | Ebb & flow | |
| 361) | Any material which is suitable for plant growth is | | | | A |
| | A. | Growing medium | B. | Non growing medium | |
| | C. | Artificial medium | D. | None of above | |
| 362) | The pH of sand and peat are: | | | | A |

| | | | | | |
|------|--|--------------------------|----|------------------------------|---|
| | A. | Acidic | B. | Neutral | |
| | C. | Basic | D. | Slightly basic | |
| 363) | 1 bar is equal to | | | | B |
| | A. | 14.2 pounds | B. | 14.5 pounds | |
| | C. | 13.4 pounds | D. | 13.8 pounds | |
| 364) | A thermocouple psychrometer works on the principle of | | | | D |
| | A. | Beer's Law | B. | Scholander law | |
| | C. | Chardakov law | D. | Peltier Effect | |
| 365) | As the solute concentration increase, the value of osmotic potential become | | | | B |
| | A. | Positive | B. | Negative | |
| | C. | Neutral | D. | Zero | |
| 366) | In roots, cortex and endodermis are separated by | | | | A |
| | A. | Casparian strips | B. | Plasmodesmata | |
| | C. | Plasma membrane | D. | Epithelium | |
| 367) | Gravitational potential is always | | | | B |
| | A. | Positive | B. | Highly negative | |
| | C. | Negative and negligible | D. | None of these | |
| 368) | In symplastic path way water moves through | | | | A |
| | A. | Plasmodesmata | B. | Vacuole | |
| | C. | Cell wall | D. | Xylem | |
| 369) | Matric potential is negligible at | | | | A |
| | A. | At high tissue hydration | B. | Cell water below 60% | |
| | C. | At low tissue hydration | D. | Cell water below 40 % | |
| 370) | Mature cell cytoplasm contain water | | | | C |
| | A. | 2-4% | B. | 3-7% | |
| | C. | 5-10% | D. | 6-12% | |
| 371) | Plasmolytic method is used to measure | | | | A |
| | A. | Osmotic potential | B. | Turgor pressure | |
| | C. | Matric potential | D. | Gravitational method | |
| 372) | <i>Psuchron</i> is a Greek words meaning | | | | C |
| | A. | To Measure | B. | Pressure | |
| | C. | Cold | D. | Sugar | |
| 373) | The connections between the adjoining cells are | | | | C |
| | A. | Plasmid | B. | Plasmolysis | |
| | C. | Plasmodesmata | D. | Plasma lemma | |
| 374) | The movement of water through cell wall is | | | | B |
| | A. | Symplastic pathway | B. | Apoplastic pathway | |
| | C. | Translaminar pathway | D. | Both A and C | |
| 375) | Value of water potential is zero when the cell is | | | | B |
| | A. | Flaccid | B. | Shrink | |
| | C. | Negative | D. | More negative | |
| 376) | Pressure Chamber method was first introduced by | | | | A |
| | A. | Henry Dixon | B. | San Diego | |
| | C. | Trinity | D. | P. Scholander | |
| 377) | Water potential can be measured by | | | | D |
| | A. |) Pressure probe | B. | Indirect method | |
| | C. | Volume method | D. | Plasmolytic method | |
| 378) | An IRGA is | | | | D |
| | A. | InfRa Gas Analyzer | B. | Infra-Red Geometric Analyzer | |
| | C. | Infra-Red Gas Acquitter | D. | Infra-Red Gas Analyzer | |
| 379) | Chlorophyll b is more soluble than chlorophyll a in polar solvent because of its | | | | B |
| | A. | Carbonyl group | B. | Hydrogen bound | |
| | C. | Hydroxyl group | D. | None of these | |

| | | | | | |
|------|--|----|-------------------------|--|---|
| 380) | Ci/Ca ratio obtained by dividing the value of Ci by | | | | C |
| A. | H-bonding | B. | A/Pn | | |
| C. | Ambient Carbon dioxide concentration | D. | Ci | | |
| 381) | The partial pressures of CO ₂ in intra cellular spaces is | | | | A |
| A. | Ci | B. | CO | | |
| C. | CO ₂ i | D. | Ca | | |
| 382) | Transpiration ratio is reciprocal of | | | | C |
| A. | Stomatal conductance | B. | Ci ratio | | |
| C. | Evaporation | D. | WUE | | |
| 383) | Which of the following groups is likely to have the highest water use efficiency | | | | C |
| A. | C ₃ | B. | C ₄ | | |
| C. | CAM | D. | C ₅ | | |
| 384) | Carotenoids are estimated according to the method of | | | | A |
| A. | Arn | B. | Davis | | |
| C. | Scholander | D. | Hoagland | | |
| 385) | Chl b occurs in | | | | B |
| A. | Higher plants | B. | Cyanobacteria | | |
| C. | Brown algae | D. | Diatoms | | |
| 386) | Greek word khloros mean | | | | C |
| A. | Pale blue | B. | Pale yellow | | |
| C. | Pale green | D. | Pale brown | | |
| 387) | Leaf chlorophyll absorbs | | | | A |
| A. | Red light | B. | Infrared light | | |
| C. | A and B | D. | None of these | | |
| 388) | The carbonyl group is found in chlorophyll | | | | B |
| A. | C | B. | A | | |
| C. | B | D. | Both (b) and c | | |
| 389) | The reaction center | | | | A |
| A. | P680 and P700 | B. | P480 and P600 | | |
| C. | P600 and P780 | D. | P280 and P400 | | |
| 390) | The reflectance of Chlorophyll a is in | | | | D |
| A. | Violet-blue | B. | Green /yellow | | |
| C. | Orange-red light | D. | Both (a) and (c) | | |
| 391) | For the detection of Alkaloids, the typical GC column temperature is | | | | B |
| A. | 200 oC | B. | 450 oC | | |
| C. | 350 oC | D. | 250 oC | | |
| 392) | In normal phase chromatography, molecules are separated according to their | | | | A |
| A. | Decreasing polarity | B. | Hydrophobic-Interaction | | |
| C. | Hydrophilic-Interaction | D. | Increasing polarity | | |
| 393) | Eosin y is used for staining | | | | A |
| A. | Cytoplasm | B. | Cell walls | | |
| C. | Mitochondria | D. | Chromosomes | | |
| 394) | Microtome is used for sample | | | | B |
| A. | Flame photometry | B. | Section cutting | | |
| C. | Electrophoresis | D. | Blotting | | |
| 395) | Basic fixation images is used for studies of | | | | A |
| A. | Mitochondrial | B. | Cytoplasmic | | |
| C. | Chromatin | D. | Both a and b | | |
| 396) | Infiltration means: | | | | C |
| A. | Removal of xylol | B. | Dehydration | | |
| C. | Clearing | D. | Removal of wax | | |
| 397) | In flame photometer the elements are detected by | | | | B |
| A. | Flame heat | B. | Flame color | | |

| | | | | | |
|------|---|---|----|--|---|
| | C. | Flame size | D. | Flame intensity | |
| 398) | Spectrometry is a technique that measure the ---of electromagnetic radiation | | | | A |
| | A. | Wavelength | B. | Length | |
| | C. | Wirth | D. | Diameter | |
| 399) | The spectroscopy technique use to measure the: | | | | B |
| | A. | Temperature | B. | Concentration | |
| | C. | Pressure | D. | volume | |
| 400) | . Automizer is the part of | | | | C |
| | A. | Optical atomic Refractors | B. | Visible spectrometer | |
| | C. | Atomic absorption spectrometer | D. | UV spectrometer | |
| 401) | . The natural residence of every organism is known as: | | | | D |
| | A. | Biome | B. | Niche | |
| | C. | Habit | D. | Habitat | |
| 402) | What is the name of the feature that allows organisms to survive in the conditions of its habitat? | | | | B |
| | A. | Adjustment | B. | Adaptation | |
| | C. | Acclimatisation | D. | Adaptive variation | |
| 403) | Shelford's law of tolerance is named after: | | | | C |
| | A. | James Shelford | B. | Jacob Shelford | |
| | C. | Ernest Shelford | D. | None of these | |
| 404) | Shelford's law of tolerance suggests that organisms with a wide tolerance limit for environmental factors show: | | | | B |
| | A. | Narrow distribution with low population | B. | Wide distribution with high population | |
| | C. | Wide distribution with high population | D. | Narrow distribution with high population | |
| 405) | Wide variety of living organisms is called: | | | | A |
| | A. | Biodiversity | B. | Population | |
| | C. | Habitat | D. | Diversity | |
| 406) | Animal adopt a similar state like sleep to reduce their metabolic rate, it is called: | | | | C |
| | A. | Migration | B. | Transpiration | |
| | C. | Hibernating | D. | None of these | |
| 407) | Hyenas and Vultures are | | | | B |
| | A. | Omnivorous | B. | Scavengers | |
| | C. | Carnivorous | D. | Herbivorous | |
| 408) | A mutual relationship between two organisms, where both of them are benefitting from watch other is called: | | | | A |
| | A. | Mutualism | B. | Symbiosis | |
| | C. | Parasitism | D. | Food chain | |
| 409) | Which is not a feature of heliophyte among the following? | | | | A |
| | A. | Stem with long internodes | B. | Numerous rootlets | |
| | C. | Long lateral roots | D. | Vigorous fruiting and flowering | |
| 410) | Which of the following is not a feature of 'r' selected species? | | | | D |
| | A. | Reproduce quickly | B. | The low survival rate of progenies | |
| | C. | Reproduce a large number of progenies | D. | Paternal care | |
| 411) | The term ecosystem was proposed by | | | | B |
| | A. | Lindeman | B. | Tansley | |
| | C. | Grinnel | D. | Turesson | |
| 412) | What is the percentage of oxygen and carbon dioxide exists in the ecosystem? | | | | B |
| | A. | 20.95% and 0.004% | B. | 20.95% and 0.04% | |
| | C. | 20.0% and 0.40% | D. | 20.0% and 0.44% | |
| 413) | Which of the following is the smallest artificial ecosystem that has sustained for a long period? | | | | B |
| | A. | Folsom pond | B. | Folsom bottle | |
| | C. | Folsom stream | D. | None of these | |
| 414) | group of species exploits the biotic and abiotic resources in the same way. | | | | D |
| | A. | Community | B. | Ecads | |
| | C. | Biomes | D. | Guild | |

| | | | | |
|------|--|--|----|---|
| 415) | Which is/are the abiotic components of an ecosystem? | | D | |
| | A. | Soil | B. | Protein |
| | C. | Carbon | D. | All of the above |
| 416) | The set of ecosystems is called | | C | |
| | A. | Atmosphere | B. | Hydrosphere |
| | C. | Biosphere | D. | None of the above |
| 417) | Acid rain is a result of: | | C | |
| | A. | Excess amount CO ₂ | B. | Excess amount of NH ₃ |
| | C. | Excess amount of SO ₂ and NO ₂ | D. | Excess carbon monoxide |
| 418) | The greenhouse effect in the atmosphere is produced due to: | | A | |
| | A. | Absorption and re-emission of infrared radiation by the atmosphere | B. | Absorption and re-emission of ultraviolet radiation by the atmosphere |
| | C. | Absorption and re-emission of visible light by the atmosphere | D. | Absorption and re-emission of visible light by clouds |
| 419) | The result of acid disposition is: | | A | |
| | A. | Dying forests and lakes | B. | Acid indigestion in humans |
| | C. | Greenhouse effect lessens | D. | All of these |
| 420) | The reason of soil pollution is | | D | |
| | A. | Ozone | B. | Aerosol |
| | C. | PAN | D. | Acid rain |
| 421) | The force that initiates evolution is | | A | |
| | A. | Variation | B. | Mutation |
| | C. | Extinction | D. | Adaptation |
| 422) | _____ is a vestigial organ | | C | |
| | A. | Intestinal villi | B. | Papillae |
| | C. | Vermiform appendix | D. | None of the above |
| 423) | The earliest geological time period among the following is | | A | |
| | A. | Cambrian | B. | Permian |
| | C. | Jurassic | D. | Quaternary |
| 424) | The experiment that simulated conditions thought to be present on the early earth. | | C | |
| | A. | Hershey–Chase experiment | B. | Geiger–Marsden experiment |
| | C. | Miller–Urey experiment | D. | Schiehallion experiment |
| 425) | Example of a homologous organ | | A | |
| | A. | The arm of a human, wing of a bird | B. | Wing of an insect, wing of a bird |
| | C. | Leg of a dog, leg of a spider | D. | None of the above |
| 426) | Primordial soup is a set of hypothetical conditions on ancient earth first proposed by | | B | |
| | A. | Dmitri Ivanovsky | B. | Alexander Oparin |
| | C. | Dmitry Anuchin | D. | Nikolay Shatsky |
| 427) | Which condition can be explained by Lamarckism? | | D | |
| | A. | How giraffes got their long neck | B. | How humans lost their tail |
| | C. | How humans became bipedal | D. | All of the above |
| 428) | Observation of species on _____ heavily inspired Darwin's theory of evolution. | | D | |
| | A. | Ilha da Queimada Grande | B. | Guatemala |
| | C. | Faroe Islands | D. | Galapagos Islands |
| 429) | _____ was considered as a missing link between reptiles and birds. | | A | |
| | A. | Archaeopteryx | B. | Pteranodon |
| | C. | Avimimus | D. | Caudipteryx |
| 430) | The oldest mineral discovered so far was _____, which dates back to 4.4 billion years. | | B | |
| | A. | Iron | B. | Zircon |
| | C. | Cadmium | D. | Silicon |
| 431) | Pidgeon, platypus and panda are | | A | |
| | A. | Homeothermic | B. | Poikilothermic |
| | C. | Hyperthermic | D. | None of the above |
| 432) | The last common ancestor of humans is | | A | |

