

National Testing Agency

Question Paper Name: Plant Physiology and Plant Tissue Culture 10th November 2019 Shift 1
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Plant Physiology and Plant Tissue Culture

Group Number : 1
Group Id : 709597331
Group Maximum Duration : 0
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Break time: 0
Group Marks: 100

Plant Physiology and Plant Tissue Culture

Section Id : 709597428
Section Number : 1
Section type : Online
Mandatory or Optional: Mandatory
Number of Questions: 100
Number of Questions to be attempted: 100
Section Marks: 100
Display Number Panel: Yes
Group All Questions: No

Sub-Section Number: 1
Sub-Section Id: 709597532
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 70959730065 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Main sources of biofertilizers are

- (a) Bacteria
- (b) Cyanobacteria
- (c) Both (a) and (b)
- (d) None of these

Question Number : 2 Question Id : 70959730066 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Some blue-green algae can be used as biofertilizers as they are

- (a) Photosynthetic
- (b) Capable of fixing nitrogen
- (c) easy to grow
- (d) rapidly proliferated

Question Number : 3 Question Id : 70959730067 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

An insect repellent obtained from neem is:

- (a) Saponin
- (b) Azadiractin
- (c) Essential oils
- (d) None of these

Question Number : 4 Question Id : 70959730068 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

IPM in agriculture means:

- (a) Integrated pest management
- (b) Internal plant management
- (c) Internal pest mortality
- (d) Integrated Plant mortality

Question Number : 5 Question Id : 70959730069 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Contractile roots are found in -----.

- (a) *Rhizophora*
- (b) *Terminalia catapa*
- (c) *Allium*
- (d) All of these

Question Number : 6 Question Id : 70959730070 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Main functions of roots are -----.

- (a) Anchorage
- (b) Absorption
- (c) Both (a) and (b)
- (d) None of the above

Question Number : 7 Question Id : 70959730071 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Epidermis of roots generally acts as-----

- (a) Protective tissue
- (b) Absorptive tissue
- (c) Photosynthetic tissue
- (d) All of these

Question Number : 8 Question Id : 70959730072 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Root hair arises from -----.

- (a) Pericycle
- (b) Endodermis
- (c) Epiblema
- (d) Central zone

Question Number : 9 Question Id : 70959730073 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Multiseriate epidermis found in-----aerial roots.

- (a) Orchid
- (b) Sunflower
- (c) Gossypium
- (d) All of these

Question Number : 10 Question Id : 70959730074 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Offset originates from:

- (a) Stem base
- (b) Leaf axils
- (c) Root axil
- (d) Shoot tip

Question Number : 11 Question Id : 70959730075 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

_____ is axillary bud which becomes large and fleshy for food storage.

- (a) Rhizomes
- (b) Tubers
- (c) Bulbils
- (d) Stolon

Question Number : 12 Question Id : 70959730076 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Vascular cambium produces

- (a) Primary xylem and primary phloem
- (b) Secondary xylem and secondary phloem
- (c) Primary xylem and secondary phloem
- (d) Secondary xylem and primary phloem

Question Number : 13 Question Id : 70959730077 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

As a tree grows older, which of the following increases more rapidly in thickness?

- (a) Heart wood
- (b) Sap wood
- (c) Phloem
- (d) None of the above

Question Number : 14 Question Id : 70959730078 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Stomata close during

- (a) very strong wind
- (b) night
- (c) Both A and B
- (d) None of the above

Question Number : 15 Question Id : 70959730079 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Plants in deserts have only few stomata to reduce:

- a) Water intake
- b) Water loss
- c) Mineral content
- d) Chlorophyll content

Question Number : 16 Question Id : 70959730080 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Plant wilts when leaf.

- (a) Loses its central rib
- (b) Nucleus loses its central vacuoles
- (c) Loses its turgor pressure
- (d) None of the above

Question Number : 17 Question Id : 70959730081 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

During day, plants keep their

- (a) Stomata open
- (b) Stomata closed
- (c) Phloem blocked
- (d) Leaves curled

Question Number : 18 Question Id : 70959730082 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Outer side of guard cells is

- (a) Concave
- (b) Convex
- (c) Rough
- (d) Hairy

Question Number : 19 Question Id : 70959730083 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Member of gynoecium is called as:

- (a) Sepals
- (b) Corolla
- (c) Stamens
- (d) Carpels

Question Number : 20 Question Id : 70959730084 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In epigynous condition:

