



# BRAINWARE UNIVERSITY

Term End Examination 2021 - 22  
 Programme – Bachelor of Science (Honours) in Agriculture  
 Course Name – Fundamentals of Crop Physiology  
 Course Code - CC-BAG274(T)  
 ( Semester II )

Time allotted : 1 Hrs.5 Min.

Full Marks : 50

[The figure in the margin indicates full marks.]

## Group-A

(Multiple Choice Type Question)

1 x 50=50

Choose the correct alternative from the following :

- (1) Movement of solute particle from a higher concentration to its lower concentration area till the equilibrium is achieved is known as-
 

a) Plasmolysis	b) Transpiration
c) Osmosis	d) Diffusion
- (2) The natural occurring hormone in higher plant is \_\_\_\_\_
 

a) IAA	b) IBA
c) NAA	d) IBA and NAA
- (3) An essential growth substance required in tissue culture and delay the chlorophyll loss
 

a) GA	b) Kinetin
c) Cytokinin	d) Auxin
- (4) Stress hormone is \_\_\_\_\_
 

a) GA	b) IAA
c) ABA	d) NAA
- (5) Which Metabolic Pathway Produces Carbohydrate?
 

a) Glycolysis	b) Krebs cycle
c) Cyclic electron pathway	d) Calvin cycle
- (6) What is the End Product of the Calvin Cycle?
 

a) PGA	b) ADP+NADP
c) RuBP	d) PGAL
- (7) \_\_\_\_\_ have no Role in Photosynthesis.

- a) Anthocyanin  
c) Phycoerythrin
- b) Xanthophyll  
d) Phycoyanin
- (8) What is the Reason Behind Cell Elongation in Internodal Regions of Plants?  
a) Indole acetic acid  
c) Gibberellins
- b) Cytokinins  
d) Ethylene
- (9) Which of the Following is Known as a Hatch-slack Pathway?  
a) C2.  
c) C4.
- b) C3.  
d) C5.
- (10) Among the Following, Which is a C4 Plant?  
a) Sugarcane  
c) Corn
- b) Soybean  
d) All of these
- (11) Among the Following, Which is a CAM Plant?  
a) Mango  
c) Kiwifruit
- b) Coconut  
d) Pineapple
- (12) Among the Following, Which is an Example of 'Upright Growth of Stems'?  
a) Phototropism  
c) Negative geotropism
- b) Positive geotropism  
d) Auxin tropism
- (13) What is the Rate of Photosynthesis in C4 Plants?  
a) Higher  
c) Low
- b) Moderate  
d) Very low
- (14) Who Gave the 'Root Pressure' Theory?  
a) J.C. Bose  
c) Stephan Hales
- b) Godlewski  
d) Boehm
- (15) A Dark Reaction Takes Place in \_\_\_\_\_  
a) Grana  
c) Grana and Stroma both.
- b) The stroma of chloroplast  
d) Mitochondria
- (16) What is the Name of the Process By Which Turgidity of a Cell is Maintained?  
a) Wall pressure  
c) Diffusion pressure
- b) Osmotic pressure  
d) Turgor pressure
- (17) Wilting of a Plant is a Result of Excessive -  
a) Transpiration  
c) Photosynthesis
- b) Absorption  
d) Respiration
- (18) What is the Reason for Seed Dormancy?  
a) Starch  
c) Ethylene
- b) Glucose  
d) Abscisic acid
- (19) Due to the Uneven Distribution of \_\_\_\_\_ Phototropic Curvature Occurs  
a) Auxin  
c) Phytochrome
- b) Cytokinins  
d) Gibberellin
- (20) Peroxisomes are involved in which type of reactions pertaining to plant photosynthesis?  
a) Calvin Cycle  
c) Glyoxylate cycle
- b) Glycolytic cycle  
d) Bacterial photosynthesis
- (21) The physical process involved in the release of molecular oxygen from leaves is

