



GGSRDN
Educational Services Private Limited
9th, 10th, NEET, JEE(Main/Advanced)

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FOUNDATION-NEET

For Class : XI

DPP

Daily Practice Problem

BOTANY

Set Your Target and Keep Try in Until You Reach It.

BOTANY

DPP No. : 01

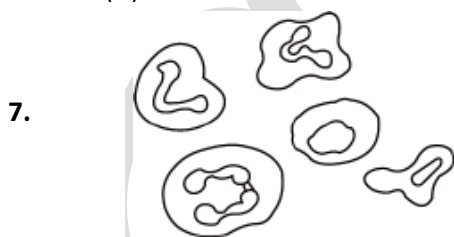
CHAPTER - CELL BIOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION A : Introduction, Prokaryotic Cell

- Smallest known cell is
(A) Acetabularia (B) Nostoc
(C) Chlamydomonas (D) Pleuropneumonia like organisms
- The inherent capacity of a cell to regenerate a new whole organism is called
(A) Ontogeny (B) Totipotency
(C) Phylogeny (D) Differentiation
- Which of the following forms more than half of cell ?
(A) Water (B) Mineral
(C) Protein (D) Carbohydrate
- A mesokaryotic cell is that in which
(A) Nucleus is present (B) Histone proteins are absent
(C) Found in dinoflagellates (D) All correct
-is the main arena of cellular activities in both the plant and animal cells. Various chemical reactions occur in it to keep the cell in the living state
(A) Nucleus (B) Cell membrane
(C) Cytoplasm (D) Deutoplasm
- Select the wrong statement :
(A) The four basic shapes of bacteria are bacillus (Rod shaped), Coccus(Spherical), Vibrio(Comma-shaped) and spirillum(spiral).
(B) Human red blood cell is about 7.0 μm in diameter
(C) Smallest cell is of mycoplasma (0.3 μm in length)
(D) Ribosomes are membrane bound organelles found in both procaryotic as well as eucaryotic cells.



The above diagram represents :

- (A) Red blood cells (B) Tracheids
(C) Columnar epithelial cells (D) White blood cells
- Which structure of Photosynthetic bacteria has pigments ?
(A) Nucleoid (B) Mesosome
(C) Chromatophore (D) Chloroplast
- Which of the following feature is not related with blue green algae?
(A) Presence of gas vacuoles (B) Presence of flagellated gametes
(C) Presence of heterocyst (D) Presence of chromatophores
- Select the wrong pair
(A) Mesosome – Essential infolding of cell membrane in Prokaryotic cell

- | | |
|--------------------|--|
| (B) Plasmid | – Extra nuclear, double stranded, linear DNA |
| (C) Polysome | – mRNA + Few Ribosomes |
| (D) Chromatophores | – Contain photosynthetic pigments in BGA |

DPP No. : 02

CHAPTER - CELL BIOLOGY

Total Marks : 40

Single choice Objective

Max. Time : 10 min.

(D marks 1 min.)

SECTION A : Introduction, Prokaryotic Cell

- During conjugation, bacteria attach by means of
(A) Flagella (B) Pili (C) Cilia (D) Hair
- Middle lamella is found between ——— of adjacent cells
(A) Secondary walls (B) Primary walls (C) Plasmalemma (D) Anywhere in cell
- Smaller cells are very active as they have
(A) Higher nucleocytoplasmic ratio (B) Higher surface area per unit volume ratio
(C) Only (B) is correct (D) Both (A) and (B) are correct.
- Cell wall of bacteria is composed of ?
(A) Cellulose (B) Peptidoglycan
(C) Chitin (D) Non Cellulosic polysaccharide
- Which of the following organelles is present in bacterial cell?
(A) Mitochondria (B) Ribosomes
(C) Golgi complex (D) Endoplasmic reticulum
- Raphides are crystals of
(A) calcium oxalate (B) calcium carbonate
(C) calcium phosphate (D) magnesium carbonate
- These are small bristle like fibres sprouting out of the cell. In some bacteria, they are known to help attach the bacteria to rocks in streams and also to the host tissues. They show
(A) Pili (B) Cilia (C) Flagella (D) Fimbriae

SECTION B : Cell Wall

- Cellular totipotency is demonstrated by
(A) All eukaryotic cells (B) Bacterial cells
(C) Living plants cells (D) Only gymnosperm cells
- Prokaryotic cell does not have
(A) Nucleolus (B) Membrane bound organelles
(C) Centriole (D) All of these
- Cell wall is absent in ?
(A) Gametes (B) Amoeba (C) Mycoplasma (D) All of these

DPP No. : 03
CHAPTER - CELL BIOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION B : Cell Wall

1. The cell wall of algae is made of ?
(A) Peptidoglycan, lipopolysaccharide, cellulose
(B) Cellulose, galactans, mannans, CaCO_3
(C) Cellulose, hemicellulose, mannans, CaCO_3
(D) Mucopeptide, xylan, galactan, CaCO_3
2. Which part of a cell wall is chiefly made up of calcium pectate ?
(A) Primary wall
(B) Secondary wall
(C) middle lamella
(D) middle lamella & Primary wall
3. Cell wall in higher plants is made up of ?
(A) Cellulose + lignin
(B) Cellulose + pectin
(C) Cellulose + Suberin
(D) Cellulose + lipid
4. Which is correct for the structure of cell wall of bacteria and fungi ?
(A) Both are made up of cellulose
(B) Both have mucopeptide
(C) Both are made up of N-acetylglucosamine
(D) None of these
5. A primary wall can be distinguished from secondary wall in?
(A) Arrangement of microfibrils
(B) Deposition of wall material
(C) Chemical composition
(D) All of the above
6. Waxy substance secreted by epidermal cell on their outer walls is :
(A) Cutin
(B) Lignin
(C) Pectin
(D) Cellulose
7. The minute protoplasmic connections between cells are called
(A) Chiasmata
(B) Plasmodesmata
(C) Tractile fibres
(D) Ultra-cellular strands
8. Animal cells do not have cell wall because
(A) They are adapted to move their body
(B) They have muscles and nerves
(C) They have to change the size of their body during locomotion
(D) All correct.
9. How many micelles combine to form a microfibril ?
(A) 10
(B) 20
(C) 40
(D) 60
10. Torus is related with
(A) Bordered pits in cell wall
(B) Receptacle of lotus
(C) Both correct
(D) Both wrong

DPP No. : 04

CHAPTER - CELL BIOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION B : Cell Wall