| | | | | | |
|------|--|--|----|--|---|
| | A. | Pan troglodytes | B. | Homo neanderthalensis | |
| | C. | Lemuroidea | D. | Dromaeosaurus | |
| 433) | An example of convergent evolution is | | | | A |
| | A. | Wing of Hawkmoths, the wing of hawks | B. | Teeth of domestic dog, teeth of a wolf | |
| | C. | Wings of Geospiza magnirostris, wings of Geospiza fortis | D. | None of the above | |
| 434) | On the Origin of Species was written by | | | | A |
| | A. | Charles Darwin | B. | Ludmila Kuprianova | |
| | C. | Mikhail A. Fedonkin | D. | None of the above | |
| 435) | When did dinosaurs die off? | | | | B |
| | A. | 105.1 million years ago | B. | 65.5 million years ago | |
| | C. | 75.5 million years ago | D. | None of the above | |
| 436) | Scientist estimate the age of earth or fossils by studying of | | | | B |
| | A. | Sedimentary rocks | B. | Isotopes | |
| | C. | Epochs | D. | Fossils | |
| 437) | Who stated that fossils are not related to modern organism but they are from previous era. | | | | A |
| | A. | Charles bonnet | B. | Charles darwin | |
| | C. | Lamarck | D. | Carlous linnaeous | |
| 438) | Who wrote an assay on population growth? | | | | C |
| | A. | Charles Lyell | B. | James hutton | |
| | C. | Malthus | D. | Charles bonnet | |
| 439) | When hybrid is viable but their adults are sterile known as | | | | C |
| | A. | A. Haybrid viability | B. | Haybrid inviability | |
| | C. | Haybrid sterility | D. | Haybrid breakdown | |
| 440) | Which one is a polygeneic trait? | | | | D |
| | A. | Frickles | B. | Dimples | |
| | C. | Taste ptc | D. | Height | |
| 441) | The group of subpopulations remains within the habitat of an original population but enters a different niche. | | | | C |
| | A. | Allopatric speciation | B. | Sympatric speciation | |
| | C. | Parapatric speciation | D. | Peripatric speciation | |
| 442) | Mimicry in butterflies or insects is an example of | | | | A |
| | A. | Convergent evolution | B. | Divergent evolution | |
| | C. | Microevolution | D. | Macroevolution | |
| 443) | Wings of all flying animals looks very similar because of | | | | A |
| | A. | Law of aerodynamics | B. | Homologous structure | |
| | C. | Analogous structure | D. | Vestigious structure | |
| 444) | The term coevolution was coined by Ehrlich and Raven in | | | | B |
| | A. | Nineteen sixty five | B. | Nineteen sixty four | |
| | C. | Nineteen sixty three | D. | Nineteen seventy three | |
| 445) | <i>Didelphus</i> pretend which type of mimicry. | | | | B |
| | A. | Protective | B. | Concious | |
| | C. | Mullerian | D. | Automimicry | |
| 446) | In which type of evolution natural selection develop analogous features in different species. | | | | D |
| | A. | Coevolution | B. | parallel evolution | |
| | C. | Divergent evolution | D. | Convergent evolution | |
| 447) | Compression of thick accumulation of plant debris consists of | | | | D |
| | A. | Peat | B. | Lignite | |
| | C. | Coal | D. | All of these | |
| 448) | are the largest spanning time periods. | | | | C |
| | A. | Eras | B. | Epochs | |
| | C. | Eons | D. | Periods | |
| 449) | are the simple conducting cells of water and minerals. | | | | B |
| | A. | Leptoids | B. | Hydroids | |

| | | | | | |
|------|--|-----------------------|----|--------------------|---|
| | C. | Rhizoids | D. | None of these | |
| 450) | is the superb preservation of the plant and animal material. | | | | B |
| | A. | Aglaophyton | B. | Rhynie chert | |
| | C. | Geological time scale | D. | None of these | |
| 451) | Eurypteris is the state fossil of | | | | A |
| | A. | New york | B. | Aberdeenshire | |
| | C. | Scotland | D. | Brazile | |
| 452) | First globally successful group of plant on earth. | | | | B |
| | A. | Rhyniophytes | B. | Lycophytes | |
| | C. | Euphyllophytes | D. | None of these | |
| 453) | True roots evolve for the first time in group. | | | | C |
| | A. | Rhyniophytes | B. | Lycophytes | |
| | C. | Zoosterophylls | D. | Club mosses | |
| 454) | Which group of plants have evolved prickles on stem? | | | | C |
| | A. | Rhyniophytes | B. | Club moss | |
| | C. | Zoosterophyllopsida | D. | Anthoceropsidea | |
| 455) | Which group of plants had extinct calamites. | | | | C |
| | A. | Horse tails | B. | Ferns | |
| | C. | Drepanophyte | D. | Spike moss | |
| 456) | Connecting axis between dichotomies are known as | | | | B |
| | A. | Telome | B. | Mesome | |
| | C. | Telome truss | D. | Sterile telome | |
| 457) | Which one is monocarpic plant. | | | | A |
| | A. | Agave americana | B. | Rosa chinensis | |
| | C. | Tecoma stans | D. | Calotropis procera | |
| 458) | is the first discovered tree fern on earth. | | | | B |
| | A. | Calamites | B. | Psaronius | |
| | C. | Garden fern | D. | Eospermatopteris | |
| 459) | An evidence of previous life, either direct or indirect known as | | | | A |
| | A. | Fossils | B. | Evolution | |
| | C. | Coevolution | D. | None of these | |
| 460) | Direct fossils evidence provided information about | | | | D |
| | A. | Morphology | B. | Anatology | |
| | C. | Ultra structure | D. | All of these | |
| 461) | are the plant parts that have suffered the physical deformation. | | | | B |
| | A. | Impression | B. | Compression | |
| | C. | Cast | D. | Mold | |
| 462) | Number of eons have been evolved in history of earth. | | | | B |
| | A. | Five | B. | Four | |
| | C. | Six | D. | Three | |
| 463) | is the periode in which diversification of land has been occurred. | | | | A |
| | A. | Silurian | B. | Ordovician | |
| | C. | Cambrian | D. | Permian | |
| 464) | Unequal branching that creates a upright stature of branches. | | | | C |
| | A. | Isotomous | B. | Anisotomous | |
| | C. | Pseudomonopodial | D. | All of these | |
| 465) | Telome theory was proposed by | | | | A |
| | A. | Walter zimmermann | B. | Charles darwin | |
| | C. | John ray | D. | Gregor Mendel | |
| 466) | Modern ferns are known as the | | | | A |
| | A. | Polypodiidae | B. | Calamites | |
| | C. | Horsetail | D. | Psilophyton | |
| 467) | is the first discovered tree on the earth. | | | | D |

| | | | | | |
|------|---|------------------------------------|----|------------------------|---|
| | A. | Calamites | B. | Psaronius | |
| | C. | Garden fern | D. | Eospermatopteris | |
| 468) | Range of air borne pollen grain is | | | | D |
| | A. | 100 to 200um | B. | 25 to 49um | |
| | C. | More than 200um | D. | 10 to 80um | |
| 469) | Pollen shapes were classified on the basis of | | | | C |
| | A. | Polar axis | B. | Equitorial diameter | |
| | C. | Polar axis and equitorial diameter | D. | Proximal axis | |
| 470) | First cell of gametophyte generation is | | | | C |
| | A. | Microspore | B. | Megaspore | |
| | C. | Spore | D. | Oospore | |
| 471) | Pollens having ill-defined pores in their polar region known as | | | | D |
| | A. | Sulcate | B. | Zonosulcate | |
| | C. | Culpate | D. | Ulcerate | |
| 472) | When exine of pollen grain raised in the form of ridges such structure known as | | | | B |
| | A. | Saccus | B. | Lophae | |
| | C. | Tectum | D. | Collumella | |
| 473) | In which type of pollens tectum is completely absent due to large spaces. | | | | D |
| | A. | Saccate | B. | Alveolate | |
| | C. | Lophate | D. | Fenestrate | |
| 474) | When apertures arranged at equatorial region of pollen. | | | | A |
| | A. | Zono | B. | Peri | |
| | C. | Colpi | D. | Sulci | |
| 475) | Slit like aperture situated at proximal end of pollens. | | | | B |
| | A. | Amb | B. | Lete | |
| | C. | Laesurae | D. | Margo | |
| 476) | A distinct thickening of the exine bordering the aperture known as | | | | B |
| | A. | Amb | B. | Margo | |
| | C. | Costa | D. | Laesurae | |
| 477) | Laesurae may be | | | | D |
| | A. | Monolete | B. | Dilete | |
| | C. | Trilete | D. | All of these | |
| 478) | Pollens are released in the form of pollinia in | | | | A |
| | A. | Calotropis procera | B. | Cynodon dactylon | |
| | C. | Tecoma stans | D. | Rosa chinensis | |
| 479) | are the best tool for biostratigraphic study. | | | | C |
| | A. | Seeds | B. | Flowers | |
| | C. | Pollens | D. | Ovules | |
| 480) | Fossilized primitive spores first appear in the fossil record | | | | A |
| | A. | Cryptospores | B. | Scolecodonts | |
| | C. | Palynodebris | D. | Varia | |
| 481) | Meridional ridges of pollen are stated as | | | | B |
| | A. | Sacci | B. | Plicae | |
| | C. | Culpi | D. | Lacunae | |
| 482) | The member of family malvaceae is | | | | B |
| | A. | Rosa chinensis | B. | Hibiscus rosa sinensis | |
| | C. | Tecoma stans | D. | Calotropis procera | |
| 483) | Wide spreading roots that support the very tall emergent and canopy trees | | | | D |
| | A. | Adventitious roots | B. | Tap roots | |
| | C. | Ephemerals | D. | Buttress roots | |
| 484) | A circle around the earth run parallel to the north of equator | | | | A |
| | A. | Tropic of cancer | B. | Tropic of capricorn | |
| | C. | Equator | D. | Polar | |

| | | | | | |
|------|---|-------------------------------|----|-------------------------------|---|
| 485) | The distribution of individual among the species known as | | | | B |
| | A. | Richness | B. | Evenness | |
| | C. | Diversity | D. | Diversity indices | |
| 486) | Amount of species turn over along the ecological gradient known as | | | | B |
| | A. | Alpha diversity | B. | Beta diversity | |
| | C. | Gama diversity | D. | Diversity indices | |
| 487) | Climate of Pakistan is almost | | | | B |
| | A. | Tropical | B. | Subtropical | |
| | C. | Warm temperate | D. | Cold temperate | |
| 488) | Pakistan geographically divided in to types of vegetation's | | | | C |
| | A. | Seven | B. | Eleven | |
| | C. | Nine | D. | Five | |
| 489) | Which area is known by name of jewel of Pakistan | | | | C |
| | A. | Eastern | B. | Western | |
| | C. | Northern | D. | Southern | |
| 490) | The largest genus with more number of endemic species is | | | | A |
| | A. | Astragalus | B. | Poa | |
| | C. | Rosa | D. | Eucalyptus | |
| 491) | Area along the coastline and highly influenced by freshwater bodies known as | | | | C |
| | A. | Wetalnd | B. | Salt marshes | |
| | C. | Mangroves | D. | Saline wasteland | |
| 492) | <i>Houbara bustard</i> is the provisional bird of | | | | A |
| | A. | Baluchitan | B. | Sindh | |
| | C. | Punjab | D. | Kpk | |
| 493) | Which one is national mammal of Pakistan | | | | C |
| | A. | Marco polo sheep | B. | Markhor | |
| | C. | Indus dolphin | D. | Black bear | |
| 494) | Number of non-governmental agencies involved in biodiversity conservation of Pakistan | | | | C |
| | A. | Four | B. | Five | |
| | C. | Three | D. | Two | |
| 495) | Number of countries signed at rio de jenerio under nineteenth century in convention of biological diversity | | | | D |
| | A. | 150 | B. | 155 | |
| | C. | 153 | D. | 154 | |
| 496) | <i>Parthenium hysterophorus</i> was introduce as allien species in Pakistan through | | | | B |
| | A. | Sand dunes | B. | Accidental | |
| | C. | Ornamental | D. | Water garden plant | |
| 497) | One of the major of loss of biodiversity is | | | | A |
| | A. | Overpopulation | B. | Dams building | |
| | C. | Floods | D. | All of these | |
| 498) | Biological resources fulfils the needs of poor people's | | | | A |
| | A. | Eighty percent | B. | Fourty percent | |
| | C. | Seventy percent | D. | Fifty percent | |
| 499) | Areas with extremely high level of biodiversity known as | | | | B |
| | A. | Endemism | B. | Hotspots | |
| | C. | Ecosystem | D. | Biomes | |
| 500) | The wetlands can be used effectively by means of | | | | D |
| | A. | Conservation | B. | Sustainable development | |
| | C. | Ecosystem approaches | D. | All of these | |
| 501) | By semi-autonomous metabolic compartment, we mean that for functions it is | | | | B |
| | A. | A. not dependent upon nucleus | B. | partly dependent upon nucleus | |
| | C. | fully dependent upon nucleus | D. | non-existent | |
| 502) | A plastid in its undifferentiated form is called as | | | | C |

| | | | |
|------|---|--------------------------------|---|
| | A. Preplastid | B. Euplastid | |
| | C. Propalstid | D. Preprotoplastid | |
| 503) | A plastic responsible for fruit colors and carotenoid metabolism is | | A |
| | A. Chromoplast | B. Amyloplast | |
| | C. Etioplast | D. Leukoplast | |
| 504) | In primary carbon metabolism, _____ are used for the synthesis of organic compounds | | B |
| | A. Organic materials | B. Inorganic materials | |
| | C. Both of these | D. None of these | |
| 505) | The synthesis of complex/long-chain compounds takes place in the | | B |
| | A. Primary carbon metabolism | B. Secondary carbon metabolism | |
| | C. Inorganic carbon metabolism | D. None of these | |
| 506) | A technique for immunological localization of proteins in tissues is called as | | C |
| | A. Immunochemistry | B. Histochemistry | |
| | C. Immunohistochemistry | D. Immunoassay | |
| 507) | A science dealing with analysis of individual proteins in the cells is called as | | A |
| | A. Proteomics | B. Proteination | |
| | C. protein fractionation | D. None of these | |
| 508) | GFPs stand for | | B |
| | A. Gray fluorescent proteins | B. Green fluorescent proteins | |
| | C. Gray fuorescent proteins | D. Green fuorescent proteins | |
| 509) | A method used to collect the _____ is aphid stylet method | | C |
| | A. Xylem sap | B. Stele sap | |
| | C. Phloem sap | D. Transfer cell sap | |
| 510) | The glucan subunits linkage in amylose is | | A |
| | A. α -1, 4-glucan | B. α -1, 6-glucan | |
| | C. β -1, 4-glucan | D. β -1, 6-glucan | |
| 511) | Quantitative study of energy transduction occurring in living cells is called as | | D |
| | A. Energetics | B. Chemoenergetics | |
| | C. Thermogetics | D. Bioenergetics | |
| 512) | Major form of transport sugars are sugar alcohols in the plants of family | | D |
| | A. Cyperaceae | B. Cucurbitaceae | |
| | C. Mimosaceae | D. Rosaceae | |
| 513) | Oval-shaped starch grains are found in | | B |
| | A. Rice grain | B. Potato tuber | |
| | C. Maize grain | D. Olive seed | |
| 514) | Ability of an object or system to do work on another object or system is called as | | C |
| | A. Work | B. Tendency | |
| | C. Energy | D. Torque | |
| 515) | Sound is a form of _____ energy | | A |
| | A. Kinetic | B. Potential | |
| | C. Nuclear | D. Electrical | |
| 516) | Quantitative study of energy transduction occurring in living cells is called as | | D |
| | A. Energetics | B. Chemoenergetics | |
| | C. Thermogetics | D. Bioenergetics | |
| 517) | A system in which there is only the exchange of energy not the matter | | B |
| | A. Closed system | B. Isolated system | |
| | C. Open system | D. Semi-closed system | |
| 518) | A reaction in which heat absorbed by the system (Q) is negative value is called | | A |