- (a) Calyx ,corolla, androecium are present above the ovary
- (b) Calyx ,corolla, androecium are present below the ovary
- (c) Calyx ,corolla, androecium are present in the central part of the ovary
- (d) Ovary is absent

Question Number : 21 Question Id : 70959730085 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Artificial pollination is pollination by:

- (a) Animals other than insects
- (b) By humans
- (c) By snails
- (d) By air

Question Number : 22 Question Id : 70959730086 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Allogamy is:

- (a) Across pollination
- (b) Self pollination
- (c) Water mediated pollination
- (d) Bat mediated pollination

Question Number : 23 Question Id : 70959730087 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Embryo sac is present inside the:

- (a) Seed
- (b) Stigma
- (c) Ovule
- (d) Egg

Question Number : 24 Question Id : 70959730088 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

At the upper end of the outer layer of the ovule there is an opening known as:

- (a) Micropyle
- (b) Synergid
- (c) Chalaza
- (d) Nucellus

Question Number : 25 Question Id : 70959730089 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In the seed the plumule and cotyledons develop from:

- (a) Epi-basal cells
- (b) Hypo basal cells
- (c) Suspensor cells
- (d) All of these

Question Number : 26 Question Id : 70959730090 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

When the two primordial for cotyledons develop in the embryo it becomes:

- (a) Globular
- (b) Cylindrical
- (c) Heart shaped
- (d) Torpedo shaped

Question Number : 27 Question Id : 70959730091 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Osmosis is the diffusion of:

- (a) Water
- (b) Solute particles
- (c) Gases
- (d) All of the above

Question Number : 28 Question Id : 70959730092 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Pressure developed on cell wall of plant cell caused by osmotic movement of water is called as:

- (a) Turgor pressure
- (b) Osmotic pressure
- (c) Suction pressure
- (d) Cohesion pressure

Question Number : 29 Question Id : 70959730093 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Name the protein, which is involved in the transfer of water across the cellular membrane?

- a) Keratin
- b) Alanine
- c) Arginine
- d) Aquaporin

Question Number : 30 Question Id : 70959730094 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The entry of water from adjacent cells to guard cells or vice versa is caused by the differences in:

- (a) Osmosis
- (b) Diffusion
- (c) Water Potential
- (d) All of these

Question Number : 31 Question Id : 70959730095 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Differences in water potentials of the guard cells are caused by accumulation or loss of:

- (a) Calcium ions
- (b) Potassium ions
- (c) Chloride ions
- (d) None of these

Question Number : 32 Question Id : 70959730096 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Root pressure is enhanced as:

- (a) Water is needed in leaves for photosynthesis
- (b) Cells around xylem are low in salts and amino acids
- (c) No transpiration
- (d) A concentration gradient makes osmosis happen at greater speed

Question Number : 33 Question Id : 70959730097 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

More and more water (H_2O) is pulled by xylem:

- (a) As cuticular transpiration increases
- (b) As rate of photosynthesis increases
- (c) As absorption increases
- (d) When cell sap becomes concentrated after water loss

Question Number : 34 Question Id : 70959730098 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

High-energy photons

- (a) Have long wavelengths
- (b) Have short wavelengths
- (c) Have same wavelengths
- (d) None of the above

Question Number : 35 Question Id : 70959730099 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

During photosynthesis, photons raise electrons to higher energy levels. These excited electrons belong to what compound?

- (a) H_2O
- (b) Chlorophyll
- (c) ATP
- (d) Glucose

Question Number : 36 Question Id : 70959730100 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The sunlight is used during photosynthesis to

- (a) Stimulate the breakage of Glucose
- (b) Break down the water
- (c) Open the stomata
- (d) Close the stomata

Question Number : 37 Question Id : 70959730101 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The electron in linear electron flow moves from

- (a) PSI-Cytb6f-PSII
- (b) PSII-Cytb6f -PSI
- (c) Cytb6f-PSI-PSII
- (d) PSII-PQ-Cytb6f

Question Number : 38 Question Id : 70959730102 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Oxygen released in photosynthesis comes from

- (a) Water
- (b) Carbon dioxide
- (c) Atmosphere
- (d) All of the above

Question Number : 39 Question Id : 70959730103 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What are the products of linear photo-phosphorylation?

- (a) Heat and fluorescence
- (b) ATP and photosystem I
- (c) ATP and NADPH
- (d) All of the above

Question Number : 40 Question Id : 70959730104 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following statements correctly describes difference in photosynthesis and respiration?

- (a) Photosynthesis stores energy in complex molecules while respiration releases it.
- (b) Photosynthesis takes place in plants while respiration takes place in animals.
- (c) Respiration is anabolic while photosynthesis is catabolic.
- (d) None of these

Question Number : 41 Question Id : 70959730105 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is mismatched?