1. The smallest structural unit of cell wall is
(A) Fibril (B) Microfibril
(C) Micelle (D) Pectin

SECTION C : Cell membrane

2. Which of the following statement is incorrect w.r.t Plasma membrane?
(A) It is selectively permeable
(B) It is made up of lipids, carbohydrates & Proteins
(C) It is permeable
(D) It helps in endocytosis process
3. Singer and Nicholson's model of plasma membrane differs from Robertson's model in the?
(A) Number of lipid layers
(B) Arrangement of lipid layers
(C) Arrangement of proteins
(D) Absence of protein in Singer and Nicholson's model
4. The functional characteristics of plasma membrane in fluid mosaic model are determined by?
(A) Extrinsic proteins (B) Intrinsic proteins
(C) Both (D) Lipid molecules.
5. Cell membrane's carbohydrates participate in
(A) Transporting substances across the membrane (B) Cell to cell recognition
(C) Attaching the membrane to cytoskeleton (D) Cell adhesion
6. Plasma membrane is made up of
(A) A protein layer between two lipid layers
(B) A lipid layer between two protein layers
(C) A protein, a lipid and a cellulose layers
(D) Bimolecular lipid layer surrounded by two protein layers
7. According to widely accepted "Fluid mosaic model" cell membranes are semi-fluid, where lipids and integral proteins can diffuse randomly. In recent years, this model has been modified in several respects. In this regard, which of the following statement is incorrect?
(A) Proteins in cell membranes can travel within the lipid bilayer
(B) Proteins can also undergo flip-flop movements in the lipid bilayer
(C) Proteins can remain confined with in certain domains of the membrane
(D) Many proteins remain completely embedded within the lipid bilayer
8. The main difference between pinocytosis and phagocytosis is
(A) Taking in of liquid substances and engulfing of food material and foreign bodies
(B) Taking in of small and large particles respectively
(C) Taking in of small amount of liquid and large volume of liquids
(D) None of the above

SECTION D : Plastids

9. Plastids of an etiolated plant possess
(A) Chlorophyll and carotenes (B) Chlorophylloid and carotenoids
(C) Phycobilins (D) Carotenoids and xanthophyll.
10. The chloroplasts of algae usually lack
(A) Grana (B) Pigments (C) Quantasomes (D) Lamellae

DPP No. : 05

CHAPTER - CELL BIOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION D : Plastids

- How many chlorophyll molecules combine to form a quantasome ?
(A) 100 (B) 150 (C) 200 (D) 230
- Which of these is mis-matched
(A) Amyloplasts – Store protein granules
(B) Elaioplasts – Store oils or fats
(C) Chloroplasts – Contain chlorophyll pigments
(D) Chromoplasts – Contain coloured pigments other than chlorophyll
- Chlorophyll 'a' differs from chlorophyll 'b' in having
(A) More carbon (B) More oxygen less hydrogen
(C) More hydrogen and less oxygen (D) More nitrogen and magnesium
- Which one of the following pigments does not occur in the chloroplast?
(A) Carotene (B) Chlorophyll 'b' (C) Xanthophyll (D) Anthocyanin

SECTION E : Mitochondria

- If living cells similar to those found on earth, were found on another planet where was no oxygen. Which cell organelle would most probably be absent?
(A) Cell membrane (B) Ribosomes (C) Mitochondria (D) Chromosomes
- The mitochondrial DNA Differs from the nuclear DNA because of ?
(A) Being linear (B) Having A = T and C ≡ G
(C) Lacking binding histones (D) Being highly twisted
- Inheritance of male sterility in Maize is due to ?
(A) Chloroplast (B) Ribosomes
(C) Endoplasmic reticulum (D) Mitochondria
- Mitochondria are yellowish due to ?
(A) Proplastids (B) Xanthophyll
(C) β carotene (D) Riboflavin
- The "marker" enzyme of Mitochondria is
(A) Lysozyme (muramidase) (B) Acid protease
(C) Acid phosphatase (D) Succinate dehydrogenase
- Extranuclear genes are found in
(A) Nucleus & Mitochondria (B) Nucleus & Chloroplast
(C) Ribosome & Nucleus (D) Chloroplast & Mitochondria

DPP No. : 06

CHAPTER - CELL BIOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION F : Endoplasmic Reticulum (ER)

- Mechanical support, enzyme circulation, protein synthesis and detoxification of drugs are function of ?
(A) ER (B) Ribosomes (C) Dictyosomes (D) Chloroplast
- During ultracentrifugation the ER and bodies associated with it are separated as fraction known as
(A) Microsome (B) Polysome (C) Quantasome (D) Episome
- Which type of membrane is most abundant within a cell ?
(A) ER membrane (B) Nuclear membrane (C) Golgi membrane (D) Plasma membrane

SECTION G : Golgi Complex

- In plant cells the number of golgi bodies increases during
(A) Cell division (B) Food synthesis (C) Translocation (D) Respiration
- The transfer vesicle from RER fuse with which region of golgi complex?
(A) Cis (B) middle (C) Trans (D) Endoplasmic reticulum
- Which of the cell organelle is involved in synthesis of the cell organelle that contain hydrolytic enzymes?
(A) Mitochondrion (B) Golgi apparatus (C) Plastids (D) Nucleus
- Golgi body is associated with
(A) Packaging and storage of material (B) Cell plate formation
(C) Secretion of different substance (D) All of the above
- Golgi body is an important site for the formation of
(A) Lipids & Proteins (B) Starch & Lipids
(C) Glycolipids & Glycoproteins (D) Starch & Glycoproteins
- The golgi apparatus contains
(A) DNA
(B) RNA
(C) Phospholipids, proteins, enzymes and vitamin C
(D) Protein-lipid-protein
- The major role of golgi bodies is
(A) Fermentation (B) Phosphorylation
(C) Glycosidation (D) Translocation

DPP No. : 07

CHAPTER - CELL BIOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION G : Golgi Complex

1. Secretory and membrane proteins are processed in
(A) Peroxisomes (B) Glyoxysomes (C) Golgi complex (D) Sphaerosomes
2. Golgi bodies are maximum in
(A) Calyptrogen (B) Root tip (C) Root cap (D) None the these

SECTION H : Lysosome

3. The "Marker" enzyme of lysosome is
(A) Lysozyme (B) Acid protease (C) Acid phosphatase (D) Beta-galactosidase
4. Scavenging of worn out cell parts and denatured proteins in the cell is done by?
(A) Vacuoles (B) Golgi bodies (C) Lysosomes (D) Endoplasmic reticulum
5. Secondary lysosomes are also called
(A) Autophagic vacuoles (B) Lipofuscin granules
(C) Residual body (D) Heterophagosomes
6. A lysosome in which intracellular organelles are digested is called
(A) Primary lysosome (B) Secondary lysosome
(C) Autophagosome (D) None of the above

SECTION I : Ribosome

7. Which of the following subunit of ribosome is composed of 23S rRNA and a 5S rRNA + 32 different proteins?
(A) 50 S (B) 70 S (C) 30 S (D) 60 S
8. Ribosomes that occur exclusively in mitochondria is
(A) 70S (B) 55S (C) 30S (D) 50S
9. Below a certain level of Mg^{++} the two sub units of the ribosome
(A) Separates (B) Fuses (C) Divides (D) None of these
10. The two sub-units of ribosome remain united at a critical ion level of ?
(A) Magnesium (B) Calcium (C) Copper (D) Manganese

DPP No. : 08
CHAPTER - CELL BIOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION I : Ribosome

1. Which of the following statements is wrong for ribosome?
(A) Formed by two-sub units (B) Formed by ribo-protein
(C) Formed in chain (D) Both sub-units are bounded by a membrane
2. Which type of ribosomes are found in Nostoc cells?
(A) 50 S (B) 60 S (C) 70S (D) Eukaryotic
3. Subcellular organelle is :
(A) Peroxisome (B) Ribosome (C) Plastid (D) Lysosome
4. If all the ribosomes of a cell are destroyed
(A) Respiration will not take place (B) Photosynthesis will not occur
(C) Fat will not be stored (D) Protein will not be formed
5. Which of the following pairs is correct ?
(A) Svedberg unit – Biomembranes (B) Polyribosomes – RNA
(C) Dictyosomes – Suicidal sacs (D) Cisternae – Mitochondria
6. Polyribosomes are aggregation of
(A) Ribosomes and rRNA
(B) Only rRNA
(C) Peroxisomes
(D) Several ribosomes held together by a string of mRNA
7. Choose the correct statement
(A) In 70S ribosome rRNA : Proteins = 60 : 40
(B) In 80S ribosome rRNA : Proteins = 40 : 60
(C) Both are correct
(D) Both are wrong
8. Specialized cells which secrete Proteinaceous substances possess
(A) Free ribosomes (B) Bound ribosomes (C) ER (D) mRNA
9. Which one of the following structures is an organelle with in an organelle
(A) Endoplasmic Reticulum (B) Peroxisome
(C) Mesosome (D) Ribosome