| | | | |
|------|--|---|---|
| | A. Exothermic | B. Endothermic | |
| | C. Isothermic | D. Heterothermic | |
| 519) | A reaction will be spontaneous if | | A |
| | A. ΔG is negative | B. ΔG is Positive | |
| | C. ΔG is zero | D. ΔG is variable | |
| 520) | Randomness of a system is defined as | | B |
| | A. Enthalpy | B. Entropy | |
| | C. Free energy | D. Spontaneity | |
| 521) | The ultimate source of energy in the universe is | | C |
| | A. Fossil fuel | B. Biological waste | |
| | C. Solar source | D. Hydal source | |
| 522) | The type of energy stored in the food is | | D |
| | A. Physical | B. Kinetic | |
| | C. Electrical | D. Chemical | |
| 523) | The first ever crystallized enzyme by Sumner was | | B |
| | A. Protease | B. Urease | |
| | C. Uricase | D. Kinase | |
| 524) | The first ever crystallized enzyme by Sumner was | | A |
| | A. Urease | B. Isozymes | |
| | C. Ribozyme | D. Homozyme | |
| 525) | Tom Cech got Nobel Prize in 1982 for his discovery of | | C |
| | A. Urease | B. Isozymes | |
| | C. Ribozyme | D. Homozyme | |
| 526) | A coenzyme or metal ion covalently bound to the enzyme protein is called | | A |
| | A. Prosthetic group | B. Coenzyme | |
| | C. Apoenzyme | D. Holoenzyme | |
| 527) | Hexokinase, Glucose-6-phosphatase are activated by | | B |
| | A. Cu^{2+} | B. Mg^{2+} | |
| | C. Ni^{2+} | D. Co^{2+} | |
| 528) | Coenzyme thiamine pyrophosphate is involved in the transfer of | | D |
| | A. Alcohol group | B. Acyl group | |
| | C. Ketone group | D. Aldehyde group | |
| 529) | Bond formation coupled to ATP cleavage is catalyzed by | | B |
| | A. Oxidoreductases | B. Ligases | |
| | C. Lyases | D. Transferases | |
| 530) | Enzyme numerical classification based the reaction they catalyze is known as | | A |
| | A. Enzyme Commission Number | B. Enzyme Command Number | |
| | C. Enzyme Collective Number | D. None of these | |
| 531) | Three most important characteristics of the enzyme active site are | | C |
| | A. Specificity, reusability, advanced fit | B. Generality, reusability, induced fit | |
| | C. Specificity, reusability, induced fit | D. Generality, durability, induced fit | |
| 532) | Average rate at which the reactions are usually catalyzed by an enzyme is | | D |
| | A. About 300/sec | B. About 500/sec | |
| | C. About 800/sec | D. About 1000/sec | |
| 533) | A degree of stability in enzyme-substrate complex is provided by | | B |
| | A. Activation energy | B. Binding energy | |
| | C. Starter energy | D. None of these | |

| | | | | | |
|------|--|----|---------------------------------------|--|---|
| 534) | Irreversible enzyme inhibition is caused by | | | | D |
| A. | A. Nerve gases | B. | . Arsenate | | |
| C. | Herbicide | D. | All of these | | |
| 535) | are the molecules that inhibit or activate an enzymatic reaction | | | | B |
| A. | A. Inhibitors | B. | Effectors | | |
| C. | Inducers | D. | Excluders | | |
| 536) | In _____ reactions, an outside energy source is needed to run them | | | | A |
| A. | Non-spontaneous | B. | Forward | | |
| C. | Backward | D. | Spontaneous | | |
| 537) | _____ reactions use coenzymes to trap energy released from catabolism | | | | D |
| A. | A. Phosphorylation | B. | Reduction | | |
| C. | Oxidation | D. | Redox | | |
| 538) | In irreversible inhibition, there is | | | | B |
| A. | Physical change in enzyme structure | B. | Chemical change in enzyme structure | | |
| C. | Temporary change in enzyme structure | D. | Transitory change in enzyme structure | | |
| 539) | Beta-galactosidase breaks lactose down to | | | | C |
| A. | Glucose and fructose | B. | Galactose and fructose | | |
| C. | Glucose and galactose | D. | Glucose and mannose | | |
| 540) | The NADPH and ATP synthesized during light reactions of photosynthesis is used in | | | | A |
| A. | Calvin cycle | B. | Krebs cycle | | |
| C. | β -oxidation cycle | D. | Photorespiratory cycle | | |
| 541) | Loss of green color is accompanied with conversion of chlorophylloid-a to | | | | C |
| A. | A. Coprobilinogen-III | B. | Protoporphyrin IX | | |
| C. | Phaeophorbide-a | D. | Protochlorophylloid-a | | |
| 542) | _____ is responsible for dismantling the chlorophyll from the protein complex | | | | B |
| A. | Radical | B. | Hypothetical | | |
| C. | Real | D. | Non-existent | | |
| 543) | $3 \text{ CO}_2 + 9 \text{ ATP} + 6 \text{ NADPH} \rightarrow \text{Glyceraldehyde-3-P} + 9 \text{ ADP} + \text{_____} + \text{_____}$ | | | | A |
| A. | 6 NADP + 8 Pi | B. | 6 NADP + 9 Pi | | |
| C. | 5 NADP + 8 Pi | D. | 5 NADP + 8 Pi D. 5 NADP + 9 Pi | | |
| 544) | In the presence of light, the chlorophyll synthesis is promoted by | | | | D |
| A. | A. Ethylene | B. | Auxins | | |
| C. | Gibberellins | D. | Cytokinins | | |
| 545) | $\text{ATP} + \text{H}_2\text{O} \rightarrow \text{ADP} + \text{Pi} + \text{H}^+ : \Delta G =$ | | | | B |
| A. | A. +30.5 kJ mol ⁻¹ | B. | -30.5 kJ mol ⁻¹ | | |
| C. | -30.5 mJ mol ⁻¹ | D. | -30.5 MJ mol ⁻¹ | | |
| 546) | _____ is the most abundant carotenoid in higher plants | | | | A |
| A. | β -carotene | B. | α -carotene | | |
| C. | . Lycopene | D. | Leutin | | |
| 547) | Dismantling the chlorophyll from the protein complex takes place by | | | | D |
| A. | A. Chlorophyllase | B. | Lyase | | |
| C. | Oxido-reductase | D. | None of these | | |
| 548) | Geranyl-geranyl diphosphate is a | | | | B |
| A. | A. 10-C compound | B. | 20-C compound | | |
| C. | 30-C compound | D. | 40-C compound | | |
| 549) | Site of SSU mRNA synthesis is | | | | B |
| A. | A. Chloroplast | B. | Nucleus | | |

| | | | | | |
|------|--|--------------------------------|----|-----------------|---|
| | C. | Lysosomes | D. | Golgi bodies | |
| 550) | is essential for binding photosystem proteins with chlorophyll molecules | | | | A |
| | A. | A. Light | B. | Darkness | |
| | C. | Auxins | D. | Ethylene | |
| 551) | Which one of the following is a 5 carbon compounds | | | | C |
| | A. | A. Sesquiterpene | B. | Triterpene | |
| | C. | Hemiterpene | D. | Tetraterpene | |
| 552) | Isoprene is a five carbon containing secondary metabolite | | | | D |
| | A. | Solid | B. | Semisolid | |
| | C. | Liquid | D. | Gaseous | |
| 553) | Anthocyanidin is of purplish red color | | | | D |
| | A. | A. Petunidin | B. | Pelargonidin | |
| | C. | Peunidin | D. | Cyanidin | |
| 554) | tannins are soluble in water | | | | A |
| | A. | Hydrolyzable | B. | Condensed | |
| | C. | Amorphous | D. | Solid | |
| 555) | Chalcone after isomerization leads to the formation of | | | | D |
| | A. | Flavonols | B. | Anthocyanidin | |
| | C. | Leucocyanadin | D. | Naringenin | |
| 556) | Gallotannins are gallic acid esters of glucose in | | | | A |
| | A. | A. Tannic acid | B. | . Galic acid | |
| | C. | Fulvic acid | D. | Shikimic acid | |
| 557) | For detection of pseudotannins, the test used is | | | | D |
| | A. | A. Goldbeater's test | B. | Goldbear's test | |
| | C. | Goldmayer's test | D. | None of these | |
| 558) | Lignin is composed of monolignols, which are of | | | | B |
| | A. | Two types | B. | Three types | |
| | C. | Four types | D. | Five types | |
| 559) | The proportion of hemicellulose in the secondary wall is | | | | B |
| | A. | A. 25% B. | B. | 30% | |
| | C. | 35% | D. | 40% | |
| 560) | The synthesis of conyferyl alcohol takes place with the activity of | | | | C |
| | A. | A. GAL . | B. | TAL | |
| | C. | PAL | D. | All of these | |
| 561) | Alkaloids are named so because they have pH in the cytosol | | | | A |
| | A. | A. Alkaline | B. | Acidic | |
| | C. | Neutral | D. | Variable | |
| 562) | Human use of is stimulant, depressant, tranquilizer | | | | D |
| | A. | Flavonols | B. | Anthocyanidin | |
| | C. | Lignan | D. | Nicotine | |
| 563) | Which one of the following is a polyamine | | | | D |
| | A. | Canavine Dopamine | B. | Nicotine | |
| | C. | | D. | Spermine | |
| 564) | Precursor of dopamine is | | | | A |
| | A. | A. Phenylalanine C. Proline | B. | Lucien | |
| | C. | | D. | Asparagine | |

| | | | |
|------|--|---|--|
| 565) | Apoptosis can be brought about with polyamine analog | | A |
| | A. | A. P53 C. Q53 = | B. B53 |
| | C. | | D. All of these |
| 566) | Which one of the families is a major source of atropine | | C |
| | A. | Malvaceae | B. Cumbricitaceae |
| | C. | Solanaceae | D. Poaceae |
| 567) | Precursor of scopolamine synthesis is | | B |
| | A. | Methionine | B. Ornithine |
| | C. | Arginine | D. Lysine |
| 568) | Chemical formula of cocaine is | | C |
| | A. | C ₁₉ H ₁₄ NO ₂ | B. C ₁₈ H ₁₅ NO ₃ |
| | C. | C ₁₇ H ₂₁ NO ₄ | D. C ₁₆ H ₂₈ NO ₅ |
| 569) | Precursor of ephedrine is | | B |
| | A. | Tyrosine | B. Phenylalanine |
| | C. | Lysine | D. None of these |
| 570) | Ramoplanin, an antibiotic drug, is used against | | A |
| | A. | A. Gram +ve bacteria | B. Gram -ve bacteria |
| | C. | Viruses | D. Actinomycetes |
| 571) | Which one of the following is not precursor of cyanogenic glycosides | | D |
| | A. | Valine B. | B. Isoleucine |
| | C. | Leucine | D. Glycine |
| 572) | _____ is the end product of cyanogenic glycosides metabolism | | A |
| | A. | Hydrogen cyanide | B. Nitrile |
| | C. | Cyanohydrin | D. Aglycone |
| 573) | Transcription factor MYB plays _____ in plant development | | C |
| | A. | Inhibitory role | B. Promotory role |
| | C. | Regulatory role | D. No role |
| 574) | The alkaloids based medicines in the market account for up to _____ | | B |
| | A. | About 10% About 40% | B. About 25% |
| | C. | | D. About 50% |
| 575) | A polyamine is an organic compound having two or more _____ group | | A |
| | A. | . -NH ₂ | B. -NH |
| | C. | NH ₃ | D. All of these |
| 576) | Ephedrine is obtained from an evergreen shrub named as | | B |
| | A. | Ephedra sinica | B. Ephedra vulgaris |
| | C. | Ephedra sativa | D. All of these |
| 577) | A major family of plants showing the synthesis of glucosinolates is | | D |
| | A. | Solanaceae | B. Mimosaceae |
| | C. | Poaceae | D. Brassicaceae |
| 578) | Precursor of glucosinolates is/are | | D |
| | A. | A. Tyrosine | B. Phenylalanine |
| | C. | Methionine | D. All of these |
| 579) | During their metabolism, the glucosinolate synthesis competes with | | A |
| | A. | Auxins biosynthesis | B. Gibberellins biosynthesis |
| | C. | Cytokinins biosynthesis | D. ABA biosynthesis |
| 580) | One of the most fatal disease caused by excess of glucosinolates intake is | | C |
| | A. | A. Meningitis | B. Tuberculosis |

| | | | | | |
|------|--|---|----|----------------------------|---|
| | C. | Cancer | D. | Goiter | |
| 581) | A non-protein amino acid, Hypoglycin, has a great similarity with amino acid | | | | B |
| | A. | Glycine | B. | Lysine | |
| | C. | Aspartate | D. | Methionine | |
| 582) | The tumor formation during carcinogenesis takes place due to expression of | | | | D |
| | A. | Impaired DNA | B. | Repaired DNA | |
| | C. | Normal DNA | D. | Damaged DNA | |
| 583) | Glutamic acid has structural similarity to non-protein amino acid | | | | A |
| | A. | Theanine | B. | Tryptamine | |
| | C. | Canavanine | D. | Cadaverine | |
| 584) | Structure of phycobilins is | | | | A |
| | A. | Linear tetrapyrroles | B. | Closed tetrapyrroles | |
| | C. | Semi-closed tetrapyrroles | D. | None of these | |
| 585) | In Beale pathway of chlorophyll synthesis, the _____ is converted to ALA | | | | B |
| | A. | Aspartic acid | B. | Glutamic acid | |
| | C. | Alanine | D. | Glycine | |
| 586) | Chlorophyll <i>a</i> is converted to Chlorophyll <i>b</i> in the presence of enzyme | | | | A |
| | A. | Chlorophyll a oxygenase | B. | Chlorophyll b oxygenase | |
| | C. | Chlorophyll b synthase | D. | Chlorophyll oxidoreductase | |
| 587) | _____ are synthesized during normal growth and development of plants | | | | B |
| | A. | Phytoalexins | B. | Phytoanticipins | |
| | C. | Antioxidants | D. | None of these | |
| 588) | Most predominant form of aflatoxins is | | | | A |
| | A. | AFB1 | B. | AFG1 | |
| | C. | AFM1 | D. | AFP1 | |
| 589) | Name of fungal species from which aflatoxins were first isolated is | | | | D |
| | A. | Aspergillusniger Aspergillusparasticus | B. | Aspergillusnomius | |
| | C. | | D. | Aspergillusflavus | |
| 590) | Papillae are included in the class of _____ Papillae are included in the class of _____ | | | | C |
| | A. | Chemical defense | B. | Biochemical defense | |
| | C. | Structural defense | D. | Chemical defense | |
| 591) | Secretion of compounds by one plant to harm the growth of neighboring plants is called as | | | | A |
| | A. | Allelopathy | B. | Hydrophathy | |
| | C. | Ceismopathy | D. | Chemopathy | |
| 592) | The first protein hormone, composed of 18 amino acid residues is known as | | | | B |
| | A. | Osmotin Proteinase | B. | Systemin | |
| | C. | | D. | Lectin | |
| 593) | The most available form of sulfur to plant roots is | | | | D |
| | A. | Sulfide | B. | Sulfite | |
| | C. | Disulfide | D. | Sulfate | |
| 594) | _____ is synthesized in peroxisome from uric acid | | | | A |
| | A. | Allantoin Citrulline | B. | Allantoic acid | |
| | C. | | D. | Ornithine | |
| 595) | $\text{SO}_4^{2-} + \text{ATP} + 8\text{e}^- + 8\text{H}^+ \rightarrow \text{S}^{2-} + 4\text{H}_2\text{O} + \text{PPi}$ | | | | A |
| | A. | AMP | B. | GMP | |