- a) diffusion  
c) osmosis
- b) transpiration  
d) capillarity
- (22) Translocation of carbohydrate nutrients usually occurs in the form of  
a) glucose  
c) starch
- b) maltose  
d) sucrose
- (23) Chief function of leaves are  
a) transpiration and photosynthesis  
c) respiration and digestion
- b) respiration and photosynthesis  
d) respiration and transpiration
- (24) End product of glycolysis is  
a) acetyl CoA  
c) glucose-1-phosphate
- b) pyruvic acid  
d) fructose-1-phosphate
- (25) The ultimate gain of light reaction is  
a) ATP and NADPH<sub>2</sub>  
c) only ATP
- b) NADPH<sub>2</sub>  
d) only O<sub>2</sub>
- (26) End product of fermentation of sugars is  
a) H<sub>2</sub>O and CO<sub>2</sub>  
c) alcohol and CO<sub>2</sub>
- b) CO<sub>2</sub>  
d) alcohol
- (27) Which of the following is not performed by root hairs?  
a) Water uptake  
c) Mineral uptake
- b) Oxygen uptake  
d) CO<sub>2</sub> uptake
- (28) The specialized cells in between epidermis and vascular layer of root are known as-  
a) Cork cambium  
c) Phloem
- b) Xylem  
d) Cortex
- (29) In Hatch and Slack cycle, the final product synthesized is considered as -  
a) Pyruvate  
c) Phosphoglyceric acid
- b) 3 Phosphoglycerate  
d) Phosphoenolpyruvate
- (30) In TCA cycle, a total number of \_\_\_\_\_ ATP is synthesized from single molecule of Glucose -  
a) 4  
c) 18
- b) 8  
d) 24
- (31) The event of C<sub>4</sub> pathway mainly observed in-  
a) Rice  
c) Maize
- b) Wheat  
d) Pineapple
- (32) The highest rate of transpiration is taken place through-  
a) Stomatal transpiration  
c) Lenticular transpiration
- b) Cuticular transpiration  
d) Hydathode transpiration
- (33) The phyto-hormone which promotes seed germination is-  
a) Auxin  
c) Gibberellin
- b) Cytokinin  
d) Abscisic acid
- (34) Formulae of Graham's law on diffusion depicted as -  
a)  $(d \propto 1/\sqrt{D})$   
c)  $(D \propto d)$
- b)  $(D \propto 1/d)$   
d)  $(D \propto 1/d)$
- (35) 'Ghost Cell' is basically-

- a) Cell ruptures when put in hypotonic solution  
 b) Cell become shrink & flacid when put in hypertonic solution  
 c) Cells getting dried out due to transpired heavily  
 d) none of these
- (36) The type of movement of water molecules through the internal passage between two cells and also a type of water transport in plants is known as-  
 a) Diffusion  
 b) Symplastic movement  
 c) Apoplastic movement  
 d) Transmembrane movement
- (37) Which one is incorrect about imbibition of plant seed-  
 a) Heat is generated or released  
 b) Volume is changed  
 c) Pressure is created internally  
 d) None of these
- (38) The reason of occurrence of chlorosis in leaves is due to the deficiency of -  
 a) Ca  
 b) K  
 c) Na  
 d) Mg
- (39) Which initial ionic exchange takes place for opening of stomata during night time?  
 a) Na<sup>+</sup> & K<sup>+</sup>  
 b) Na<sup>+</sup> & H<sup>+</sup>  
 c) H<sup>+</sup> & K<sup>+</sup>  
 d) None of these
- (40) Cristae is the folded part of the inner membrane of-  
 a) Golgibody  
 b) Mitochondria  
 c) Peroxisome  
 d) Cytosol
- (41) Nucleolus is the hub for the synthesis of-  
 a) RNA  
 b) DNA  
 c) Both RNA & DNA  
 d) Protein
- (42) Science that measures the timing of life cycle events for plants and animals is known as-  
 a) Phenocopy  
 b) Pleiotropy  
 c) Botany  
 d) Phenology
- (43) Under growth measurement, arithmetic growth is represented by \_\_\_\_\_ curve  
 a) Linear  
 b) Sigmoid  
 c) Parabolic  
 d) Hyperbolic
- (44) Which type of plants are belong to Monocot category-  
 a) Grass  
 b) Shrub  
 c) Tree  
 d) Both grass and tree
- (45) The concept of photoperiodism was given by-  
 a) Garner & Allard  
 b) Darwin  
 c) Pavlov  
 d) None of these
- (46) Which type of cell organelle is the site of phospho-lipid biosynthesis-  
 a) Ribosome  
 b) Peroxisome  
 c) Rough ER  
 d) Smooth ER
- (47) A family of proteins that form channels to facilitate the transport of water across cell membranes-  
 a) Porin  
 b) Symporin  
 c) Aquaporin  
 d) Carrier protein

(48) \_\_\_\_\_ enables xylem walls very rigid to prevent them collapsing under the large tension forces set up by transpiration pull-

- a) Lignin
- c) Cuticle

- b) Suberin
- d) None of these

(49) The cell organelle which is responsible for shipment in transport vesicle and also known as sorting and processing center of cell-

- a) Mitochondria
- c) Endoplasmic Reticulum

- b) Golgi body
- d) Nucleus

(50) The inner matrix of Mitochondria is the site of-

- a) TCA cycle
- c) Both TCA cycle & Fatty acid breakdown

- b) Fatty acid breakdown
- d) Glycolysis