SECTION J : Cilia & Flagella Centrioles and cytoskeletal elements

10. Microtubules are made up of
(A) Tubulin, found in cilia & flagella
(B) Myosin & function in contraction
(C) Actin & helps in locomotion
(D) Polysaccharide & function is locomotion

DPP No. : 09

CHAPTER - CELL BIOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION J : Cilia & Flagella Centrioles and cytoskeletal elements

- Structure which is similar to centriole
(A) Microfilament (B) Basal body (C) Microtubule (D) Centromeres
- Select the incorrect statement related to cilia & flagella
(A) Develop from basal body
(B) Outgrowth of cell membrane in the form of hair
(C) They are not structurally different in prokaryotes & eukaryotes
(D) All
- Centriole develops from
(A) Sphaerosomes (B) SER (C) de novo (D) Pre-existing centriole
- Centriole replicates in
(A) G₁ phase (B) G₂ phase (C) S phase (D) M phase
- Microfilaments are composed mainly of a protein called
(A) actin (B) chitin (C) myosin (D) tubulin
- are especially important in reinforcing the shape of a cell & fixing the position of certain organelles like Nucleus
(A) Microfilaments (B) Endoplasmic reticulum
(C) Microtubules (D) Intermediate filaments

SECTION K : Microbodies and Vacuoles

- Three of the following statements regarding cell organelles are correct while one is wrong. Which one is wrong?
(A) Lysosomes are double membraned vesicles budded off from golgi apparatus and contain digestive enzymes
(B) Endoplasmic reticulum consists of a network of membranous tubules and helps in transport, synthesis and secretion
(C) Leucoplast are bound by two membranes, lack pigment but contain their own DNA and protein synthesizing machinery
(D) Sphaerosomes are single membrane bound and are associated with synthesis and storage of lipids
- The functions of peroxisome are
(A) Synthesis of glycine
(B) Synthesis of serine
(C) Protection of cellular organelles from the toxic effect of H₂O₂
(D) 1 & 3 both
- Match the items in column I with column II and choose the correct answer

S.No	Column-I	S.No	Column-II
A	Sap vacuole	1	Contain digestive enzymes
B	Contractile vacuole	2	Store metabolic gases
C	Food vacuole	3	Osmoregulation
D	Air vacuole	4	Store lipids
E	Sphaerosomes	5	Store and concentrate mineral salts and nutrients

- (A) A = 2, B = 3, C = 4, D = 5, E = 1
(C) A = 5, B = 2, C = 3, D = 1, E = 4

- (B) A = 5, B = 3, C = 1, D = 2, E = 4
(D) A = 5, B = 3, C = 2, D = 4, E = 1

SECTION L : Nucleus

10. Euchromatin is
- (A) Less active darkly staining region of the chromatin
 - (B) Less active lightly staining region of the chromatin
 - (C) More active darkly staining region of the chromosome
 - (D) More active weakly staining region of the chromatin

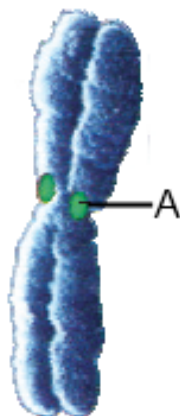
DPP No. : 10
CHAPTER - CELL BIOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION L : Nucleus

1. Which of the following properties is not associated with secondary constrictions of chromosomes
(A) Not present over all chromosomes
(B) Non- staining
(C) Not present over a defined location
(D) Both 1 & 3

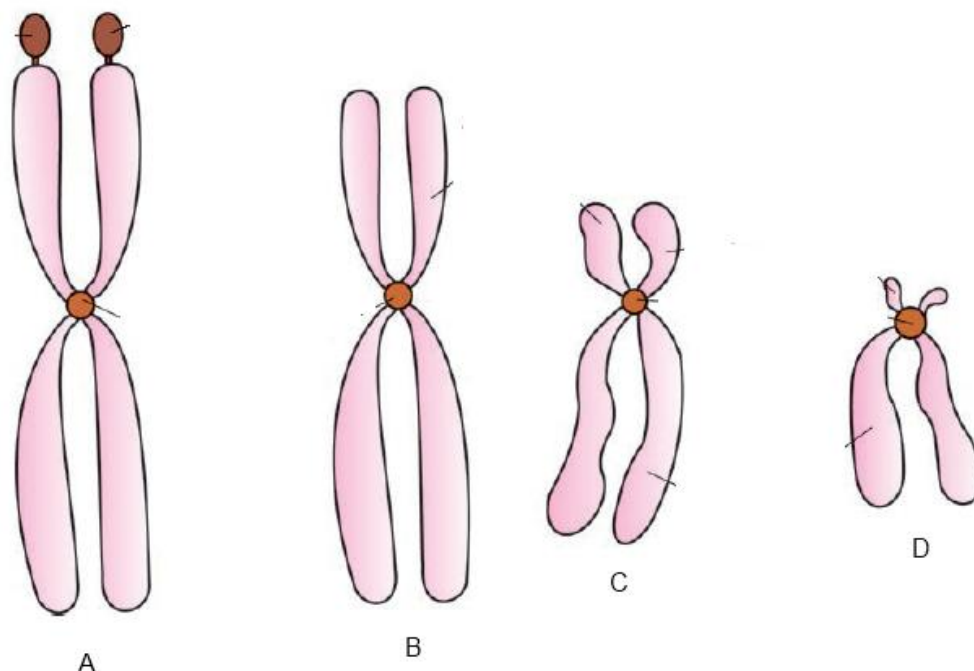


2. Which of the following is not true for 'A' ?
(A) Disc shaped structures
(B) Present on the sides of centromere
(C) Visible in all stages of cell
(D) Has a role in cell division
3. These are ____ A ____ the passages through which movement of ____ B ____ molecules takes place in both directions between the nucleus and the cytoplasm.
(A) A-nucleoplasm ; B-DNA and protein
(B) A- nuclear pore ; B-RNA and protein
(C) A-nuclear pore ; B-DNA and protein
(D) A-nucleoplasm ; B-RNA and protein
4. Chromatin is
(A) Network of nucleoprotein fibres
(B) Loose and indistinct network
(C) Present in interphase nucleus
(D) All of these
5. Following are the properties of a part of chromosomes-
(a) An essential primary constriction
(b) Visible only in dividing cells
(c) Bears disc shaped structures on its sides
(A) Kinetochore
(B) Centromere
(C) Satellite
(D) Chromatin
6. The space between two parallel membranes of nucleus is of
(A) 25-60 nm
(B) 10-50 nm
(C) 20-50 nm
(D) 30-50 nm
7. Nucleolus and chromatin are present in
(A) Nuclear matrix
(B) Nucleoplasm
(C) Both 1 & 2
(D) Perinuclear space
8. The non staining secondary constrictions at a constant location over chromosomes give the appearance of a small fragment called as
(A) Centromere
(B) Chromomere
(C) Kinetophore
(D) Satellite
9. The spherical structures present in nucleoplasm that has content continuous with the rest of the nucleoplasm and is actively involved in rRNA synthesis -
(A) Nuclear pore
(B) Chromosome

(C) Chromomere

(D) Nucleolus

10.