| | | | | | |
|------|---|---------------------------|----|-----------------|---|
| | C. | ADP | D. | GDP | |
| 596) | Pheophytinase involved in chlorophyll degradation is a _____ localized enzyme | | | | C |
| | A. | Endoplasmic reticulum | B. | Golgi bodies | |
| | C. | Plastid | D. | Microsome | |
| 597) | Plants of temperate region exhibit the synthesis of _____ | | | | C |
| | A. | A. Ureids | B. | Carbides | |
| | C. | Amides | D. | Amines | |
| 598) | Site of glutathione synthesis is _____ | | | | B |
| | A. | Peroxisome Chromoplast | B. | Chloroplast | |
| | C. | | D. | Mitochondria | |
| 599) | Salicylic acid was discovered from _____ bark in 1828 | | | | A |
| | A. | Willow | B. | Cinchona | |
| | C. | Brassica | D. | Potato | |
| 600) | The synthesis of choline takes place in _____ | | | | D |
| | A. | Chloroplast | B. | Microsome | |
| | C. | Dictyosomes | D. | Cytoplasm | |
| 601) | Guard cells in the stomata of dicot plants are _____ | | | | C |
| | A. | Ball shape | B. | Dumbbell shape | |
| | C. | Kidney shape | D. | Egg shape | |
| 602) | The only epidermal cells which also possess chloroplast are known as _____ | | | | B |
| | A. | Lenticels | B. | Guard cells | |
| | C. | Hair cells | D. | Cortical cells | |
| 603) | The plants which possess stomata on lower surface are known as _____ | | | | B |
| | A. | Astomatous | B. | Hypostomatous | |
| | C. | Epistomatous | D. | amphistomatous | |
| 604) | The plants which possess stomata on upper surface are known as _____ | | | | B |
| | A. | amphistomatous | B. | Hypostomatous | |
| | C. | Epistomatous | D. | Astomatous | |
| 605) | At high pH the enzyme phosphorylase causes the ----- of starch | | | | A |
| | A. | Breakdown | B. | Formation | |
| | C. | Transport | D. | Storage | |
| 606) | At low pH the enzyme phosphorylase causes the -----of starch | | | | D |
| | A. | Transport | B. | Storage | |
| | C. | Breakdown | D. | Formation | |
| 607) | Increase in temperature will cause the stomata to _____ | | | | B |
| | A. | Close | B. | Open | |
| | C. | Remain dormant | D. | Die | |
| 608) | Among various hormones, ABA will bring the stomatal _____ | | | | B |
| | A. | Opening | B. | Closing | |
| | C. | Number increase | D. | Number decrease | |

| | | | | | |
|------|---|--------------------------------|----|-----------------------|---|
| 609) | In grasses stomata are found on | | | | C |
| | A. | Upper surface | B. | Lower surface | |
| | C. | Equal number on both surfaces | D. | Non-of them | |
| 610) | Stomatal regulation is | | | | A |
| | A. | Opening and closing of stomata | B. | Opening of stomata | |
| | C. | Closing of stomata | D. | Non-of them | |
| 611) | The most active photosynthetic tissues in plants are | | | | A |
| | A. | Mesophyll | B. | Sclerenchyma | |
| | C. | Cortex | D. | Epidermal | |
| 612) | End product of cyclic electron transport chain in chloroplast is | | | | B |
| | A. | NADPH | B. | ATP | |
| | C. | NADPH and ATP | D. | FADH ₂ | |
| 613) | End product of non-cyclic electron transport chain in chloroplast is | | | | D |
| | A. | ATP | B. | NADPH | |
| | C. | FADH ₂ | D. | NADPH and ATP | |
| 614) | Photosystem I and II are located on | | | | C |
| | A. | Cell membrane | B. | Choloroplast membrane | |
| | C. | Thylakoind membrane | D. | Cell wall | |
| 615) | During light reaction the energy products are produced in the form of | | | | C |
| | A. | NADPH | B. | ATP | |
| | C. | NADPH and ATP | D. | FADH ₂ | |
| 616) | The organisms which can prepare their organic food from inorganic source are known as | | | | B |
| | A. | Heterotrophs | B. | Autotrophs | |
| | C. | Mesotroghs | D. | Chemotrophs | |
| 617) | Green sulphur bacterial use ----- instead fo water | | | | C |
| | A. | SO ₂ | B. | SO ₃ | |
| | C. | H ₂ S | D. | HSO ₃ | |
| 618) | Purple sulphur bacterial use----- instead fo water | | | | B |
| | A. | HSO ₃ | B. | H ₂ S | |
| | C. | SO ₃ | D. | SO ₂ | |
| 619) | Light has characteristic of both | | | | B |
| | A. | Photon and quantum | B. | Particle and wave | |
| | C. | Wave and liquid | D. | Particle and liquid | |
| 620) | Amount of energy in photon is called | | | | D |
| | A. | Watt | B. | kJ | |
| | C. | Calorie | D. | Quantum | |
| 621) | 1 Calorie is equal to | | | | C |
| | A. | 5 J | B. | 6 J | |
| | C. | 4.19 J | D. | 4.5 J | |
| 622) | 1 W is equal to | | | | C |
| | A. | 4 J/s | B. | 3 J/s | |
| | C. | 1 J/s | D. | 2 J/s | |
| 623) | UV-A ranges from | | | | A |
| | A. | 320-400 | B. | 350-420 | |
| | C. | 300-400 | D. | 380-420 | |
| 624) | UV-B ranges from | | | | B |
| | A. | 320-400 | B. | 280-320 | |
| | C. | 250-300 | D. | 240-300 | |
| 625) | UV-C ranges from | | | | C |
| | A. | 150-250 | B. | 120-250 | |
| | C. | 100-280 | D. | 130-210 | |

| | | | | | |
|------|---|----------------------|---|----|---------------------|
| 626) | Number of carbon atoms in chlorophyll a are | | B | | |
| | A. | 60 | | B. | 55 |
| | C. | 50 | | D. | 65 |
| 627) | Number of hydrogen atoms in chlorophyll b are | | C | | |
| | A. | 74 | | B. | 72 |
| | C. | 70 | | D. | 75 |
| 628) | Number of chlorophyll pigments required to process one quantum is | | B | | |
| | A. | 300-400 | | B. | 200-300 |
| | C. | 250-350 | | D. | 150-250 |
| 629) | The region of chloroplast outside the thylakoid is known as | | C | | |
| | A. | Matrix | | B. | Cytosol |
| | C. | Stroma | | D. | Nucleoplasm |
| 630) | The ultimate source of electrons for photosynthesis is | | B | | |
| | A. | CO ₂ | | B. | Water |
| | C. | NADPH | | D. | FADH ₂ |
| 631) | Calvin cycle occurs in | | C | | |
| | A. | Cytosol | | B. | Matix |
| | C. | Stroma | | D. | Vacuole |
| 632) | The most abundant soluble protein in plants is | | B | | |
| | A. | Sucrose | | B. | Rubisco |
| | C. | Aldolase | | D. | Kinase |
| 633) | The most abundant soluble sugar in plants is | | C | | |
| | A. | Raffinose | | B. | Stachyose |
| | C. | Sucrose | | D. | Glucose |
| 634) | In C ₃ plants for the fixation of one CO ₂ , number of ATPs required are | | C | | |
| | A. | 5 ATP | | B. | 4 ATP |
| | C. | 3 ATP | | D. | 6 ATP |
| 635) | In C ₃ plants for the fixation of one CO ₂ , number of NADPH required are | | B | | |
| | A. | 1 | | B. | 2 |
| | C. | 4 | | D. | 4 |
| 636) | Those elements which can move via phloem are known as | | A | | |
| | A. | Mobile | | B. | Immobile |
| | C. | Macronutrients | | D. | Micronutrients |
| 637) | Atmosphere is source of the nutrients | | D | | |
| | A. | Carbon | | B. | Hydrogen |
| | C. | Oxygen | | D. | All of them |
| 638) | Macronutrients are also known as | | A | | |
| | A. | Major elements | | B. | Essential elements |
| | C. | Minor elements | | D. | Beneficial elements |
| 639) | Nutrients in the absence of which plants can not complete their life cycle are | | C | | |
| | A. | Beneficial elements | | B. | Macronutrients |
| | C. | Essential elements | | D. | Mobile elements |
| 640) | When increase in concentration of one nutrient lower down the concentration of other nutrient, then this effect is known as | | B | | |
| | A. | Synergistic effect | | B. | Antagonistic effect |
| | C. | Beneficial effect | | D. | Toxic effect |
| 641) | The elements which stimulate plant growth but they are not essentially required for growth | | D | | |
| | A. | Micronutrients | | B. | Essential elements |
| | C. | Fundamental elements | | D. | Beneficial elements |
| 642) | Nutrients deficiency can be reduced by | | C | | |
| | A. | Soil application | | B. | Foliar application |
| | C. | Both a & b | | D. | Non of them |

| | | | |
|------|--|--|----|
| 643) | The study of how plants obtain and use mineral nutrients is called | | A |
| | A. | Mineral nutrition | B. |
| | C. | Absorption of nutrients | D. |
| 644) | On younger leaves symptoms are due to | | D |
| | A. | Essential elements | B. |
| | C. | Minor elements | D. |
| 645) | Chlorosis and backward hooking of young leaves are due to | | C |
| | A. | Zinc | B. |
| | C. | Calcium | D. |
| 646) | On the basis of physiological functions plant nutrients can be classified into | | A |
| | A. | Four groups | B. |
| | C. | Six groups | D. |
| 647) | Carbon, Hydrogen, Oxygen, Nitrogen, Phosphorus, Potassium, Calcium, Magnesium and Sulphur all are | | D |
| | A. | Essential elements | B. |
| | C. | Beneficial elements | D. |
| 648) | Which of the following is not an amino acid? | | B |
| | A. | glutamic acid | B. |
| | C. | aspartic acid | D. |
| 649) | What type of covalent bonds link the amino acids in a protein? | | A |
| | A. | peptide bonds | B. |
| | C. | ionic bonds | D. |
| 650) | Which of the following factors can affect enzyme activity? | | D |
| | A. | pH | B. |
| | C. | ions the presence of certain metal | D. |
| 651) | Anaerobic metabolism refers to the generation of ATP: | | C |
| | A. | without the use of glycogen | B. |
| | C. | without the use of oxygen | D. |
| 652) | Glycolysis is the name given to the pathway involving the conversion of: | | A |
| | A. | glycogen or glucose to pyruvate or lactate | B. |
| | C. | glycogen or glucose to fructose | D. |
| 653) | The enzymes of glycolysis are located in the | | A |
| | A. | cytoplasm | B. |
| | C. | lysosomes | D. |
| 654) | How many CO ₂ and ATP molecules are formed during one complete turn of the tricarboxylic acid cycle (Krebs' cycle)? | | D |
| | A. | 2CO ₂ and 2ATP | B. |
| | C. | 2CO ₂ and 12ATP | D. |
| 655) | Pathways for the movement of water across the roots are | | B |
| | A. | Five pathways | B. |
| | C. | Six pathways | D. |
| 656) | Apoplastic movement of water is through | | B |
| | A. | Living portion of cell | B. |
| | C. | Both a & b | D. |
| 657) | Symplastic movement of water is through | | A |
| | A. | Living portion of cell | B. |
| | C. | Both a & b | D. |
| 658) | The process of guttation is due to | | C |
| | A. | Transpiration | B. |
| | C. | Root pressure | D. |
| 659) | Major constituent of protoplast is | | B |
| | A. | Cellulose | B. |

| | | | | | |
|------|--|-------------------------|----|------------------------|---|
| | C. | Carbon | D. | Oxygen | |
| 660) | At which temperature density of water is maximum | | | | C |
| | A. | 10 °C | B. | 6 °C | |
| | C. | 4 °C | D. | 0 °C | |
| 661) | Relative effectiveness of different wavelengths of light on photomorphogenesis is known as | | | | A |
| | A. | Action spectrum | B. | Absorption spectrum | |
| | C. | High intensity of light | D. | Low intensity of light | |
| 662) | Phytochromobilins are synthesized in | | | | B |
| | A. | Mitochondria | B. | Plastids | |
| | C. | Vacuole | D. | Nucleus | |
| 663) | Respiratory substrates are of | | | | A |
| | A. | Four types | B. | Six types | |
| | C. | Eight types | D. | Ten types | |
| 664) | Hypoxic condition is | | | | B |
| | A. | Zero oxygen | B. | Low amount of oxygen | |
| | C. | High amount of oxygen | D. | All above | |
| 665) | PPi-PFK enzyme is found only in | | | | D |
| | A. | Animals | B. | Fungi | |
| | C. | Viruses | D. | Plants | |
| 666) | In plants cytosolic NADH+H is equal to | | | | B |
| | A. | Three ATPs | B. | Two ATPs | |
| | C. | Four ATPs | D. | Non of above | |
| 667) | How many enzymes are involved in Krebs cycle? | | | | C |
| | A. | Four | B. | Six | |
| | C. | Eight | D. | Ten | |
| 668) | In plants net energy balance of aerobic respiration is | | | | A |
| | A. | 36 or 37 ATPs | B. | 36 ATPs | |
| | C. | 37 ATPs | D. | 38 ATPs | |
| 669) | Inhibitors of complex-I of electron transport chain are | | | | D |
| | A. | Antimycin a and DPI | B. | CO and CN | |
| | C. | SHAM | D. | Amytal and Rotenone | |
| 670) | Inhibitors of complex-III of electron transport chain are | | | | A |
| | A. | Antimycin a | B. | CO and CN | |
| | C. | SHAM | D. | Amytal and Rotenone | |
| 671) | Inhibitors of complex-IV of electron transport chain are | | | | B |
| | A. | Antimycin a and DPI | B. | CO and CN | |
| | C. | SHAM | D. | Amytal and Rotenone | |
| 672) | Inhibitors of alternative oxidase of electron transport chain are | | | | C |
| | A. | Antimycin a and DPI | B. | CO and CN | |
| | C. | SHAM | D. | Amytal and Rotenone | |
| 673) | Those organs or tissue where food is synthesized or available is known as | | | | A |
| | A. | Source | B. | Sink | |
| | C. | Stem | D. | Root | |
| 674) | Temporary plugging in plants is by | | | | B |
| | A. | Cellulose | B. | P-proteins | |
| | C. | Glucose | D. | Lipids | |
| 675) | The movement of photosynthates from chloroplast of mesophyll cells to sieve tube is called | | | | C |
| | A. | Short distant transport | B. | Phloem unloading | |
| | C. | Phloem loading | D. | Long distant transport | |
| 676) | The color of chromoplasts is never | | | | D |

