

COMMON MODEL PAPER
Plant Anatomy and Plant Physiology MCQ TEST

10th Standard

Science

Exam Time : 01:00:00 Hrs

Total Marks : 60

60 x 1 = 60

- 1) Casparian strips are present in the _____ of the root.
(a) cortex (b) pith (c) pericycle (d) endodermis
- 2) The endarch condition is the characteristic feature of
(a) root (b) stem (c) leaves (d) flower
- 3) The xylem and phloem arranged side by side on same radius is called _____.
(a) radial (b) amphivasal (c) conjoint (d) None of these
- 4) Which is formed during anaerobic respiration
(a) Carbohydrate (b) Ethyl alcohol (c) Acetyl CoA (d) Pyruvate
- 5) Krebs's cycle takes place in
(a) chloroplast (b) mitochondrial matrix (c) stomata
(d) inner mitochondrial membrane
- 6) Oxygen is produced at what point during photosynthesis ?
(a) when ATP is converted to ADP (b) when CO₂ is fixed (c) when H₂O is splitted
(d) All of these
- 7) Exarch and tetrarch xylem are a feature of _____.
(a) dicot stem (b) dicot leaf (c) monocot root (d) dicot root
- 8) Mitochondria was discovered by _____.
(a) Sachs (b) Kelvin (c) Melvin (d) Kolliker
- 9) Name the tissue present between the upper and lower epidermis.
(a) Lower epidermis tissue (b) Pith (c) Upper epidermis tissue (d) Mesophyll
- 10) The inner mitochondrial membrane gives rise to finger like projections called _____.
(a) oxysomes (b) matrix (c) cristae (d) stalk
- 11) Leucoplasts are _____ plastids.
(a) colourless (b) yellow (c) orange (d) red
- 12) The study of internal structure of plants _____.
(a) Plant Physiology (b) Plant Anatomy (c) Taxonomy (d) Cytology
- 13) In _____ vascular bundles, Xylem and phloem are present in different radii alternating with each other.
(a) Collateral (b) Bicollateral (c) Concentric (d) Radial
- 14) The xylem is exarch and polyarchin _____.
(a) Dicot stem (b) Dicot root (c) Monocot stem (d) Monocot root
- 15) Conjunctive tissue in monocot root, is made up of _____.
(a) Parenchyma (b) Collenchyma (c) Sclerenchyma (d) Xylem
- 16) Root hairs are the unicellular out growths of _____.
(a) Epiblema (b) Rhizodermis (c) Piliferous layer (d) All the above
- 17) _____ of dicot leaf takes part in photosynthesis
(a) Vascular bundle (b) Lower epidermis (c) Spongy Parenchyma

- (d) Palisade parenchyma
- 18) Vascular bundles are conjoint, collateral and closed in _____
(a) Monocot and dicot stem (b) Monocot and dicot root
(c) Monocot and dicot leaf (d) All the above
- 19) Mesophyll is not differentiated into palisade and spongy parenchyma in _____
(a) Monocot leaf (b) Dicot leaf (c) Monocot and dicot leaf (d) None of the above
- 20) Yellow, red, orange coloured plastids _____
(a) Leucoplast (b) Chloroplast (c) Chromoplast (d) None of the above
- 21) Stroma contains _____ ribosomes for protein synthesis.
(a) 20 S (b) 30 S (c) 50 S (d) 70 S
- 22) Thylakoids forms a stack of disc like structures called _____
(a) Stroma (b) Matrix (c) Granum (d) Lamellae
- 23) During photosynthesis _____ is released as a byproduct.
(a) Oxygen (b) Carbon di oxide (c) ATP (d) ADP
- 24) _____ is the primary photosynthetic pigment
(a) Chlorophyll a (b) Chlorophyll b (c) Carotenoids (d) Xanthophylls
- 25) The entire process of photosynthesis takes place inside the _____
(a) Chloroplast (b) Leucoplast (c) Chromoplast (d) Mitochondria
- 26) Dark reaction or biosynthetic pathway is carried out in the _____
(a) Stroma (b) Oxysomes (c) Grana (d) Lamellae
- 27) Light independent reaction is also called as _____
(a) Calvin cycle (b) Krebs cycle (c) Glycolysis (d) Hill reaction
- 28) Glycolysis takes place in _____ of the cell.
(a) Chloroplast (b) Mitochondria (c) Cytoplasm (d) Ribosome
- 29) _____ is the ultimate electron acceptor in aerobic respiration.
(a) Oxygen (b) Hydrogen (c) Carbon di oxide (d) Water
- 30) _____ is parenchymatous with profuse inter cellular spaces in monocot stem.
(a) Hypodermis (b) Ground tissue (c) Vascular bundle (d) Cortex
- 31) Single layered without hair
(a) Endodermis (b) Epidermis (c) Hypodermis (d) Pericycle
- 32) Bulliform or motor cells are Present on
(a) Root (b) Stem (c) Isobilateral leaf (d) Dorsiventral leaf
- 33) Bulliform cells differ from other cells in being
(a) small and thick wall (b) small and thin walled (c) large and thick walled
(d) large and thin walled
- 34) Passage cells are Present in
(a) cortex (b) Pericycle (c) pith (d) endodermis
- 35) Innermost layer of cortex is
(a) pericycle (b) endodermis (c) cortex (d) perisperm
- 36) Starch sheath is
(a) endodermis of stem (b) outer cortex (c) inner cortex
(d) covering of vascular bundle