Identify the correct option:

- (A) A-Acrocentric ; B- telocentric; C-sub-metacentric; D- metacentric
(B) A- metacentric ; B- Acrocentric ; C-sub-metacentric; D-telocentric
(C) A- metacentric ; B- sub-metacentric ; C- Acrocentric; D-telocentric
(D) A-Acrocentric ; B-metacentric ; C- telocentric; D- sub-metacentric

DPP No. : 11

CHAPTER - CELL BIOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION M : Cell division

- Chromosome can be counted best at the stage of
(A) Prophase (B) Anaphase
(C) Metaphase (D) telophase
- A plant cell has 12 chromosomes at the end of mitosis. How many chromosomes would it have in the G_2 phase of its next cell cycle
(A) 6 (B) 8 (C) 12 (D) 24
- Post-mitotic gap phase and synthetic phase of cell cycle are also respectively referred to as
(A) G_2 and S (B) G_1 and S (C) G_1 and F_2 (D) S and G_2
- Beside cyclin protein which other molecule is essential for completion of cell cycle
(A) CCK (B) CKc (C) CdK (D) CKd
- In mitotic metaphase, the number of chromatids in each chromosome is
(A) One (B) Two (C) Three (D) Four
- Astral rays arise from
(A) centriole (B) cytoplasm
(C) chromatid (D) centromere
- The number of mitotic cell divisions required to produce 256 cells from a single cell is
(A) 6 (B) 8 (C) 10 (D) 12

8. Bead-like thickened portion of leptotene chromosomes are
(A) Puffs (B) Genes
(C) Centromeres (D) Chromomeres
9. Colchicine interferes with
(A) Spindle formation (B) Chromosome replication
(C) Chromosome condensation (D) Separation of daughter chromosomes
10. Tetrad consists of
(A) Four nonhomologous chromatids
(B) Four nonhomologous chromosomes
(C) Four homologous chromosomes with four chromatids
(D) Two homologous chromosomes each with two chromatids

DPP No. : 12
CHAPTER - CELL BIOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

1. **Assertion:** Lysosome has hydrolytic enzymes & formed by GERL System
Reason: Lysosomes are called suicidal bags.
(A) (B) (C) (D)
2. **Assertion:** Mitochondria, chloroplast and peroxisome are not involved in Endomembrane system.
Reason: They coordinate with endomembrane components for performing photorespiration.
(A) (B) (C) (D)
3. **Assertion:** Grana and stroma are two fractions of mitochondria.
Reason: Leucoplasts are associated with photosynthesis phenomenon.
(A) (B) (C) (D)
4. **Assertion:** Glycoproteins and glycolipids perform cell recognition in cell membrane.
Reason: Glycoproteins and glycolipids are synthesized by golgibody.
(A) (B) (C) (D)
5. **Assertion:** DNA damage triggers activation of cell cycle check point
Reason: If a cell lacks nutrients in the G_1 phase, it enters transiently into a resting G_0 – Phase.
(A) (B) (C) (D)
6. **Assertion :** interphase is most suitable stage for study of nucleus
Reason : During interphase nucleus has highly extended and elaborate chromosomes.
(A) (B) (C) (D)
7. **Assertion :** F_1 particles are present in the inner mitochondrial membrane.
Reason : An electron gradient formed on the inner mitochondrial membrane, forms ATP.
(A) (B) (C) (D)
8. **Assertion:** Ribosomes are common in both prokaryotes and eukaryotes.
Reason: Ribosomes are found as free ribosomes as well as bounded ribosomes in prokaryotes only.
(A) (B) (C) (D)
9. **Assertion :** Fluid mosaic model is the famous model of structure of cell wall.
Reason : Lipid and extrinsic proteins form mosaic pattern in cell membrane.
(A) (B) (C) (D)
10. **Assertion :** Mitosis maintains the genetic similarity of somatic cells.
Reason : Chromosomes do not undergo crossing over.
(A) (B) (C) (D)

DPP No. : 13

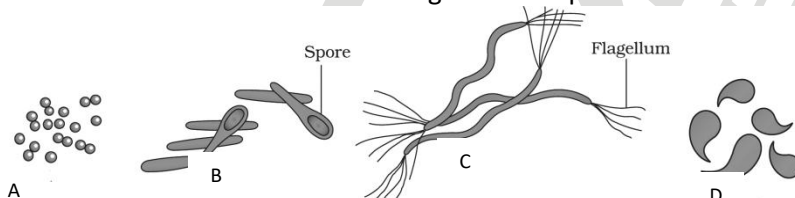
CHAPTER - BIOLOGICAL CLASSIFICATION

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION A : Kingdom-Monera

- Based upon the shape bacteria are grouped under how many categories ?
(A) 2 (B) 3 (C) 4 (D) 5
- Identify the names of the different bacteria according to the shapes



- A - Cocci, B - Bacilli, C - Spirilla, D - Vibrio
 - A - Bacilli, B - Cocci, C - Spirilla, D - Vibrio
 - A - Spirilla, B - Bacilli, C - Cocci, D - Vibrio
 - A - Spirilla, B - Vibrio, C - Cocci, D - Bacilli
- Which of the following statement is correct about bacteria?
(A) Bacteria are simple in both structure and behaviour
(B) Bacteria are complex in structure as well as behaviour
(C) Bacteria are complex in structure but simple in behaviour
(D) Bacteria are simple in structure but complex in behaviour
 - Which of the following organisms show the most extensive metabolic diversity?
(A) Algae (B) Fungi (C) Bacteria (D) Bryophytes
 - Most of the bacteria are
(A) Autotrophs (B) Chemoautotrophs
(C) Heterotroph (D) Parasites
 - Which of the following statements is wrong about Archaeobacteria ?
(A) They live in some of the most harsh habitats
(B) They are recently evolved group
(C) Cell wall lacks peptidoglycan
(D) They are unlike most other bacteria
 - Which of the following areas or conditions would be favoured by thermoacidophiles ?
(A) The stomach of many herbivores (B) Hot, alkaline
(C) Hot, sulphur springs (D) Deep sea volcanic
 - Eubacteria include
(A) Bacteria and Archaeobacteria (B) Cyanobacteria + Archaeobacteria
(C) Bacteria and Blue green algae (D) Bacteria + Eukaryote
 - All Eubacteria have
(A) Cell wall (B) Flagella (C) Heterocyst (D) All the above
 - Branched chain lipids occur in the cell membranes of
(A) Archaeobacteria (B) Mycoplasma (C) Actinomycetes (D) Streptomyces

DPP No. : 14

CHAPTER - BIOLOGICAL CLASSIFICATION

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION A : Kingdom-Monera

- One of the major components of bacterial cell wall is a polymer called
(A) Peptidoglycan (B) Cellulose (C) Chitin (D) Xylan
- Cyanobacteria / Blue green algae are
(A) Unicellular only (B) Colonial only
(C) Filamentous only (D) Unicellular, Colonial or filamentous
- Match the following pairs correctly and choose the right combination.