| | | | | | |
|------|--|---------------------------------|----|------------------------------------|---|
| | A. | Red | B. | Blue | |
| | C. | Yellow | D. | Green | |
| 677) | The centers of light harvesting in the thylakoid membrane are | | | | A |
| | A. | PSII & PSI | B. | PSII & Plastoglobulii | |
| | C. | PSII & strome | D. | PSII & pyrenoids | |
| 678) | The peripheral reticulum is present in | | | | B |
| | A. | Golgi bodies | B. | Chloroplast | |
| | C. | Mitochondria | D. | Peroxisomes | |
| 679) | The plastoglobulii are more commonly found in | | | | C |
| | A. | Chloroplasts | B. | Chromoplasts | |
| | C. | Etioplasts | D. | Amyloplasts | |
| 680) | The proteins for RUBISCO are encoded | | | | C |
| | A. | In chloroplast only | B. | In nucleus only | |
| | C. | In both chloroplast and nucleus | D. | Neither in chloroplast nor nucleus | |
| 681) | The genome size of the chloroplast is | | | | A |
| | A. | 120-160 kb | B. | 500-600 kbp | |
| | C. | Less than 50 kbp | D. | 1000 kbp | |
| 682) | The chloroplast has been thought to be evolved as a result of | | | | B |
| | A. | Exosymbiosis | B. | Endosymbiosis | |
| | C. | Invegination | D. | Reduplication | |
| 683) | The endomembrane system consists of | | | | D |
| | A. | Endoplasmic reticulum | B. | Golgi bodies | |
| | C. | . Nuclear envelop | D. | . All of these | |
| 684) | Which among the following are branched endoplasmic reticulum | | | | C |
| | A. | Cisternae | B. | Vesicles | |
| | C. | Tubules | D. | None of these | |
| 685) | Biochemically the ribosomes are | | | | B |
| | A. | Riboproteins | B. | Nucleoproteins | |
| | C. | Sulphoproteins | D. | Glycoproteins | |
| 686) | The protein synthesis in ribosomes is comprised of | | | | A |
| | A. | Three steps | B. | Four steps | |
| | C. | Five steps | D. | Six steps | |
| 687) | Through _____ the newly synthesized peptides enter into the lumen of rER | | | | C |
| | A. | Depressions | B. | Pores | |
| | C. | Translocons | D. | All of these | |
| 688) | Plate formation during cell division in plant cells is facilitated by | | | | D |
| | A. | Signal peptides | B. | Lysosomes | |
| | C. | Nucleus | D. | Dictyosomes | |
| 689) | Main function of Golgi bodies is to _____ the cell products | | | | D |
| | A. | Finish | | Sort | |
| | C. | Ship | | All of these | |
| 690) | The outer membrane of nucleus is contiguous with | | | | A |
| | A. | Endoplasmic reticulum | B. | Golgi bodies | |
| | C. | Eye spot | D. | Flagellar base | |
| 691) | The molecules >100 Da can only enter the nucleus via | | | | C |
| | A. | Envelop lamins | B. | Channels | |
| | C. | Nuclear pore complexes | D. | None of these | |
| 692) | The source of strength and architecture for the nucleus is/are | | | | B |
| | A. | Dermins | B. | Lemins | |
| | C. | . Lipins | D. | Pterins | |
| 693) | The function of nuclear localization sequences (NLSs) is to target the | | | | B |
| | A. | Ions to the nucleus. | B. | Proteins to nucleus | |
| | C. | Carbohydrates to nucleus | D. | Nucleic acids to nucleus | |

| | | | | | |
|------|---|---------------------------|----|-------------------------------|---|
| 694) | The karyopherins are | | | | A |
| | A. | Nuclear import receptors | B. | Organelles import receptors | |
| | C. | Vacuolar import receptors | D. | D. Thylakoid import receptors | |
| 695) | The pH inside the lysosomes is | | | | A |
| | A. | 4.8 | B. | 6.8 | |
| | C. | 8.8 | D. | 10.2 | |
| 696) | There are basic types of lysosomes | | | | B |
| | A. | Three | B. | Four | |
| | C. | Five | D. | Six | |
| 697) | Long-chain and branched fatty acids are broken down by | | | | D |
| | A. | Golgi bodies | B. | Lysosomes | |
| | C. | Vacuolar enzymes | D. | Peroxisomes | |
| 698) | Scavenging of hydrogen peroxide takes place by | | | | A |
| | A. | Catalase | B. | Peroxidase | |
| | C. | Superoxide dismutase | D. | Hydrolase | |
| 699) | The metabolites shuttling from peroxisome to mitochondrion is | | | | A |
| | A. | Glycine | B. | Aspartate | |
| | C. | Alanine | D. | Acetyl CoA | |
| 700) | One main function of peroxisomes during morphogenesis in plants is restoration of | | | | B |
| | A. | Green color | B. | Etiolation | |
| | C. | Statocyte formation | D. | Cryptochrome synthesis | |
| 701) | Shoot elongation and root growth inhibition is mainly due to | | | | C |
| | A. | Auxin | B. | Vitamin | |
| | C. | Brassinosteroid | D. | Gibberellin | |
| 702) | Brassinosteroids increase the tolerance against | | | | D |
| | A. | Salinity | B. | Drought | |
| | C. | High temperature | D. | All of them | |
| 703) | Maximum concentration of Brassinosteroids are found in | | | | D |
| | A. | Stem | B. | Roots | |
| | C. | Leaves | D. | Pollens | |
| 704) | Abscisic acid caused the stomata to | | | | B |
| | A. | Open | B. | Close | |
| | C. | No effect | D. | Both effect | |
| 705) | Brassinosteroids caused the stomata to | | | | A |
| | A. | Open | B. | Close | |
| | C. | No effect | D. | Both effect | |
| 706) | Those hormones or compounds which possess two or more than two amino groups | | | | B |
| | A. | Poly hormones | B. | Polyamines | |
| | C. | Tocopherols | D. | Vitamins | |
| 707) | Putrescene contains | | | | A |
| | A. | 2 amines | B. | 3 amines | |
| | C. | 4 amines | D. | 5 amines | |
| 708) | Spermidine contains | | | | B |
| | A. | 2 amines | B. | 3 amines | |
| | C. | 4 amines | D. | 5 amines | |
| 709) | Spermine contains | | | | C |
| | A. | 2 amines | B. | 3 amines | |
| | C. | 4 amines | D. | 5 amines | |
| 710) | Number of carbon atoms in Cadaverine are | | | | A |
| | A. | 5 | B. | 10 | |
| | C. | 15 | D. | 20 | |
| 711) | Arginine decarboxylase is localized in | | | | C |
| | A. | Cytosol | B. | Vacuole | |

| | | | | | |
|------|--|-------------------------|----|------------------------------|---|
| | C. | Chloroplast | D. | Nucleus | |
| 712) | Cadaverine is decarboxylation product of amino acid | | | | B |
| | A. | Glycine | B. | Lysine | |
| | C. | Methionine | D. | Cystein | |
| 713) | Ancient Egyptians used ----- for ripening process | | | | C |
| | A. | Auxin | B. | ABA | |
| | C. | Ethylene | D. | Polyamines | |
| 714) | Triple response hormone is | | | | D |
| | A. | ABA | B. | Auxin | |
| | C. | Polyamines | D. | Ethylene | |
| 715) | Number of hydrogen atoms in ethylene is | | | | B |
| | A. | 2 | B. | 4 | |
| | C. | 6 | D. | 8 | |
| 716) | Ethylene can easily diffuse through | | | | B |
| | A. | Soil | B. | Membrane | |
| | C. | Stem | D. | Root | |
| 717) | Color of ethylene gas is | | | | D |
| | A. | Red | B. | Blue | |
| | C. | Orange | D. | Colorless | |
| 718) | Ethylene biosynthesis occur through | | | | A |
| | A. | Yang's cycle | B. | Carbon cycle | |
| | C. | Calvin cycle | D. | Glyoxylate cycle | |
| 719) | AVG inhibited the biosynthesis of | | | | D |
| | A. | ABA | B. | Auxin | |
| | C. | Polyamines | D. | Ethylene | |
| 720) | Artificial ripening of fruits is done by | | | | A |
| | A. | Ethylene | B. | ABA | |
| | C. | Auxin | D. | Polyamines | |
| 721) | ABA is absent in | | | | C |
| | A. | Trees | B. | Shurbs | |
| | C. | Bacteria | D. | Algae | |
| 722) | The growth inhibitor hormone is | | | | A |
| | A. | ABA | B. | Auxin | |
| | C. | Polyamines | D. | Triacontanol | |
| 723) | Water deficit condition signal is transferred through | | | | A |
| | A. | ABA | B. | Tocopherol | |
| | C. | Batasins | D. | Gibberellin | |
| 724) | Which of the hormone is involved in Gravitopism | | | | B |
| | A. | Tocopherol | B. | ABA | |
| | C. | Auxin | D. | Triacontanol | |
| 725) | Seed storage protein accumulation is -----by ABA | | | | A |
| | A. | Increased | B. | Decreased | |
| | C. | Remain of constant | D. | Non of them | |
| 726) | In atmosphere nitrogen in the form of N ₂ is about | | | | D |
| | A. | 76% | B. | 77% | |
| | C. | 75% | D. | 79% | |
| 727) | Conversion of inert nitrogen into useable form of nitrogen is known as | | | | A |
| | A. | Nitrogen fixation | B. | Nitrogen metabolism | |
| | C. | Nitrogen destruction | D. | Nitrogen assimilation | |
| 728) | More than 90 % of nitrogen is fixed through | | | | B |
| | A. | Lightening | B. | Biological nitrogen fixation | |
| | C. | Photochemical reactions | D. | Non of them | |
| 729) | Most preferred form of nitrogen for plants is | | | | A |

| | | | | | |
|------|---|--|----|---|---|
| | A. | NO ₃ | B. | NO ₂ | |
| | C. | NH ₄ | D. | HNO ₃ | |
| 730) | Nitrate reductase occurs in | | | | C |
| | A. | Chloroplast | B. | Matrix | |
| | C. | Cytosol | D. | Vacuole | |
| 731) | Sulfur is absorbed by the plants in the form of | | | | B |
| | A. | SO ₃ | B. | SO ₄ | |
| | C. | H ₂ S | D. | H ₂ SO ₄ | |
| 732) | Thioredoxin widely occurs in plants is | | | | C |
| | A. | Lipids in nature | B. | Carbohydrate in nature | |
| | C. | Protein in nature | D. | Non of them | |
| 733) | Glutathione is made up of | | | | B |
| | A. | Glutamate, cysteine and proline | B. | Glutamate, cysteine and glycine | |
| | C. | Glutamate, cysteine and lucine | D. | Glutamate and glycine | |
| 734) | Main purpose of glyoxylate pathway is | | | | B |
| | A. | Conversion of carbohydrates to CO ₂ | B. | Conversion of fats to glucose | |
| | C. | Both a & b | D. | Non of them | |
| 735) | Process by which glucose is synthesized from the compounds other than carbohydrates is known as | | | | D |
| | A. | Pentose phosphate pathway | B. | Glucogenesis | |
| | C. | Photorespiration | D. | Gluconeogenesis | |
| 736) | Oxidative decarboxylation takes place in | | | | C |
| | A. | Plastids | B. | Vacuole | |
| | C. | Mitochondria | D. | Vacuole | |
| 737) | Fe-S protein and cytochrome have the ability to receive and transfer | | | | B |
| | A. | One electron and one proton at a time | B. | One electron at a time | |
| | C. | One electron and two protons at a time | D. | Two electrons and two protons at a time | |
| 738) | FMN and UQ have the ability to receive and transfer | | | | D |
| | A. | One electron at a time | B. | One electron and one proton at a time | |
| | C. | One electron and two protons at a time | D. | Two electrons and two protons at a time | |
| 739) | Starch is storage carbohydrate which is stored in | | | | A |
| | A. | Chloroplast | B. | Vacuole | |
| | C. | Mitochondria | D. | Golgi bodies | |
| 740) | Almost ten glucose molecules are present in | | | | A |
| | A. | Dextrins | B. | Inuline | |
| | C. | Verbasucose sugars | D. | Stachyose | |
| 741) | During CN resistant respiration energy is generated in the form of | | | | B |
| | A. | ATP | B. | Heat | |
| | C. | FADH ₂ | D. | NADPH | |
| 742) | The process of Krebs cycle operates in | | | | C |
| | A. | Stroma | B. | Cytosol | |
| | C. | mitochondria | D. | Cytosol | |
| 743) | Maltose is combination of | | | | D |
| | A. | Glucose + fructose | B. | Fructose + fructose | |
| | C. | Sucrose +glucose | D. | Glucose + Glucose | |
| 744) | When glycerol phosphate shuttle is operative then NADH will be equal to | | | | A |
| | A. | 2 ATP | B. | 2.5 ATP | |
| | C. | 3 ATP | D. | 3.5 ATP | |
| 745) | When malate-aspartate shuttle is operative then NADH will be equal to | | | | C |
| | A. | 2 ATP | B. | 2.5 ATP | |
| | C. | 3 ATP | D. | 3.5 ATP | |

| | | | | | |
|------|--|--------------------|----|------------------------|---|
| 746) | The plants which produce heat energy during CN resistant respiration are known as | | | | A |
| | A. | Thermogenic plants | B. | Aquatic plants | |
| | C. | Monocot | D. | Dicot | |
| 747) | The process in which heat energy is generated in plants is known as | | | | B |
| | A. | Photosynthesis | B. | Thermogenesis | |
| | C. | Glucogenesis | D. | Glycolysis | |
| 748) | Permanent plugging in plants occurs due to | | | | C |
| | A. | Glucose | B. | Proteins | |
| | C. | Callose | D. | Cellulose | |
| 749) | In seive elements ----- is absent | | | | A |
| | A. | Nucleus | B. | Mitochondria | |
| | C. | Plastids | D. | Endoplasmic reticulum | |
| 750) | The pathway by which metabolites move through plasmodesmata is known as | | | | B |
| | A. | Apoplastic pathway | B. | Symplastic pathway | |
| | C. | Diffusion | D. | Osmosis | |
| 751) | Pollen in grasses are mostly | | | | B |
| | A. | Echinate | B. | Psilate | |
| | C. | Rugose | D. | Tricolpate | |
| 752) | Speciation taking place in millions of years is called | | | | C |
| | A. | Sympatric | B. | Allopatric | |
| | C. | Gradualism | D. | Punctuated equilibrium | |
| 753) | A system in which fluid loses density due to heat and is forced into region of greater density is called | | | | A |
| | A. | Convection cell | B. | Tectonic cell | |
| | C. | Transfer cell | D. | Continental cell | |
| 754) | Poaceous plants are characterized by having | | | | D |
| | A. | Tricolpate pollen | B. | Dicolpate | |
| | C. | Polyporate pollen | D. | Monoporate pollen | |
| 755) | The first stage of taphonomy is | | | | A |
| | A. | Disarticulation | B. | Dispersal | |
| | C. | Accumulation | D. | Fossilization | |
| 756) | Polonium is present in | | | | D |
| | A. | Poa annua | B. | Tecomella undulata | |
| | C. | Conocarpus erectus | D. | Calotropis procera | |
| 757) | In early angiosperms pollen were | | | | A |
| | A. | Small | B. | Large | |
| | C. | Medium | D. | Without apertures | |