- (a) Photosystem I - uses the P700 molecule in its photocenter
- (b) PGA - a 3-carbon compound
- (c) Water-Photolysis
- (d) CAM plants - open their stomata during the day and close them at night to avoid photorespiration

Question Number : 42 Question Id : 70959730106 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following organisms have the greatest problem with photorespiration?

- (a) C4 plants
- (b) C3 plants
- (c) CAM plants
- (d) None

Question Number : 43 Question Id : 70959730107 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Two tubes, A and B, containing chloroplasts, 6.5 pH buffer, water and DCPIP are observed for 30 minutes for a color change. Tube A has changed from blue to clear. Tube B has remained blue. What can you conclude from experiment?

- (a) Photosynthesis and electron transportation has occurred in Tube A and not in Tube B
- (b) Photosynthesis and electron transportation has occurred in Tube B and not in Tube A.
- (c) Tube A was kept in the dark.
- (d) Tube B was kept in light.

Question Number : 44 Question Id : 70959730108 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Consider the experiment to observe starch production during photosynthesis. Why was iodine added after boiling the leaf in water and then in methanol?

- (a) To bleach out the chlorophyll from the leaf
- (b) To stain the starch in the leaf
- (c) To stain the chlorophyll in the leaf
- (d) To separate the metabolites

Question Number : 45 Question Id : 70959730109 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Two tubes, A and B, containing chloroplasts, 6.5 pH buffer, water and DCPIP are illuminated for 1 min for 30 minutes for a color change. An inhibitor DCMU is added to tube A. What result do you expect in this experiment?

- (a) Colour change will be observed in tube A and not in tube B.
- (b) Colour change will be observed in tube B and not in tube A.
- (c) Both the tubes will not change colour
- (d) None of the above

Question Number : 46 Question Id : 70959730110 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

To fix one molecule of nitrogen

- (a) 6 ATP molecules are required
- (b) 12 ATP molecules are required
- (c) 16ATP molecules are required
- (d) No ATP is required

Question Number : 47 Question Id : 70959730111 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Splitting of dinitrogen molecule into free nitrogen atom in biological N₂

fixation is carried out by

- (a) Hydrogenase
- (b) Nitrogenase
- (c) Dinitrogenase
- (d) Aminolyase

Question Number : 48 Question Id : 70959730112 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The chief source of nitrogen for green plants is

- (a) Nitrates
- (b) Ammonia
- (c) Nitrogen gas
- (d) None of the above

Question Number : 49 Question Id : 70959730113 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which crops help in Nitrogen fixation?

- (a) Wheat
- (b) Rice
- (c) Beans
- (d) All of the above

Question Number : 50 Question Id : 70959730114 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which part of nitrogen cycle involves the use of Mo^{2+} ?

- (a) Dentrification
- (b) Nitrogen fixation
- (c) Nitrogen assimilation
- (d) All of the above

Question Number : 51 Question Id : 70959730115 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following can reduce nitrate to ammonia?

- (a) Phototrophs
- (b) Non photosynthetic microorganisms
- (c) Both a & b
- (d) None of the above

Question Number : 52 Question Id : 70959730116 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is the function of nitrogenase?

- (a) Oxidation of nitrogen
- (b) Assimilation of atmospheric nitrogen
- (c) Both a & b
- (d) None of the above

Question Number : 53 Question Id : 70959730117 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The conversion of nitrogen gas to nitrates by bacteria is called

- (a) Nitrification
- (b) Denitrification
- (c) Nitrogen fixation
- (d) Ammonification

Question Number : 54 Question Id : 70959730118 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A weedicide is a substance that can:

- (a) Promote growth of weeds
- (b) Kill the weeds
- (c) Kill the insects
- (d) Nurture the insects

Question Number : 55 Question Id : 70959730119 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A seedless fruit is produced by:

- (a) Hybridization
- (b) Fertilization of a flower
- (c) Back cross
- (c) Parthenocarpy

Question Number : 56 Question Id : 70959730120 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Apical dominance is:

- (a) Growth of shoots
- (b) Growth of roots
- (c) Suppression of lateral buds
- (d) Production of flowers

Question Number : 57 Question Id : 70959730121 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A mutation in 'tmr' locus produces:

- (a) Shooty tumour
- (b) Rooty tumour
- (c) Callus
- (d) Nodule

Question Number : 58 Question Id : 70959730122 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Most of the cytokinins are:

- (a) Amino acids
- (b) Amino purines
- (c) Pyrimidines
- (d) None of these

Question Number : 59 Question Id : 70959730123 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In the cereals the reserved food is stored in:

- (a) Embryo
- (b) Testa
- (c) Endosperm
- (d) Seed Coat

Question Number : 60 Question Id : 70959730124 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Synthesis of α - amylase is promoted by:

- (a) DELLA proteins
- (b) c-GMP
- (c) MYB protein
- (d) None of these

Question Number : 61 Question Id : 70959730125 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Anthocyanins are:

- (a) Flavanoids
- (b) Alkaloids
- (c) Terpenes
- (d) Phenolics

Question Number : 62 Question Id : 70959730126 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Ethylene stimulates the formation of:

- (a) Nodes
- (b) Stem
- (c) Flower
- (d) Roots

Question Number : 63 Question Id : 70959730127 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which plant hormone was discovered in infected rice seedlings that grew extremely tall and slender:

- (a) Auxin
- (b) Absciscic acid
- (c) Cytokinin
- (d) Gibberellin

Question Number : 64 Question Id : 70959730128 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Absciscic acid inhibits:

- (a) Growth of seedlings
- (b) Betacyanin synthesis
- (c) Growth and betacyanin synthesis
- (d) None of the above

Question Number : 65 Question Id : 70959730129 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Vernalization is treatment of seeds with:

- (a) High temperature
- (b) Low temperature
- (c) Low pH
- (d) High pH

Question Number : 66 Question Id : 70959730130 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The fast responses induced by phytochrome are due to:

- (a) Change in the rate of growth
- (b) Acceleration of protein synthesis
- (c) Changes in ion fluxes
- (d) None of these

Question Number : 67 Question Id : 70959730131 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Exposure to red light in the middle of the dark period inhibited flowering in the plant,
so the plant is a:

- (a) Day neutral plant
- (b) Short day plant
- (c) Long day plant
- (d) None of the above

Question Number : 68 Question Id : 70959730132 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Insectivorous plants trap the insects due to:

- (a) Change in temperature
- (b) Change in pH
- (c) Change in cytoplasmic content
- (d) Physical contact

Question Number : 69 Question Id : 70959730133 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The relatively high level of cytokinin to auxin favours _____ during organogenesis.

- (a) Callogenesis
- (b) Shoot formation
- (c) Root formation
- (d) Both root and shoot formation

Question Number : 70 Question Id : 70959730134 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The generation of shoot and root from the explants or calli is termed as:

- (a) Caulogenesis
- (b) Organogenesis
- (c) Embryogenesis
- (d) None of these

Question Number : 71 Question Id : 70959730135 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Zn and Mn are added to the nutrient medium in the form of-

- (a) Carbonates
- (b) Phosphates
- (c) Sulphates
- (d) Chlorides

Question Number : 72 Question Id : 70959730136 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Most commonly used sugar in plant culture media is-

- (a) Sucrose
- (b) Fructose
- (c) Sorbitol
- (d) Glucose

Question Number : 73 Question Id : 70959730137 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The dead or damaged cells from suspension culture is stained with -----

- (a) Evans blue dye
- (b) Safranin
- (c) Acetocarmine
- (d) All of these

Question Number : 74 Question Id : 70959730138 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Following physical method is reported to induce synchronization of suspension culture

- (a) Low temperature shocks combined with nutrient starvation of the culture
- (b) Selection of suspension culture
- (c) High temperature shock
- (d) Low pH

Question Number : 75 Question Id : 70959730139 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the statements are true:

- (a) The undifferentiated cells first acquire competence and then become irreversibly committed
- (b) The undifferentiated cells first become irreversibly committed and then acquire competence.
- (c) The undifferentiated cells do not get committed in any stage.
- (d) None of the above

Question Number : 76 Question Id : 70959730140 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Generally subculture of cells should be performed within:

- (a) 5-10 days of culture
- (b) 10-15 days of culture
- (c) 15-20 days of culture
- (d) 25-30 days of culture

Question Number : 77 Question Id : 70959730141 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is used as plant surface sterilizant:

- (a) Calcium chloride
- (b) Sodium chloride
- (c) EDTA
- (d) Mercuric chloride

Question Number : 78 Question Id : 70959730142 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Parthenogenic embryos are:

- (a) Zygotic embryos
- (b) Non zygotic embryos
- (c) Both (a) and (b)
- (d) None of the above

Question Number : 79 Question Id : 70959730143 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The embryogenic competent cells are:

- (a) Small in size and have small vacuoles
- (b) Large in size and have large vacuoles
- (c) Small in size and have large vacuoles
- (d) Do not have vacuoles

Question Number : 80 Question Id : 70959730144 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Electrofusion method for protoplast fusion was developed by:

- (a) U. Zimmerman
- (b) F. K. Skoog
- (c) G. Kohler
- (d) J Reinert

Question Number : 81 Question Id : 70959730145 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is a reporter gene:

- (a) GUS gene
- (b) Bar gene
- (c) hpt gene
- (d) nptII gene

Question Number : 82 Question Id : 70959730146 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

GFP was isolated from:

- (a) *Agrobacterium tumefaciens*
- (b) *Aequorea victoria*
- (c) Both a and b
- (d) None of these

Question Number : 83 Question Id : 70959730147 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

. The reporter gene analyze the transgene expression:

- (a) destroying the cells
- (b) without destroying the cells
- (c) by selection markers
- (d) By fusion

Question Number : 84 Question Id : 70959730148 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Synthesis of bioactive secondary metabolites, running in controlled environment, independently from climate and soil conditions is carried out using:

- (a) Tanks
- (b) Bioreactors
- (c) Conical flasks
- (d) Growth Chambers

Question Number : 85 Question Id : 70959730149 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The most common and effective elicitors used for stimulating secondary metabolite production in plant tissue cultures are:

- (a) MJ, chitosan and heavy metal salts
- (b) UV radiations, mutagens and heavy metal salt
- (c) MNNG, UV radiations and chitosan
- (d) None of the above

Question Number : 86 Question Id : 70959730150 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following type of solution has lower levels of solutes than the solution?

- a) Isotonic
- b) Hypertonic
- c) Hypotonic
- d) Anisotonic

Question Number : 87 Question Id : 70959730151 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The thin walled cells of endodermis is called -----.

- a) Casparian strip
- b) Conjunctive tissue
- c) Passage cells
- d) Schlerenchyma cells

Question Number : 88 Question Id : 70959730152 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Aerial branch with long internodes, creeping on the ground and rooting at the nodes is:

- a) Runner
- b) Sucker
- c) Offset
- d) Stolon

Question Number : 89 Question Id : 70959730153 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Stomata open at night and close during day time in:

- a) Mesophytes
- b) Succulents
- c) Hydrophytes
- d) None of the above

Question Number : 90 Question Id : 70959730154 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Perianth is a whorl of:

- (a) Sepals
- (b) Floral leaves
- (c) Petals
- (d) Epicalyx

Question Number : 91 Question Id : 70959730155 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The number of outer layer present in each ovule are:

- a) 2
- b) 3
- c) 4
- d) 5

Question Number : 92 Question Id : 70959730156 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In the seed nutrients are stored in:

- a) Endosperm
- b) Cotyledons
- c) Both endosperm and cotyledon
- d) Seed Coat

Question Number : 93 Question Id : 70959730157 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Strongest force to pull water up xylem and into leaf is:

- a) Capillary action
- b) Root pressure
- c) Transpiration pull
- d) Turgor pressure

Question Number : 94 Question Id : 70959730158 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Substrates for light reactions are

- a) Carbon dioxide, water and chlorophyll
- b) Oxygen, water and chlorophyll
- c) Water, light and chlorophyll
- d) Glucose, water and oxygen

Question Number : 95 Question Id : 70959730159 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one of the following is a non-climacteric fruit?

- a. Pineapple
- b. Apple
- c. Mango
- d. All of the above

Question Number : 96 Question Id : 70959730160 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A root that grows vertically downwards curves around an object which resists its growth, like stone, this is an example of:

- a) Hydrotropism
- b) Chemotropism
- c) Traumatotropism
- d) Thigmotropism

Question Number : 97 Question Id : 70959730161 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Synchronization of suspension culture is obtained due to

- a) Mitotic arrest
- b) Cell division
- c) Unregulated Cell proliferation
- d) Cell density

Question Number : 98 Question Id : 70959730162 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Most commonly used media for culturing plant cells is:

- a. Gamborg's B5 media
- b. Nitsch and Nitsch
- c. Chu N6
- d. Murashige and Skoog

Question Number : 99 Question Id : 70959730163 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Protoplasts possess _____ charge

- a) Positive
- b) Negative
- c) Neutral
- d) None of the above

Question Number : 100 Question Id : 70959730164 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Cybrids are-

- a) Nuclear hybrids
- b) Cytoplasmic hybrids
- c) Cytological hybrids
- d) All of the above