Column I		Column II	
A	<i>Escherichia coli</i>	1	nif gene
B	<i>Rhizobium melilotae</i>	2	Digests hydrocarbon of crude oil
C	<i>Bacillus thuringiensis</i>	3	Production of human insulin
D	<i>Pseudomonas putida</i>	4	Biological control of fungal disease
		5	Bio-decomposed insecticide

- (A) A → 3, B → 1, C → 5, D → 4
(B) A → 2, B → 1, C → 3, D → 4
(C) A → 4, B → 3, C → 1, D → 2
(D) A → 3, B → 1, C → 5, D → 2

SECTION B : Kingdom - Protista

- Protista includes
(A) Unicellular prokaryotes (B) Unicellular eukaryotes
(C) Bacteriophages (D) B.G.A
- Which of the following kingdoms has no well defined boundaries?
(A) Monera (B) Protista (C) Fungi (D) Metaphyta and Metazoa
- Members of Protista are primarily
(A) Parasites (B) Terrestrial (C) Aquatic (D) Photosynthetic
- Nearly all protists are
(A) Aerobic (B) Anaerobic
(C) Aerobic or anaerobic (D) Photosynthetic
- Nutritionally protists are
(A) Photoautotrophs (B) Heterotrophs
(C) Mixotrophs (D) Photoautotrophs, heterotrophs
- Which of the following are placed under Protista?
(A) Chrysophytes and Dinoflagellates (B) Euglenoids
(C) Slime moulds and protozoans (D) All
- Locomotory structures in protists are
(A) Flagella (B) Cilia (C) Pseudopodia (D) All

DPP No. : 15

CHAPTER - BIOLOGICAL CLASSIFICATION

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION B : Kingdom - Protista

1. Protista form a link with
(A) Plants only (B) Animals only
(C) Fungi only (D) Plants, animals and fungi
2. Chrysophytes include
(A) Diatoms and desmids (golden algae) (B) Dinoflagellates
(C) Euglenoids (D) Slime moulds
3. Which of the following modes of reproduction can be found in some protists?
(A) Binary fission (B) Sexual reproduction
(C) Spore formation (D) All
4. Select the following statement that does not apply to diatoms
(A) Diatoms cell wall may be impregnated with silica
(B) Cell wall is made up of 2 half-shells fit tightly together
(C) Diatom is a chrysophyte
(D) Diatom is multiflagellate
5. The diatoms do not degenerate easily like most of the other algae because
(A) They have highly siliceous wall (B) They have water proof cells
(C) Their cell wall are mucilaginous (D) Cell wall is virus-resistant
6. Diatomaceous earth is used for all except
(A) Polishing (B) Filtration of oils and syrups
(C) Sound and fire proof room (D) Biogas
7. Chrysophytes are
(A) Planktons (B) Nektons (C) Benthonic (D) Active swimmers
8. Red tide is caused by
(A) Ceratium (B) Noctiluca (C) Gonyaulax (D) All of these
9. Dinoflagellates have
(A) A single flagellum in the transverse groove between the cell plates
(B) A single flagellum in the longitudinal groove between the cell plates
(C) Two flagella one lies longitudinally and the other transversely in a furrow between the wall plates
(D) No flagella
10. In which of the following the cell wall has stiff cellulose plate on the outer surface
(A) Dinoflagellates (B) Desmids (C) Diatoms (D) Euglenoids

DPP No. : 16

CHAPTER - BIOLOGICAL CLASSIFICATION

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION B : KINGDOM - PROTISTA

1. Which of the following releases toxins that may even kill other marine animals like fishes
(A) Gonyaulax (B) Paramecium (C) Euglenoids (D) Sporozoans
2. Euglenoids e.g. Euglena are found
(A) In fresh running water (B) In fresh stagnant water
(C) In marine environment (D) In both fresh and marine water
3. Which of the following is correct about the slime mould?
I. It has thylloid body, plasmodium has pseudopodia for locomotion and engulf organic matter
II. During unfavourable conditions Plasmodium differentiates and produces fruiting bodies, sporangium
III. Spores possess no true cell wall
IV. They are dispersed by air current
V. Being extremely resistant, spores survive for many years
VI. Plasmodium can grow upto several feet
(A) I, II, IV, V, VI (B) I, II, III (C) I, II, III, VI (D) II, III, VI

SECTION C : Kingdom-Fungi

4. Mode of nutrition in fungi is
(A) Parasitic (B) Saprophytic (C) Autotrophic (D) Heterotrophic
5. Cell walls of all fungi consist of the polysaccharide
(A) Chitin (B) Cellulose (C) Silica (D) Pectin
6. The cells of the body of a multicellular fungus are organised into rapidly growing individual filaments called
(A) Mycelium (B) Rhizoids (C) Hyphae (D) Dikaryon
7. Which one is unicellular fungus?
(A) Puccinia (B) Toad stool (C) Penicillium (D) Yeast
8. Many fungi are associating with photosynthetic organisms to form mycorrhizae or lichens
(A) Parasitic (B) Symbiotic (C) Photosynthetic (D) Saprophytic
9. Fungi prefer to grow in
(A) Cold and dry places (B) Hot and dry places
(C) Sea water (D) Warm and humid places
10. Fungi show a great diversity in
(A) Morphology (B) Habitat (C) Both (A) and (B) (D) Nutrition

DPP No. : 17

CHAPTER - BIOLOGICAL CLASSIFICATION

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION C : Kingdom-Fungi

1. Reproduction in fungi can take place by all of the following vegetative methods except
(A) Gemmae (B) Fragmentation (C) Fission (D) Budding
2. Fungi show asexual reproduction by all of the following spores except
(A) Conidia (B) Oospore (C) Sporangiospore (D) Zoospores
3. Select the correct statements below that correctly apply to the Kingdom Fungi
(A) Some fungi form beneficial interrelationships with plants
(B) Certain fungi are natural sources of antibiotics
(C) The fungal life cycle typically includes a spore stage
(D) All
4. Which of the following is the correct sequence of 3 steps in the sexual cycle of fungi
(A) Mitosis → Meiosis → Fertilization (B) Plasmogamy → Karyogamy → Meiosis
(C) Meiosis → Plasmogamy → Karyogamy (D) Karyogamy → Plasmogamy → Meiosis
5. Fungi are classified on the basis of
(A) Morphology of mycelium (B) Mode of spore formation
(C) Development of fruiting bodies (D) All
6. Dikaryophase / Dikaryon formation is a specific characteristic of
(A) All fungi (B) Phycomycetes and ascomycetes
(C) Only basidiomycetes (D) Ascomycetes and basidiomycetes
7. Coenocytic, multinucleate and branched mycelial habit is found in
(A) Basidiomycetes (B) Phycomycetes (C) Ascomycetes (D) Deuteromycetes
8. Which of the following is false about ascomycetes
(A) Mode of nutrition are saprophytic, decomposer, coprophilous (growing on dung) and parasitic
(B) Includes unicellular (e.g. yeast) and multicellular forms
(C) Mycelium is coenocytic
(D) Aspergillus, Claviceps, Neurospora are important members of Ascomycetes
- ब9. Basidiomycetes include
(A) Mushroom, Toadstool, Puffball and bracket fungi
(B) Smut fungi and rust fungi
(C) Both (A) and (B)
(D) Bread mould, sac fungi and algal fungi
10. Which of the following is correct about class Deuteromycetes ?
(A) Some members are saprophytes or parasites
(B) A large number of members are decomposers of litter and help in mineral cycling
(C) Alternaria, Colletotrichum and Trichoderma are member of deuteromycetes
(D) All