| | | | | | |
|------|---|-------------------------------|----|---|-----------------------------|
| 758) | Mesosaurus that is now extinct, is a type of | | | C | |
| | A. | Mammal | B. | | Bird |
| | C. | Lizard | D. | | Fish |
| 759) | Most resistant organic material found in nature and in geological samples is | | | D | |
| | A. | Intine | B. | | Nexine |
| | C. | Sexine | D. | | Sporopollenin |
| 760) | According to pseudanthial hypothesis angiospermic flower is developed from | | | A | |
| | A. | Compound gymnosperm strobilus | B. | | Simple gymnosperm strobilus |
| | C. | Compound angiosperms | D. | | None of these |
| 761) | One of the most common type of plant fossils is | | | C | |
| | A. | Mold | B. | | Cast |
| | C. | Compression | D. | | Depression |
| 762) | Most common plant parts preserved as compression are | | | D | |
| | A. | Stem | B. | | Roots |
| | C. | Flowers | D. | | Leaves |
| 763) | Commonly used research tool in paleobotany to illustrate pollen morphology is | | | C | |
| | A. | TEM | B. | | LM |
| | C. | SEM | D. | | All of these |
| 764) | Latest and specific definition for sporopollenin was proposed at the international symposium in | | | B | |
| | A. | 1961 | B. | | 1971 |
| | C. | 1981 | D. | | 1951 |
| 765) | Most suitable sites for exploring plant fossils are | | | B | |
| | A. | Deserts | B. | | Rock sediments |
| | C. | Forests | D. | | Foot hills |
| 766) | If the P/E ratio is one, shape of pollen is | | | A | |
| | A. | Spherical | B. | | Oblate |
| | C. | Peroblate | D. | | Subprolate |
| 767) | Acetocarmine is used to estimate | | | B | |
| | A. | Pollen number | B. | | Pollen fertility |
| | C. | Pollen shape | D. | | Pollen size |
| 768) | In <i>Panicum antidotale</i> pollen are | | | C | |

| | | | | | |
|------|--|------------------------|----|--------------------------|---|
| | A. | Echinate | B. | Tricolpate | |
| | C. | Psilate and monoporate | D. | Periporate | |
| 769) | The term palynology was introduced by | | | | B |
| | A. | Wode house | B. | Hyde and Williams | |
| | C. | Erdman | D. | N.Grew | |
| 770) | Paleobotany is derived from Paleon, that is a | | | | A |
| | A. | Greek word | B. | Latin word | |
| | C. | Spanish word | D. | French word | |
| 771) | If the pollen size is more than 200 μm , pollen are considered | | | | D |
| | A. | Medium | B. | Large | |
| | C. | Very large | D. | Gigantic | |
| 772) | The branch of taphonomy that describes that how the decomposition and destruction of organisms has happened is called | | | | A |
| | A. | Bio taphonomy | B. | Geo taphonomy | |
| | C. | Paleo taphonomy | D. | Soil taphonomy | |
| 773) | Plants belonging to family Malvaceae have | | | | C |
| | A. | Psilate pollen | B. | Perforate pollen | |
| | C. | Echinate pollen | D. | Rugulate pollen | |
| 774) | The study of pollen contained in honey and in particular the source of | | | | C |
| | A. | Forensic palynology | B. | Paleopalynology | |
| | C. | Melissopalynology | D. | None of these | |
| 775) | Preservation of whole plant or plant parts in growth position is termed as | | | | A |
| | A. | In situ | B. | Ex situ | |
| | C. | Spot preservation | D. | Whole plant preservation | |
| 776) | The process in which as sediments accumulate, water is squeezed out and sediments become compact and plant fragments contained within them become flattened, is known as | | | | C |
| | A. | Mold | B. | Cast | |
| | C. | Compression | D. | Preservation | |
| 777) | Most common plant part preserved in the form of compressions is | | | | B |
| | A. | Root | B. | Leaf | |
| | C. | Stem | D. | Flower | |
| 778) | Commonly used research tool in paleobotany to illustrate pollen grains is | | | | C |
| | A. | LM | B. | EM | |
| | C. | SEM | D. | TEM | |

| | | | | | |
|------|--|------------------------------------|----|-------------------|---|
| 779) | Asclepiadaceae is characterized by having | | | | B |
| | A. | Psilate pollen | B. | Pollinium | |
| | C. | Echinate pollen | D. | No pollen | |
| 780) | Psilate pollen with smooth wall are present in | | | | C |
| | A. | Asteraceae | B. | Apiaceae | |
| | C. | Poaceae | D. | Clusiaceae | |
| 781) | Angiosperms dominance increased in | | | | B |
| | A. | Jurassic period | B. | Paleogene period | |
| | C. | Neogene period | D. | Quaternary period | |
| 782) | Marine algae became abundant and fungi were diversified on land in | | | | A |
| | A. | a) Paleozoic era b) c) d) | B. | Mesozoic era | |
| | C. | Cenozoic era | D. | None of these | |
| 783) | Oldest fossils of eukaryotic cells appeared in | | | | C |
| | A. | Devonian period | B. | Silurian period | |
| | C. | Ediacaran period | D. | Cambrian period | |
| 784) | Formation of species in thousands of years is known as | | | | A |
| | A. | Punctuated equilibrium | B. | Gradualism | |
| | C. | Allopatric | D. | Sympatric | |
| 785) | Most resistant organic materials found in nature and in geological samples are | | | | D |
| | A. | Exine | B. | Intine | |
| | C. | Sexine | D. | Sporopollenin | |
| 786) | earliest studies on the exine of pollen were by John in | | | | A |
| | A. | 1814 | B. | 1815 | |
| | C. | 1816 | D. | 1820 | |
| 787) | A recent definition of sporopollenin was proposed in 1971 in International | | | | B |
| | A. | Conference | B. | Symposium | |
| | C. | Seminar | D. | Workshop | |
| 788) | Chemically sporopollenin is an oxidative polymer of | | | | C |
| | A. | Carotene | B. | Xanyophyll | |

| | | | | | |
|------|---|-----------------------|----|-----------------------|---|
| | C. | Carotenoids | D. | None | |
| 789) | Pollen in different sediments show gradual colour changes from pale yellow to | | | | A |
| | A. | Dark brown | B. | Black | |
| | C. | Light yellow | D. | Red | |
| 790) | Changes in pollen colour in sediments are due to | | | | B |
| | A. | Pressure | B. | Thermal changes | |
| | C. | Geological time | D. | Exine nature | |
| 791) | All continents were combined in a single land mass called Pangaya about | | | | B |
| | A. | 200 million years ago | B. | 250 million years ago | |
| | C. | 100 million years ago | D. | 150 million years ago | |
| 792) | Pangaya was broken down into two masses called Laurasia and | | | | C |
| | A. | Sandwana | B. | Harrapa | |
| | C. | Gondwana | D. | All of these | |
| 793) | 43.Colpus in pollen is the type of | | | | B |
| | A. | Spine | B. | Aperture | |
| | C. | Pore | D. | Exine | |
| 794) | Pollen with spines on exine are termed as | | | | C |
| | A. | Psilate | B. | Scabrate | |
| | C. | Echinate | D. | Foveolate | |
| 795) | Pollen in which two polar areas can not be differentiated are called | | | | B |
| | A. | Heteropolar | B. | Apolar | |
| | C. | Isopolar | D. | None of these | |
| 796) | Pollen are produced on | | | | B |
| | A. | Stigma | B. | Anthers | |
| | C. | Seeds | D. | Carpel | |
| 797) | Mostly the pollen terminology used today is given by | | | | B |
| | A. | Wodehouse | B. | Erdtman | |
| | C. | N. Grew | D. | Hyde | |
| 798) | In compression plant fragments present in rock sedements | | | | A |
| | A. | Become flattened | B. | Squeezed | |

| | | | | | |
|------|---|--------------------------------|----|------------------------------|---|
| | C. | Freezed | D. | Are melted | |
| 799) | Pollen fertility can be determined by using | | | | A |
| | A. | Aceto carmine | B. | Lactic Acid | |
| | C. | Acetic Acid | D. | Glycerin jelly | |
| 800) | Science of assigning sedimentary rocks to a known geological period is called | | | | A |
| | A. | Biostratigraphy | B. | Geochronology | |
| | C. | Sedimentology | D. | Paleontology | |
| 801) | A sac-like organelle consisting of three distinct parts is named as: | | | | D |
| | A. | Lyso | B. | Endoplasmic reticulum | |
| | C. | Vacuole | D. | Golgi bodies | |
| 802) | An enzyme involved in tryptophan metabolism in mitochondrial membrane is | | | | C |
| | A. | Proteinase | B. | Keto-glutarate | |
| | C. | Kynureninase | D. | Isomerase | |
| 803) | Of the two mitochondrial membranes, the quantity of lipids is greater in | | | | A |
| | A. | Outer membrane | B. | Inner membrane | |
| | C. | Equal in both membranes | D. | No lipids present in both | |
| 804) | Cardiolipin is a lipid which is unique to | | | | B |
| | A. | Chloroplast | B. | Mitochondria | |
| | C. | Vacuole | D. | Nucleus | |
| 805) | Mitochondrial membrane freely permeable to oxygen, water and CO ₂ is | | | | C |
| | A. | Outer membrane | B. | Both membranes | |
| | C. | Inner membrane | D. | None is permeable | |
| 806) | An organelle responsible for cellular components degradation is | | | | B |
| | A. | Peroxisomes | B. | Lysosome | |
| | C. | Proeosomes | D. | Golgi complex | |
| 807) | The formation of Acetyl-CoA in respiration takes place in | | | | A |
| | A. | Mitochondrial matrix | B. | Outer mitochondrial membrane | |
| | C. | . Inner mitochondrial membrane | D. | . Inter-membrane space | |
| 808) | The prosthetic group for protein component cytochrome c is | | | | A |
| | A. | heme c | B. | D2 protein | |
| | C. | Myelin | D. | biliverdin | |
| 809) | The so called endosymbiosis hypothesis was put forward by _____ in 1981 | | | | D |
| | A. | Glenn Margulis | B. | Dave Margulis | |
| | C. | Ann Margulis | D. | Lynn Margulis | |
| 810) | More genes in the mitochondrial genome are located on | | | | C |
| | A. | L-strand | B. | K- strand | |
| | C. | H-strand | D. | G- strand | |
| 811) | Matrix in mitochondrion is synonymous to _____ in the chloroplast | | | | B |
| | A. | Outer membrane area | B. | Stroma | |
| | C. | Intermembrane space | D. | None of these | |
| 812) | In outer membrane of chloroplast, the translocon has a molecular mass of about | | | | A |
| | A. | 1000 kDa | B. | 1200 kDa | |
| | C. | 1500 kDa | D. | 2000 kDa | |
| 813) | The pH of the space within the inner chloroplast membrane is | | | | B |
| | A. | Extremely acidic | B. | alkaline | |

| | | | | | |
|------|--|--------------------------|----|---------------------------------|---|
| | C. | . Neutral | D. | . No pH has been reported | |
| 814) | are more common in chloroplast when it is under oxidative stress | | | | D |
| | A. | Plastocyanin | B. | Pyrenoids | |
| | C. | Starch bodies | D. | Plastoglobulii | |
| 815) | In chloroplast genome, the gene(s) encoding the small subunit of RUBISCO is/are | | | | A |
| | A. | Non existent | B. | Some are presnt | |
| | C. | Some de novo synthesized | D. | All are predominantly expressed | |
| 816) | The division of chloroplast takes place with the help of _____ protein | | | | B |
| | A. | FstZ | B. | FtsZ | |
| | C. | FZst | D. | none | |
| 817) | The endoplasmic reticulum are thought to be originated as _____ of plasma membrane | | | | C |
| | A. | Invagination | B. | In-cutting | |
| | C. | Infolding | D. | By any of these ways | |
| 818) | The ribosomes when found together are called as _____ | | | | A |
| | A. | Polysomes | B. | Autosomes | |
| | C. | Multisomes | D. | Oligosomes | |
| 819) | Actual sorting and processing of macromolecules takes place in the _____ | | | | D |
| | A. | Cis-Golgi | B. | Trans-Golgi | |
| | C. | .Marginal-Golgi | D. | Medial-Golgi | |
| 820) | _____ is the site where inner and outer nuclear membranes fuse | | | | C |
| | A. | Leminar pore complex | B. | Medial pore complex | |
| | C. | Nuclear pore complex | D. | None of these | |
| 821) | Christian de Duve received Nobel Prize in Physiology _____ for discovering lysosomes | | | | C |
| | A. | . 1981 | B. | 1977 | |
| | C. | in 1974 | D. | 1968 | |
| 822) | The enzyme _____ is responsible for scavenging of hydrogen peroxide | | | | D |
| | A. | Dismutase | B. | . Oxidase | |
| | C. | Kynureninase | D. | Catalase | |
| 823) | During mitosis the replication of organelles takes place during _____ of interphase | | | | B |
| | A. | Gap-0 phase | B. | Gap-1 phase | |
| | C. | . Gap-2 phase | D. | Any of these | |
| 824) | Chiasmata formation takes place during _____ in meiosis | | | | A |
| | A. | Division-1 | B. | Division-2 | |
| | C. | Division-1 & 2 | D. | None of these | |
| 825) | One Giga is equal to _____ | | | | D |
| | A. | 10 kilo | B. | 10 ³ kilo | |
| | C. | 10 ⁶ kilo | D. | 10 ⁹ kilo | |
| 826) | A cell without a nucleus and organelles but yet has genetic system is a _____ | | | | A |
| | A. | Spirillum cell | B. | Sieve cell | |
| | C. | Tracheid cell | D. | Egg cell | |
| 827) | The ribosomes within the nucleus are synthesized in _____ | | | | C |
| | A. | Centriole | B. | Lemin | |
| | C. | . Nucleolus | D. | Nucleoplasm | |
| 828) | The role played by the lysosomes is mainly _____ | | | | D |
| | A. | Neutral | B. | . Locomotory | |
| | C. | Anabolic | D. | Catabolic | |
| 829) | Teichoic acids are found in the cell wall of _____ | | | | C |
| | A. | Chara | B. | Penecillium | |
| | C. | Bacillus | D. | All of these | |