- 37) Endodermis is not differentiated in
(a) monocot root (b) dicot root (c) monocot stem (d) dicot stem
- 38) Open vascular bundles are those in which
(a) the protoxylem lies towards the pith (b) there is no cambium
(c) cambium is present between the xylem and phloem
(d) phloem is found on both outer and inner sides of the xylem
- 39) Stele consists of
(a) Endodermis, pericycle, vascular bundle and pith
(b) pericycle, vascular bundle and pith (c) Vascular bundle and Pith
(d) Vascular bundles only
- 40) Which of these characters does/do not apply to the vascular bundle of monocot stem?
I. Conjoint
II. Collateral
III. Open
IV. Endarch
(a) I and II only (b) II and III only (c) III and IV only (d) III only
- 41) Epidermal hairs are not present in
(a) Monocot stem (b) Monocot root (c) Dicot stem (d) Dicot root
- 42) Cell organelles responsible for preparation and storage of food
(a) Mitochondria (b) Plastids (c) Lysosomes (d) Ribosomes
- 43) Fuel Produced by using the technology Artificial photosynthesis is
(a) Oxygen (b) Nitrogen (c) Hydrogen (d) Methane
- 44) Proteins which forms channel for the passage of molecules through the outer mitochondrial membrane is
(a) porin molecules (b) cristal (c) oxysomes (d) matrix
- 45) The common step in both aerobic and anaerobic respiration is
(a) Krebs cycle (b) Electron Transport chain (c) Oxidation (d) Glycolysis
- 46) The chemical pathway of photosynthesis was discovered by
(a) C.N. Rao (b) Melvin Calvin (c) Sachs (d) Robin Hill
- 47) Power house of the cell is
(a) Mitochondria (b) Leucoplast (c) Chromoplast (d) Chloroplast
- 48) The endarch condition is characteristic of
(a) root (b) stem (c) leaves (d) petiole
- 49) Amphivasal bundle belongs to _____ type of vascular bundle.
(a) concentric (b) collateral (c) conjoint (d) radial
- 50) The _____ is called starch sheath in a dicot stem.
(a) epidermis (b) pericycle (c) endodermis (d) hypodermis
- 51) Protoxylem lacuna refers to a _____.
(a) thickening xylem (b) arrangement of (c) a cavity (d) exarch xylem
- 52) _____ are racket shaped particles seen in inner mitochondrial membrane.
(a) Porin (b) ATP (c) Oxysome (d) Grana
- 53) Respiratory quotient for aerobic respiration is _____.
(a) 2 (b) infinity (c) 1 (d) 0
- 54) _____ is the outer most layer.

- (a) Stomata (b) Epidermis (c) Periderm (d) Skin
- 55) _____ helps in transpiration.
(a) Stomata (b) Epidermis (c) Trichomes (d) Root hairs
- 56) _____ help in absorption of water and minerals.
(a) Root hairs (b) Stomata (c) Epidermis (d) Trichomes
- 57) _____ is the outermost layer of the roo.
(a) Epiblema (b) Cortex (c) Endodermis (d) Stele
- 58) Who discovered light dependent photosynthesis?
(a) Robin Hill (b) Nehemiah Grew (c) Kolliker (d) Melvin Calvin
- 59) Mitochondria contain _____ of protein.
(a) 70 - 80 % (b) 80 - 90 % (c) 60- 70 % (d) 50 - 60 %
- 60) Chloroplasts are _____ shaped organelles.
(a) disc (b) round (c) oval (d) circle

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