DPP No. : 18

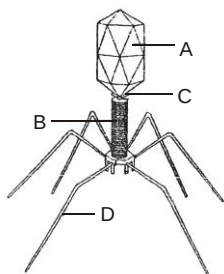
CHAPTER - BIOLOGICAL CLASSIFICATION

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION D : Virus, Lichen, Mycorrhiza, Viroid, Prion

- Chemically viruses are
(A) Glycoproteins (B) Glycolipid (C) Nucleoproteins (D) Lipopolysaccharides
- TMV was discovered by
(A) Mayer (B) Ivanowsky (C) Towrt (D) Pasteur
- Given below is the diagram of a bacteriophage. In which of the options all the four parts A,B,C and D are correct



	A	B	C	D
(A)	Tail fibres	Head	Sheath	Collar
(B)	Sheath	Collar	Head	Tail fibres
(C)	Head	Sheath	Collar	Tail fibres
(D)	Collar	Tail fibres	Head	Sheath

- Which of the following statement is false about viruses
(A) Viruses are obligate parasite
(B) Viruses can multiply only when they are inside the living cells
(C) Viruses cannot pass bacteria proof filters
(D) Viruses are made up of protein+DNA or RNA (never both DNA and RNA)
- Lichens are composite organism made up of a fungus and a photosynthetic alga. Which of the following statement is wrong about lichen?
(A) Lichens are sensitive to air pollution
(B) Algal partner (phycobiont) and fungal partner (mycobiont) live mutually
(C) Algae prepare food for fungi and fungi provide shelter and absorb water+minerals for algal partner
(D) None
- Mycorrhiza help in absorption of :
(A) Nitrogen (B) Phosphorus (C) Calcium (D) Sulphur
- Which of the following is Pioneer species on barren land :
(A) Graphis (B) Parmelia (C) Usnea (D) Fungi
- What is true about Viroids :
(A) Naked ss RNA (B) Low molecular weight RNA
(C) Protein coat absent (D) All
- Which is incorrect about Prions :
(A) Misfolded protein (B) Cause neural degeneration
(C) Causes potato spindle tuber disease (D) Cause mad cow disease
- Which is not reproduction method in lichen :

(A) Fission

(B) Fragementation

(C) Isidia

(D) Soredia

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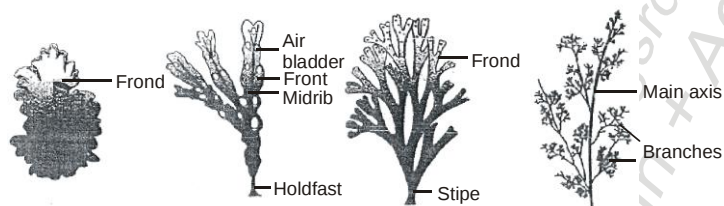
DPP No. : 19
CHAPTER - PLANT KINGDOM

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION A : Algae

- At least half of the total CO₂ fixation on earth is carried out through photosynthesis by
(A) Angiosperms (B) Lycopods (C) Algae (D) Bryophytes
- The plant body of green algae may be
(A) Unicellular (B) Colonial (C) Filamentous (D) All
- Pyrenoid contains
(A) Polysaccharide + Lipid (B) Starch + Lipid
(C) Protein + Starch (D) Starch + Glycogen
- Which pigments are found in brown algae?
(A) Chl a, Chl c (B) Chl a, Chl d
(C) Chl a, Chl c and Fucoxanthin (D) Chl a, Phycoerythrin
- Examine the figures A, B, C, D. In which one of the four options all the items A, B, C and D are correct



	A	B	C	D
(A)	Porphyra	Fucus	Dictyota	Polysiphonia
(B)	Polysiphonia	Porphyra	Dictyota	Fucus
(C)	Fucus	Dictyota	Porphyra	Polysiphonia
(D)	Porphyra	Polysiphonia	Fucus	Dictyota

- Usually plant body of brown algae consists of
(A) Hold fast (B) Stipe
(C) Frond (D) All
- In most of the brown algae asexual reproduction takes place by
(A) Auxospores
(B) Aplanospores
(C) Biflagellate zoospores (have lateral, unequal flagella)
(D) Multiflagellate zoospore
- Which one is correct about sexual reproduction in brown algae?
(A) Sexual reproduction may be isogamy, anisogamy or oogamy
(B) In isogamy and anisogamy fertilization is external (in H₂O)
(C) In oogamy fertilization occurs in oogonium
(D) All are correct
- Which of the following is correct ?
(A) In brown algae as well as red algae vegetative reproduction takes place by fragmentation
(B) In red algae algal predominant pigment is r-phycoerythrin
(C) Reserved food, floridean starch in red algae is very similar to amylopectin and glycogen in structure
(D) All are correct
- Which of the following statements does not characterize the red algae?
(A) Floridean starch (reserve food)

- (B) Both spores and gametes are nonmotile
(C) Post fertilization development is like other algae
(D) Red algae can vary their ratio of photosynthetic pigments depending upon the light conditions

DPP No. : 20

CHAPTER - PLANT KINGDOM

Total Marks : 40

Single choice Objective

Max. Time : 10 min.

(D marks 1 min.)

SECTION A : Algae

1. Naked pyrenoid and laterally inserted flagella are features of
(A) Red algae (B) Brown algae (C) Green algae (D) All of these
2. Gamete is not flagellated in
(A) Chlamydomonas (B) Ectocarpus (C) Polysiphonia (D) Volvox
3. Usually fresh watered algae are
(A) Green algae (B) Brown algae (C) Red algae (D) All of these
4. Apical, isokont flagella are present in
(A) Gelidium (B) Ectocarpus (C) Laminaria (D) Chlamydomonas
5. Type of meiosis occurs in Ectocarpus
(A) Gametic (B) Sporic (C) Zygotic (D) Any of these
6. Main pigments which provide brown colour to the brown algae are
(A) Phycocyanin (B) Phycoerythrin (C) Chl. a (D) Fucoxanthin
7. Cephalosporium is considered as
(A) Parasite (B) Saprophytes (C) Symbiont (D) Autotrophs
8. Mainly oogamous type of reproduction is found in
(A) Brown algae (B) Red algae (C) Green algae (D) None of these
9. The reserve food material of red algae is
(A) starch (B) chrysolaminarin
(C) cyanophycean starch (D) Floridian starch
10. Laminarin and Manitol, reserve food in brown algae are
(A) Lipids (B) Complex carbohydrate
(C) Proteins (D) Lipoprotein