| | | | | | |
|------|--|--------------------------------------|----|------------------------|---|
| 830) | A bacterial cell showing movement in all directions will be regarded as | | | | D |
| | A. | Allotrichous | B. | Amphitrichous | |
| | C. | Monotrichous | D. | Peritrichous | |
| 831) | Introns are present in all except in | | | | B |
| | A. | Amoeba | B. | Bacillus | |
| | C. | Paramecium | D. | Chlamydomonas | |
| 832) | Cell wall proteins are not glycosylate in | | | | C |
| | A. | Soybean | B. | Tomato | |
| | C. | Petunia | D. | None of these | |
| 833) | Along with chitin the glucan is present in all except | | | | A |
| | A. | Zygomycota | B. | Basidiomycota | |
| | C. | Chotridiomycota | D. | Ascomycota | |
| 834) | The term pinocytosis refers to | | | | B |
| | A. | Cell eating | B. | Cell drinking | |
| | C. | Cell cleavage | D. | Cytosis | |
| 835) | Among the sterols, that present in plant is | | | | C |
| | A. | Cholesterol | B. | Ergosterol | |
| | C. | . Stigmasterol | D. | Sphingosterol | |
| 836) | Among various anthocyanidins, the cyaniding is found in the vacuole of | | | | D |
| | A. | Banana | B. | Tomato | |
| | C. | Wheat | D. | Rose | |
| 837) | Cells lacking a nucleus but still have genome are called | | | | A |
| | A. | Prokaryotes | B. | Eukaryota | |
| | C. | Both of these | D. | None of these | |
| 838) | Most functions in prokaryotes are performed by | | | | C |
| | A. | Cell wall | B. | Mesosomes | |
| | C. | . Plasmalemma | D. | Heterosome | |
| 839) | Fungi and most bacteria are non-photosynthetic, they yet differ from plants in having wall | | | | A |
| | A. | Non-cellulosic | B. | Suberized | |
| | C. | . Double layered | D. | Pectinated | |
| 840) | The function of _____ is to fill the cell and suspend the organelles | | | | C |
| | A. | Cell wall | B. | . Vacuole | |
| | C. | Cytosol | D. | Lysosomes | |
| 841) | Among different functions of _____, it regulates Ca levels and breaks the toxic substances | | | | D |
| | A. | Golgi bodies | B. | Rough ER | |
| | C. | Peroxisomes | D. | . Smooth ER | |
| 842) | _____ is the cell's waste warehouse | | | | C |
| | A. | Cis-Golgi | B. | Lysosomes | |
| | C. | Vacuole | D. | All of these | |
| 843) | Compared to outer membrane, the inner mitochondrial membrane has a high _____ ratio | | | | A |
| | A. | Protein/lipid | B. | Proteins/carbohydrates | |
| | C. | Carbohydrates/lipids | D. | Lipids/calcium | |
| 844) | In respiratory electron transport chain, last electron Cyt-b3carrier is | | | | D |
| | A. | A. Cyt-f | B. | Cyt-b3 | |
| | C. | Cyt-a1 | D. | Cyt-a3 | |
| 845) | Corresponding to matrix in mitochondria, the space in the chloroplast is | | | | B |
| | A. | intermembrane space | B. | Stroma | |
| | C. | Lumen | D. | Locule | |
| 846) | The complex concerned with ATP synthesis is called | | | | C |
| | A. | F ₀ F ₁ ATPase | B. | ATP oxidase | |

| | | | | | |
|------|--|----------------------------------|----|---------------------------|---|
| | C. | F_1F_0 ATP synthase | D. | ATP kinase | |
| 847) | The Calvin cycle takes place in _____ of the chloroplast | | | | A |
| | A. | Stroma | B. | Thylakoid lumen | |
| | C. | Grana | D. | All these sites | |
| 848) | Like mitochondria, the genome of chloroplast is also _____ | | | | B |
| | A. | linear | B. | Circular | |
| | C. | Reticulate | D. | Fragmented | |
| 849) | During cytokinesis, the division of plastids is like _____ | | | | A |
| | A. | Bacteria | B. | Amoeba | |
| | C. | Statospore | D. | Oedogonium | |
| 850) | Among the various types of endoplasmic reticulum, _____ range widely in size | | | | C |
| | A. | Tubule | B. | Cisternae | |
| | C. | Vesicles | D. | None of these | |
| 851) | Of the two divisions, _____ occurs earlier to _____ | | | | A |
| | A. | Karyokinesis, cytokinesis | B. | Cytokinesis, karyokinesis | |
| | C. | Both take place at the same time | D. | None is applicable | |
| 852) | Three _____ are required for the elongation phase of protein synthesis | | | | B |
| | A. | Reducing factors | B. | Elongation Factors | |
| | C. | Strengthening factors | D. | None of these | |
| 853) | _____ is addition of sugar residues to the newly synthesized proteins | | | | D |
| | A. | Glucolation | B. | Glycogenation | |
| | C. | Glucogenation | D. | Glycosilation | |
| 854) | For his great discovery Camillo Golgi was awarded Nobel prize in _____ | | | | A |
| | A. | 1906 | B. | 1912 | |
| | C. | 1915 | D. | 1919 | |
| 855) | In Golgi complex, _____ is the shipping end | | | | B |
| | A. | Cis-Golgi | B. | Trans-Golgi | |
| | C. | Medial Golgi | D. | Lateral-Golgi | |
| 856) | Many _____ assemble together to form the Golgi bodies | | | | A |
| | A. | Dictyosomes | B. | Lamellae | |
| | C. | Vesicles | D. | All of these | |
| 857) | Nuclear lamina is structurally composed of _____ | | | | A |
| | A. | Lamins | B. | Laminins | |
| | C. | Leumens | D. | Limans | |
| 858) | Number of lamins in human nuclear lamina are _____ | | | | D |
| | A. | Two | B. | Four | |
| | C. | Seventeen | D. | Seven | |
| 859) | After their synthesis in _____ the Lysosomes are packed in Golgi complex | | | | C |
| | A. | Nucleus | B. | Peroxisomes | |
| | C. | Rough ER | D. | Smooth ER | |
| 860) | The process in plants in which three organelles cooperate is called _____ | | | | B |
| | A. | Respiration | B. | Photorespiration | |
| | C. | β -oxidation | D. | Photosynthesis | |
| 861) | Which of the following does not contain a cytoskeleton | | | | A |
| | A. | Bacillus | B. | Maize | |
| | C. | Amoeba | D. | Chara | |
| 862) | Single membrane is present in _____ | | | | D |
| | A. | Chloroplast | B. | Nucleus | |
| | C. | Mitochondria | D. | Lysosome | |

| | | | | |
|------|---|----------------------|----|--------------------------------------|
| 863) | The _____ is called the warehouse of the cell | | C | |
| | A. | Lysosome | B. | Golgi Apparatus |
| | C. | Vacuole | D. | None of these |
| 864) | The out membrane of the mitochondria contains _____ phospholipids | | B | |
| | A. | 40% | B. | 50% |
| | C. | 60% | D. | 70% |
| 865) | Bilayer and non-bilayer phospholipids have | | C | |
| | A. | Same shapes | B. | Similar shapes |
| | C. | Different shapes | D. | No shapes |
| 866) | The _____ are the sites for the electron transport system and the synthesis of ATP | | A | |
| | A. | Cristae | B. | Matrix |
| | C. | Inter-membrane space | D. | Outer membrane |
| 867) | The formation of actyl-CoA is catalyzed by | | D | |
| | A. | Pyruvate oxidase | B. | Pyruvate ligase |
| | C. | Pyruvate synthase | D. | Pyruvate dehydrogenase |
| 868) | In TCA cycle, with the addition of Acetyl CoA the next product formed is | | B | |
| | A. | Oxaloacetate | B. | Citrate |
| | C. | Malate | D. | α -keto-glutarate |
| 869) | Among three stages of fatty acid catabolism, the first stage is | | B | |
| | A. | α -oxidation | B. | β -oxidation |
| | C. | λ -oxidation | D. | None of these |
| 870) | The percentage of proteins encoded by the mitochondrial genome in the mitochondria is | | A | |
| | A. | Less than 10% | B. | More than 50% |
| | C. | About 100% | D. | Less than 1% |
| 871) | Among a number of similarities of bacteria and mitochondria, one is that both have | | C | |
| | A. | Linear genome | B. | Fragmented genome |
| | C. | Circular genome | D. | Genome is absent in both |
| 872) | Replication in the mitochondrial genome starts with | | A | |
| | A. | H strand | B. | L strand |
| | C. | H loop | D. | L loop |
| 873) | In the skeletal muscle, the mitochondrial biogenesis increases with | | D | |
| | A. | Exercise | B. | Electrical stimulation |
| | C. | Development | D. | All these ways |
| 874) | Proplastids are found in | | D | |
| | A. | Mature tissues | B. | Least developed tissues |
| | C. | Lignified tissues | D. | Tissues which have ceased to develop |
| 875) | Statoliths are found in | | C | |
| | A. | Shoot apical cells | B. | Floral cells |
| | C. | Root cap cells | D. | Root elongation zone |
| 876) | Quadrates having smallest perimeter known as _____. | | C | |
| | A. | Rectangular quadrate | B. | Sequire quadrate |
| | C. | Round quadrate | D. | None of these |
| 877) | Which size of Quadrates used for sampling of shrubs _____. | | B | |
| | A. | One meter square | B. | Five meter square |
| | C. | Ten meter square | D. | Two meter square |
| 878) | The type of method in which sampling is already decided known as _____. | | B | |
| | A. | Regular | B. | Subjective |
| | C. | Random | D. | None of these |
| 879) | Quadrates used for measurement of dry weight of plants known as _____. | | D | |
| | A. | Census quadrate | B. | Chart quadrate |

| | | | | | |
|------|--|---------------------------|----|--------------------------|---|
| | C. | Basal area quadrat | D. | Clip quadrat | |
| 880) | Method used for measurement of plants width perpendicular to transect line | | | | A |
| | A. | Eberhadt method | B. | Weinberg method | |
| | C. | Belt Method | D. | Chart method | |
| 881) | The method used for study of circular organism for ensuring of accuracy | | | | B |
| | A. | Strong method | B. | Weinberg method | |
| | C. | Clip method | D. | Transect method | |
| 882) | Which method is used to know the variation in species composition | | | | A |
| | A. | Transect method | B. | Distance method | |
| | C. | Nearest individual method | D. | Belt method | |
| 883) | The type of method used to measure the relationship of plants | | | | C |
| | A. | Line transect method | B. | Belt transect method | |
| | C. | Distance method | D. | Strong method | |
| 884) | Horizontal study of vegetation of a community known as | | | | B |
| | A. | Distance method | B. | Bisect method | |
| | C. | Randomly pairs method | D. | Nearest neighbour method | |
| 885) | The study of three dimensional projection of canopy in air known as | | | | D |
| | A. | Canopy cover | B. | Basal cover | |
| | C. | Foliar cover | D. | Crown cover | |
| 886) | _____ is the relative contribution of species to entire community. | | | | C |
| | A. | Density | B. | Frequency | |
| | C. | Relative importance value | D. | Importance value | |
| 887) | In which method we studied the impact of species on plant community structure | | | | C |
| | A. | Abundance | B. | Richness | |
| | C. | Dominance | D. | Relative abundance | |
| 888) | The sideways bar graph essentially used for assessment of wildlife habitats. | | | | A |
| | A. | Canopy profiles | B. | Canopy cover | |
| | C. | Crown cover | D. | Ground cover | |
| 889) | _____ is used for measurement of age of tree. | | | | D |
| | A. | Clinometer | B. | Clipper | |
| | C. | Measuring tape | D. | DBH | |
| 890) | The cover equal to shadow cast when the sun is directly overhead. | | | | C |
| | A. | Canopy cover | B. | Basal cover | |
| | C. | Foliar cover | D. | Crown cover | |
| 891) | Number of time a species occurred in total number of sampled quadrates. | | | | B |
| | A. | Density | B. | Frequency | |
| | C. | Relative frequency | D. | Importance value | |
| 892) | The method used for measurement of foliar cover. | | | | A |
| | A. | Leaf area index | B. | Shanon Index | |
| | C. | Net assimilation rate | D. | Leaf area | |
| 893) | The method used to determine the stability of habitats. | | | | D |
| | A. | Canopy cover | B. | Basal cover | |
| | C. | Foliar cover | D. | Ground cover | |
| 894) | The term species was defined on the basis of | | | | D |
| | A. | Behavioral isolation | B. | Ecological isolation | |
| | C. | Genetic isolation | D. | Reproduction isolation | |
| 895) | Species having distribution independent to environmental factors known as | | | | C |
| | A. | Biological species | B. | Endemic species | |
| | C. | Ubiquitous species | D. | Cosmopoliton species | |
| 896) | _____ is the results of expression of organism genes and influence of environmental factors. | | | | B |
| | A. | Genotype | B. | Phenotype | |
| | C. | Physiology | D. | Physiognomy | |
| 897) | Species reproduce without meiosis and produces genetically identical organism | | | | D |

| | | | | | |
|------|---|-----------------------------|----|-----------------------|---|
| | A. | Phenetic species | B. | Darwinian species | |
| | C. | Genetic species | D. | Micro species | |
| 898) | An ecosystem lie between the _____ and _____ for energy. | | | | D |
| | A. | Source and energy | B. | Biotic and Abiotic | |
| | C. | Species and community | D. | Source and sink | |
| 899) | =energy devoted to growth – respired –Reproduction X 100/energy assimilated. | | | | B |
| | A. | RE | B. | GE | |
| | C. | AE | D. | EE | |
| 900) | _____ is the fundamental process common to all ecosystem. | | | | A |
| | A. | Energy flow | B. | Growth efficiency | |
| | C. | Community | D. | Food chain | |
| 901) | Infiltration rate of loamy soil is _____. | | | | B |
| | A. | 20-30 | B. | 10-20 | |
| | C. | 20-10 | D. | 10-0 | |
| 902) | Soil said to be at filed capacity after drainage of _____. | | | | A |
| | A. | Two days | B. | Five days | |
| | C. | Three days | D. | One day | |
| 903) | In which state of water molecules move freely and have high kinetic energy _____. | | | | C |
| | A. | Solid | B. | Liquid | |
| | C. | Gaseous | D. | Solution | |
| 904) | Amount of energy needed to break the hydrogen bond of water known as _____. | | | | C |
| | A. | Evaporation | B. | Heat of collision | |
| | C. | Latent heat of vaporization | D. | Heat energy | |
| 905) | _____ is measured as the weight of water vapor in the air per unit weight of air. | | | | B |
| | A. | Absolute humidity | B. | Specific humidity | |
| | C. | Relative humidity | D. | Mixing ratio | |
| 906) | Fog formed when cool dry air settles over a warm, moist surface _____. | | | | C |
| | A. | Advection fog | B. | Upslope fog | |
| | C. | Steam fog | D. | Frontal fog | |
| 907) | Fog composed of super-cooled water drops. | | | | D |
| | A. | Drizzle | B. | Rain | |
| | C. | Freezing Drizzle | D. | Freezing fog | |
| 908) | Snow having small air pockets embedded within their structure and have visual remnants of ice crystals. | | | | B |
| | A. | Snow | B. | Snow pellets | |
| | C. | Snow grains | D. | Ice pellet | |
| 909) | Rice is an example of _____. | | | | C |
| | A. | Floating hydrophytes | B. | Submerged hydrophytes | |
| | C. | Emergent hydrophytes | D. | Mesophytes | |
| 910) | Gas filled spaces formed in tissues of plants growing waterlogged condition called as _____. | | | | A |
| | A. | Aerenchyma | B. | Lacunae | |
| | C. | Pneumatophores | D. | Sclerenchyma | |
| 911) | Which plant show high root to shoot ratio to absorb maximum water _____. | | | | C |
| | A. | Calotropis | B. | Cactus | |
| | C. | Mesquit | D. | Mango | |
| 912) | Plants having hard leaves to reduce water loss from surface known as _____. | | | | B |
| | A. | Phreatophytes | B. | Ephemerals | |
| | C. | Mesophytes | D. | Hydrophytes | |
| 913) | Which group of plants showed maximum water use efficiency? | | | | A |
| | A. | CAM | B. | C3 | |
| | C. | C4 | D. | Hydrophytes | |
| 914) | Which group of plants shows kranz anatomy? | | | | C |
| | A. | CAM | B. | C3 | |
| | C. | C4 | D. | Hydrophytes | |