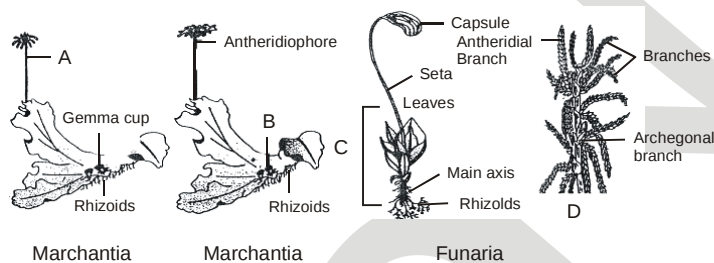
DPP No. : 21
CHAPTER - PLANT KINGDOM

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION B : Bryophytes

- Bryophytes are called "Amphibians of the plant kingdom" because
(A) They are found in only water
(B) Plants live in soil are dependent on water for sexual reproduction
(C) It needs water for spores formation
(D) Water is essential for its survival
- The plant body of bryophytes is thallus-like and prostrate or erect, and attached to substratum by
(A) Unicellular roots (B) Multicellular roots
(C) Unicellular or multicellular rhizoids (D) Adhesive
- Choose the correct option
(A) In bryophytes sexual reproduction is oogamous type
(B) Sex organs are unicellular in algae and fungi but multicellular in bryophytes to angiosperms
(C) Archegonium is flask shaped
(D) All
- Which is the correct statement about bryophytes
(A) Sporophyte is multicellular, not free living but attached with plant body (gametophyte) for nourishment from it
(B) Some cells of the sporophyte undergo meiosis to produce haploid homospores
(C) Spores germinate to produce gametophyte
(D) All
- Sphagnum is used as a packing material for transporting of living materials because of its
(A) Acidic nature as it does not undergo decay
(B) Creeping capacity
(C) Water holding capacity
(D) Both 1 and 3
- Mosses are of great ecological importance because of
(A) Its contribution to prevent soil erosion
(B) Its contribution in ecological succession
(C) Both
(D) Its capability to remove CO from the atmosphere
- Gemmae are multicellular green structures for asexual reproduction. These are found in gemma cups in
(A) *Riccia* thallus (B) *Marchantia* thallus
(C) *Funaria* protonema (D) Fern prothallus
- Sphagnum* is also called peat moss because
(A) It grows in acidic marshes (bog) and helps in peat formation
(B) It is found in peat
(C) It decays to form peat
(D) It fossilized quickly
- Protonema
(A) Is a stage of gametophytic generation
(B) Is a creeping, green, branched and develops directly from a spore
(C) Produces lateral bud which forms leafy plant body
(D) All
- Examine the figure (A-D) given below and select the right option out of (A) - (D), in which all the four item A, B, C and D are identified correctly :



- A**
 (A) Gemma cup
 (B) Archegoniophore
 (C) Archegonia
 (D) Antheridia

- B**
 Archegoniophore
 Gemma cup
 Antheridia
 Archegonia

- C**
 Sporophyte
 Gametophyte
 Gemma cup
 Gemma cup

- D**
 Sphagnum
 Sphagnum
 Sphagnum
 Sphagnum

DPP No. : 22
CHAPTER - PLANT KINGDOM

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION C : Pteridophytes

- What is the importance of pteridophytes?
(A) They are used for medicinal purposes
(B) They are used as soil binders
(C) They are frequently grown as ornamental plants
(D) All
- Which one of the following is considered first terrestrial plants to be evolved having xylem and phloem
(A) Bryophyte
(B) Gymnosperms
(C) Pteridophytes
(D) Angiosperms
- Choose the incorrect statement
(A) All pteridophytes are found in cool, damp, shady places
(B) Some pteridophytes may flourish well in sandy-soil condition
(C) Most of the pteridophytes are found in cool, damp, shady place
(D) A very few pteridophytes are hydrophytes
- The pteridophytes are mostly
(A) Heterosporous
(B) Homosporous
(C) Aquatic
(D) Trees
- Leaves bearing sporangium are sporophyll. In some pteridophytes sporophylls form compact structure called
(A) Sporocarp
(B) Strobilus or cone
(C) Spike
(D) Flower
- Cone is found in
(A) Equisetum
(B) Salvinia
(C) Selaginella
(D) 1 and 3
- Prothallus in pteridophyte is
(A) Nonvascular, haploid, multicellular small mostly photosynthetic thalloid gametophyte
(B) Vascular, haploid, multicellular sporophyte
(C) Diploid, Free-living gametophyte
(D) Thallus/plant body in same pteridophytes
- How many flagella are found in antherozoid of pteridophytes
(A) Two
(B) many
(C) Two in some, many in others
(D) generally many.
- The heterosporous pteridophytes are
(A) Lycopodium and Pteris
(B) Selaginella and Psilotum
(C) Selaginella and Salvinia
(D) Dryopteris and Adiantum
-

	Column I (Classes)		Column II (Examples)
A	Psilopsida	I	Dryopteris, Pteris, Adiantum
B	Lycopsida	II	Equisetum
C	Sphenopsida	III	Selaginella
D	Pteropsida	IV	Lycopodium
		V	Psilotum

The correct combination is

- (A) A - V, B - III, IV, C - II, D - I
(B) A - I, B - II, C - III, D - IV
(C) A - IV, B - III, C - II, D - I
(D) A - III, IV, B - V, C - I, D - II

DPP No. : 23
CHAPTER - PLANT KINGDOM

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION D : Gymnosperms

- Which is found in gymnospermic plants
(A) Companion cells (B) Double fertilization
(C) Ovary (D) secondary growth
- Seeds plants are all
(A) Heterosporous (B) Dioecious
(C) Monoecious (D) Homosporous
- Gymnosperms include
(A) Medium sized trees only (B) Tall tree only
(C) Shrubs only (D) All
- Mycorrhizal root (having symbiotic fungi) is found
(A) *Pinus* (B) *Ginkgo*
(C) *Cycas* (D) *Cedrus*
- Which one is not the characteristic of *Cycas*?
(A) Unbranched stem
(B) Compound leaves (pinnate)
(C) Dioecious (male and female cone on separate plant)
(D) Non-archegoniate
- The nucellus is protected by envelope (integument) and this composite structure is called :
(A) Antheridium (B) Ovule
(C) Ovary (D) Megaspore mother cell
- Pollen grain is
(A) Female gamete (B) Reduced male gametophyte
(C) Megaspore (D) Male cone
- Which one is correct about male and female gametophyte
(A) In bryophytes and pteridophytes they have independent free-living existence
(B) In gymnosperm and angiosperms they are not independent free-living existence
(C) Both 1 and 2
(D) In bryophytes, pteridophytes and angiosperms they have free-living life. They remain in sporangia retained on sporophytes
- Chilgoza are used as fruit is obtained from
(A) *Pinus gerardiana* (B) *Cycas* (C) *Gnetum* (D) *Angiosperm*
- Which one forms coal
(A) Fern + *Cycas* (B) Fern + Cycadofilicales
(C) *Ginkgo* + *Cedrus* (D) *Cycas* + *Pinus*

DPP No. : 24
CHAPTER - PLANT KINGDOM

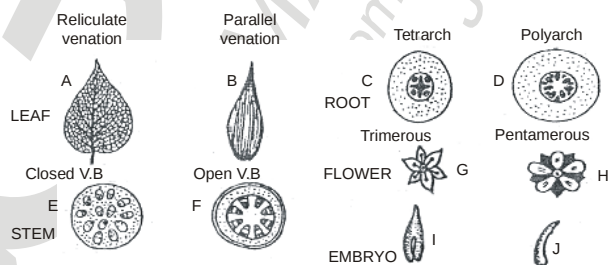
Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION E : Angiosperms