| | | | | | |
|------|---|------------------------|---|----|-------------------------|
| 915) | Range of visible light is | | B | | |
| | A. | 280-400nm | | B. | 400-700nm |
| | C. | 700-850nm | | D. | 280-310nm |
| 916) | The time at which day length is equal to twelve hours across the world known as. | | B | | |
| | A. | Solstice | | B. | Equinox |
| | C. | Angle of incidence | | D. | Insolation |
| 917) | Light absorbed by phytochromes known as. | | B | | |
| | A. | Visible light | | B. | IR light |
| | C. | UV light | | D. | Radio-active light |
| 918) | Visible light reached the forest floor. | | A | | |
| | A. | 1-5% | | B. | 0.25-2% |
| | C. | 3-4% | | D. | 2% |
| 919) | Which one is most reflected wavelength of light? | | D | | |
| | A. | Blue | | B. | Green |
| | C. | Far red | | D. | Green and Far IR |
| 920) | Epiphytes is an example of | | A | | |
| | A. | Heliophytes | | B. | Schiophytes |
| | C. | Facultative sciophytes | | D. | Facultative heliophytes |
| 921) | Group of plants having fewer stomata and less support from sclerenchyma. | | B | | |
| | A. | Heliophytes | | B. | Schiophytes |
| | C. | Facultative sciophytes | | D. | Facultative heliophytes |
| 922) | Change in species over a period of time. | | A | | |
| | A. | Succession | | B. | Disturbance |
| | C. | Dynamics | | D. | Hurricanes |
| 923) | Which type of succession is consequence of primary succession? | | B | | |
| | A. | Allogenic succession | | B. | Autogenic succession |
| | C. | Degradation succession | | D. | Succession |
| 924) | Succession in which community become simple and contain fewer species. | | B | | |
| | A. | Progressive succession | | B. | Retgressive succession |
| | C. | Autogenic succession | | D. | Degradation succession |
| 925) | A protected area which cover vast range of natural habitats and human's activities are allowed. | | C | | |
| | A. | Wildlife sanctuaries | | B. | National parks |
| | C. | Biosphere reserves | | D. | Islands |
| 926) | Water is liquid at room temperature due to | | C | | |
| | A. | Ionic bonding | | B. | Covalent bonding |
| | C. | Hydrogen bonding | | D. | Mutual sharing |
| 927) | Water molecule shows V-shape structure with an angle of about | | B | | |
| | A. | 103 ° | | B. | 105 ° |
| | C. | 107 ° | | D. | 109 ° |
| 928) | Cohesive forces are present between | | A | | |
| | A. | Similar molecules | | B. | Different molecules |
| | C. | Liquid and container | | D. | Liquid and atmosphere |
| 929) | The amount of energy required to convert 1 g of water from solid (ice) to liquid state at 0 °C | | B | | |
| | A. | Heat of vaporization | | B. | Heat of fusion |
| | C. | Specific heat | | D. | Viscosity |
| 930) | The amount of energy required to convert 1g of liquid into vapors | | A | | |
| | A. | Heat of vaporization | | B. | Heat of fusion |
| | C. | Specific heat | | D. | Viscosity |
| 931) | The density of water is maximum at | | C | | |
| | A. | 0 °C | | B. | 2 °C |
| | C. | 4 °C | | D. | 6 °C |
| 932) | Hindrance to flow of liquid | | A | | |
| | A. | Viscosity | | B. | Vaporization |

| | | | | | |
|------|---|------------------------|----|----------------------|---|
| | C. | Fusion | D. | Diffusion | |
| 933) | Adhesion is the force of attraction between | | | | B |
| | A. | Similar surfaces | B. | Water | |
| | C. | Dissimilar surfaces | D. | Gases | |
| 934) | If the pH of medium is greater than 7 then it will be | | | | D |
| | A. | Acidic | B. | Neutral | |
| | C. | Saline | D. | Alkaline | |
| 935) | If the pH of medium is less than 7 then it will be | | | | A |
| | A. | Acidic | B. | Neutral | |
| | C. | Saline | D. | Alkaline | |
| 936) | If the pH of medium is equal to 7 then it will be | | | | B |
| | A. | Acidic | B. | Neutral | |
| | C. | Saline | D. | Alkaline | |
| 937) | In gymnosperm's xylem ----- are present | | | | A |
| | A. | Tacheids | B. | Vessels | |
| | C. | hairs | D. | Trichomes | |
| 938) | In angiosperm's xylem-----are present | | | | B |
| | A. | Tacheids | B. | Vessels | |
| | C. | hairs | D. | Trichomes | |
| 939) | Dye method or falling drop method was proposed by | | | | B |
| | A. | Dixon | B. | Chardakov | |
| | C. | Taize | D. | Hopkins | |
| 940) | A single cell turgor pressure can be determined by | | | | A |
| | A. | Pressure probe | B. | Pressure chamber | |
| | C. | Osmometer | D. | Psychrometer | |
| 941) | Maximum value of pure free water is equal to | | | | D |
| | A. | 1 MPa | B. | 1.5 MPa | |
| | C. | 2 MPa | D. | 0 MPa | |
| 942) | A plant hormone is always-----in nature | | | | B |
| | A. | Inorganic | B. | Organic | |
| | C. | Mineral | D. | Ion | |
| 943) | Hormones are effective in | | | | C |
| | A. | High concentration | B. | low concentration | |
| | C. | very low concentration | D. | medium concentration | |
| 944) | Calcium and potassium are required for growth but they are not hormone because they are | | | | A |
| | A. | Inorganic | B. | Organic | |
| | C. | Macronutrients | D. | Essential nutrients | |
| 945) | The power of movement book is written by | | | | C |
| | A. | Mendel | B. | Hopkins | |
| | C. | Darwin | D. | Dixon | |
| 946) | The first hormone was isolated by | | | | D |
| | A. | Darwin | B. | Monceau | |
| | C. | Ross | D. | Fritz Went | |
| 947) | The gaseous hormone which is present in plants is known as | | | | D |
| | A. | Auxin | B. | Cytokinins | |
| | C. | Tocopherols | D. | Ethylene | |
| 948) | Receptors of water soluble hormones are present in/on | | | | B |
| | A. | cytoplasm | B. | Cell membrane | |
| | C. | Vacuole | D. | Mitochondria | |
| 949) | Receptors of lipid soluble hormones are present in/on | | | | A |
| | A. | Cytoplasm | B. | Cell membrane | |

| | | | | | |
|------|--|----------------------|----|--------------------------------|---|
| | C. | Vacuole | D. | Mitochondria | |
| 950) | The response of plant to relative length of day and night is known as | | | | B |
| | A. | Cellular response | B. | Photoperiodism | |
| | C. | Geotropism | D. | Plant movement | |
| 951) | The plants which flower when day length is greater than critical day length are known as | | | | B |
| | A. | Short day plants | B. | Long day plants | |
| | C. | Day neutral plants | D. | Intermediate day length plants | |
| 952) | The plants which flower when day length is less than critical day length are known as | | | | A |
| | A. | Short day plants | B. | Long day plants | |
| | C. | Day neutral plants | D. | Intermediate day length plants | |
| 953) | The day length which is essentially required for flowering is called | | | | D |
| | A. | Short days | B. | Long days | |
| | C. | Photoperiodism | D. | Critical day length | |
| 954) | Low temperature treatment to induce flowering in plants is called | | | | B |
| | A. | Photoperiodism | B. | Vernalization | |
| | C. | Photosynthesis | D. | Water uptake | |
| 955) | The most effective temperature range for vernalization is | | | | C |
| | A. | 1-5 °C | B. | 1-3 °C | |
| | C. | 1-7 °C | D. | 4-11°C | |
| 956) | The gene which is involved in vernalization process is | | | | A |
| | A. | FLC | B. | FLD | |
| | C. | FLO | D. | FLE | |
| 957) | The active form of phytochrome is | | | | B |
| | A. | Pr form | B. | Pfr form | |
| | C. | Type A form | D. | Type C form | |
| 958) | Relative effectiveness of different wavelengths of light on photomorphogenesis | | | | D |
| | A. | Absorption spectrum | B. | Photosynthesis | |
| | C. | Respiration | D. | Action spectrum | |
| 959) | Plants in which flowering neither occur in short days nor long days | | | | D |
| | A. | Short day plants | B. | Long day plants | |
| | C. | Day neutral plants | D. | Intermediate day length plants | |
| 960) | Phytochrome synthesized in the form of | | | | A |
| | A. | Pr form | B. | Pfr form | |
| | C. | Type A form | D. | Type C form | |
| 961) | Stable form of phytochrome is | | | | A |
| | A. | Pr form | B. | Pfr form | |
| | C. | Type A form | D. | Type C form | |
| 962) | Pr form of phytochrome is | | | | B |
| | A. | Red in color | B. | Green in color | |
| | C. | Yellow in color | D. | Blue in color | |
| 963) | Pfr form of phytochrome is | | | | A |
| | A. | Olive green in color | B. | Green in color | |
| | C. | Yellow in color | D. | Blue in color | |
| 964) | Biological activities that cycle in approximately twenty-four-hour intervals are called | | | | B |
| | A. | Stomatal regulation | B. | Circadian rhythm | |
| | C. | Photosynthesis | D. | Respiration | |
| 965) | The number of floral organ identity genes in Arabidopsis is | | | | B |
| | A. | 3 | B. | 5 | |
| | C. | 7 | D. | 9 | |
| 966) | Ripened ovule is called | | | | C |
| | A. | Vegetable | B. | Fruit | |
| | C. | Seed | D. | Ovary | |
| 967) | Those plants which do not respond to photoperiods | | | | C |

| | | | | | |
|------|---|----------------------------------|----|----------------------------------|---|
| | A. | Short day plants | B. | Long day plants | |
| | C. | Day neutral plants | D. | Intermediate day length plants | |
| 968) | Ripened ovary is called | | | | B |
| | A. | stem | B. | fruit | |
| | C. | seed | D. | ovary | |
| 969) | In monocot main storage organ in seed is | | | | B |
| | A. | Cotyledon | B. | Endosperm | |
| | C. | Ovule | D. | Vacuole | |
| 970) | In dicot main storage organ in seed is | | | | A |
| | A. | Cotyledon | B. | Endosperm | |
| | C. | Ovule | D. | Vacuole | |
| 971) | In hypogeal germination | | | | A |
| | A. | Cotyledon remain under ground | B. | Cotyledon grow up in air | |
| | C. | Cotyledon did not grow | D. | non of them | |
| 972) | Plants in which flowering is inhibited by intermediate day length | | | | A |
| | A. | Amphiphotoperiodic plants | B. | Long day plants | |
| | C. | Day neutral plants | D. | Intermediate day length plants | |
| 973) | Auxin stimulates | | | | D |
| | A. | Cell division | B. | Cell enlargement | |
| | C. | Apical dominance | D. | All of these | |
| 974) | Auxin is synthesized directly from the amino acid | | | | C |
| | A. | Proline | B. | Cystein | |
| | C. | Tryptophan | D. | Glycine | |
| 975) | Rate of polar transport of auxin | | | | B |
| | A. | 5-15 cm/h | B. | 2-20 cm/h | |
| | C. | 1-10 cm/h | D. | 10-20 cm/h | |
| 976) | Number of PIN formed proteins in Arabidopsis is | | | | B |
| | A. | 4 | B. | 8 | |
| | C. | 12 | D. | 16 | |
| 977) | Germination of plants is of | | | | B |
| | A. | Two types | B. | Three types | |
| | C. | Four types | D. | Five types | |
| 978) | Coleorhiza sheath enclosed the | | | | A |
| | A. | Radicle | B. | Plumule | |
| | C. | Both a & b | D. | Non of them | |
| 979) | Peripheral layer enclosing the endosperm is called | | | | D |
| | A. | Seed coat | B. | Testa | |
| | C. | Cotyledon | D. | Aleurone layer | |
| 980) | Phytochromobilins are synthesized in | | | | C |
| | A. | Vacuole | B. | Mitochondria | |
| | C. | Plastids | D. | Nucleus | |
| 981) | In plants phytochromes are of | | | | B |
| | A. | 3 types | B. | 5 types | |
| | C. | 7 types | D. | 8 types | |
| 982) | Phytochromes are | | | | D |
| | A. | Plant hormones | B. | Pheromones | |
| | C. | Vitamins | D. | Plant pigments | |
| 983) | Short-long-day plants requires | | | | B |
| | A. | Long days followed by short days | B. | Short days followed by long days | |
| | C. | Short days | D. | Day-neutral plants | |
| 984) | By the addition of solutes water potential | | | | D |
| | A. | Becomes neutral | B. | Increased | |
| | C. | Remain constant | D. | Decreased | |

| | | | | | |
|-------|--|----|------------------|--|---|
| 985) | Water is universal solvent. This property of water is mainly due to | | | | C |
| A. | Adhesive forces | B. | Cohesive forces | | |
| C. | Hydrogen bonding | D. | Covalent bonding | | |
| 986) | In a normal plant water rate ranges from | | | | C |
| A. | 20-40% | B. | 60-80% | | |
| C. | 70-90% | D. | All above | | |
| 987) | Major constituent of protoplast is | | | | A |
| A. | Water | B. | Cellulose | | |
| C. | Carbon | D. | Oxygen | | |
| 988) | Salicylic acid was discovered from ----- plant | | | | C |
| A. | Ficus | B. | Eucalyptus | | |
| C. | Willow | D. | Carrot | | |
| 989) | Salicylic acid transmission is through | | | | C |
| A. | Vascular tissue | B. | Roots | | |
| C. | Air | D. | stem | | |
| 990) | Salicylic acid is calorigenic substance which produces heat during fertilization | | | | B |
| A. | ATP | B. | Heat | | |
| C. | NADH | D. | Cell division | | |
| 991) | Jasmonates are released as ----- compounds from trees | | | | C |
| A. | Organic | B. | Covalent | | |
| C. | Volatile | D. | Liquid | | |
| 992) | Systemin is a polypeptide composed of | | | | B |
| A. | 16 amino acids | B. | 18 amino acids | | |
| C. | 20 amino acids | D. | 22 amino acids | | |
| 993) | Tocopherols are also known as | | | | D |
| A. | Vitamin A | B. | Vitamin C | | |
| C. | Vitamin D | D. | Vitamin E | | |
| 994) | Tocopherols have ----- froms | | | | B |
| A. | 2 | B. | 3 | | |
| C. | 5 | D. | 7 | | |
| 995) | Wilting toxin hormone is | | | | C |
| A. | Auxin | B. | Gibberellin | | |
| C. | Fusicoccin | D. | Systemin | | |
| 996) | Triacontanol is hormone composed of ----- carbons | | | | C |
| A. | 20 | B. | 25 | | |
| C. | 30 | D. | 35 | | |
| 997) | Batasins were isolated from | | | | C |
| A. | Carrot | B. | Cabbage | | |
| C. | Yam plants | D. | Willow tree | | |
| 998) | The first steroidal hormone discovered in plants is | | | | C |
| A. | Absciscic acid | B. | Ethylene | | |
| C. | Brassinosteroid | D. | Turgorins | | |
| 999) | Visually brassinosteroid hormones have resemblance with | | | | A |
| A. | Crotisol | B. | Ethylene | | |
| C. | Absciscic acid | D. | Turgorins | | |
| 1000) | Brassinosteroids are recognized at the | | | | B |
| A. | Cytosol | B. | Cell membrane | | |
| C. | Cell wall | D. | Nuclear membrane | | |