- In angiosperms, types of meiosis occur
(A) Gametic (B) Sporic (C) Zygotic (D) Any of these
- Characteristic feature of angiosperms is
(A) Gametophyte is independent (B) Presence of double fertilization
(C) Presence of coralloid roots (D) All of these
- Which of the following is not present in angiosperms?
(A) Flower (B) Adventitious root (C) Antheridium (D) endospermic seed
- In angiosperms life cycle is
(A) Haplontic (B) Diplontic (C) Haplodiplontic (D) all of these
- Flowering plants are more successful than other members of the plant world because
(A) They are large and have a good vascular tissue system
(B) They carry out variety of pollination mechanism
(C) The protected plant embryo can survive in the period of unfavourable conditions
(D) All of these
- Given below the names of following organisms with their parts
(i) Prothallus cell of a Fern (ii) Rhizoidal cell of Moss
(iii) Meristem cell of Monocot (iv) Gemma cell in Marchantia
(v) PEN (Primary Endosperm Nucleus) in Dicot
(vi) Protonemal cell of a Moss
Select the option that has correct ploidy level of (i), (ii), (iii), (iv), (v) and (vi) respectively
(A) n, 2n, n, 2n, 3n, n (B) n, n, 2n, n, 3n, n
(C) 2n, 2n, 2n, n, 3n, 2n (D) n, 2n, 2n, 2n, 3n, h

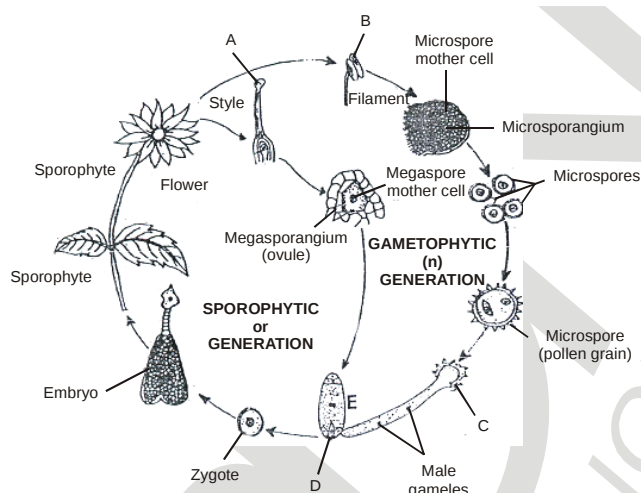
7.



Dicot and monocot characters are respectively

- (A) A, C, F, H, I and B, D, E, G, J
(B) A, D, F, H, I and B, C, E, G, J
(C) A, C, E, G, I and B, D, F, H, J
(D) B, C, F, H, I and A, D, E, G, J

8.



Life cycle of an angiosperm

A, B, C, D and E are respectively

- (A) Stigma, Anther, Male gametophyte, Egg and Female gametophyte
(B) Stigma, Anther, Female gametophyte, Egg and Male gametophyte
(C) Stigma, Anther, Male gametophyte, Fertilized egg and Female gametophyte
(D) Stigma, Anther, Embryo sac, Egg and Female gametophyte

9. Which of the following group does not have free living gametophyte?
(A) Bryophytes only (B) Pteridophytes only
(C) Gymnosperms only (D) Gymnosperms & Angiosperms
10. Which of the following is unique feature of Angiospermic plants
(A) Presence of vessels (B) Presence of companion cells
(C) Presence of secondary growth (D) Presence of seeds

DPP No. : 25

CHAPTER - PLANT MORPHOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION A : Root

1. The adventitious roots are found in
(A) Grasses (B) Monstera (C) Banyan tree (D) All of these
2. Roots arise from parts of the plant other than the radicle are called
(A) Adventitious roots (B) Tap roots (C) Fibrous roots (D) All of these
3. When the roots originate from lower nodes of the stem are called
(A) Prop root (B) Stilt root (C) Storage root (D) Pneumatophores
4. In some plants many roots come out of the ground and grow vertically upwards are called
(A) Prop root (B) Pneumatophores (C) Assimilatory roots (D) Supportive roots
5. Epiphytes like Vanda develop special layer of absorptive tissue velamen consisting of 4 or 5 layers of long polygonal cells. Velamen is formed by
(A) Absorbing roots (B) Stem (C) Clinging roots (D) hanging roots

SECTION B : Stem

6. When lateral branches originate from basal and underground part of the stem, grow horizontally beneath the soil and then come out obliquely to form new shoot, are called
(A) Off set (B) Sucker (C) Stolon (D) Rhizome
7. Vegetative reproduction occurs by bulbil in
(A) Agave (B) Colocasia (C) Zingiber (D) Vallisneria
8. In Opuntia, the function of photosynthesis is carried out by
(A) Cladode (B) Phylloclade (C) Phyllode (D) Bulb
9. Offset occurs in
(A) Strawberry (B) Colocasia (C) Eichhornia (D) Chrysanthemum
10. *Mentha arvensis* (Mint) has one of the following
(A) Sucker (B) Offset (C) Stolon (D) Rhizome

DPP No. : 26

CHAPTER - PLANT MORPHOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION B : Stem

- Thorn of Bougainvillea is modified
(A) Stem (B) Leaf (C) Floral bud (D) Root
- Green leaf-like one internode long stem branches are called
(A) Phylloclades (B) Phyllodes (C) Bulbils (D) Cladodes
- Which of the following can be vegetatively propagated by axillary buds
(A) Potato (B) Mango (C) China rose (D) Mustard
- Some plants of arid regions modify their stems into fleshy cylindrical structures. They contain chlorophyll and carry out photosynthesis
(A) Opuntia (B) Euphorbia (C) Asparagus (D) Australian Acacia

SECTION C : Leaf

- Which structures do not bear vascular supply
(A) Thorn (B) Spines (C) Prickles (D) All of these
- Presence of sheathing leaf base and ligule are characteristics of
(A) Cycas leaf (B) Fern leaf (C) Banana leaf (D) Grass leaf
- When more than two leaves arise at a node and form a whorl, it is called whorled, found in
(A) Guava (B) China rose (C) Mustard (D) Alstonia
- In the Utricularia plant, which of the following structure is used for capturing insects
(A) Leaf pitcher (B) Leaf bladder (C) Leaf hook (D) Leaf tendril
- Venus fly trap has
(A) Modified stem (B) Modified leaves
(C) Modified roots (D) Modified inflorescence

SECTION D : Inflorescence

- In which type of inflorescence the main axis continues to grow and the flowers are borne laterally in an acropetal succession
(A) Cymose (B) Racemose (C) Cymose head (D) Mixed inflorescence

DPP No. : 27

CHAPTER - PLANT MORPHOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION D : Inflorescence

1. Verticillaster inflorescence occurs in
(A) Solanaceae (B) Cruciferae (C) Malvaceae (D) Labiatae
2. In Cyathium inflorescence, the ratio of male / female flowers are
(A) One / one (B) Many / many (C) Many / one (D) One / many
3. Axis of inflorescence is
(A) Pedicel (B) Peduncle (C) Petiole (D) All
4. The special type of inflorescence found in Ficus where the female flower are at bottom and male flower near ostiole and enclosed within a cup shaped fleshy thalamus (receptacle) with ostiole is called
(A) Cyathium (B) Verticillaster (C) Spadix (D) Hypanthodium

SECTION E : Flower

5. Polyadelphous anthers are present in
(A) Sunflower (B) Lemon (C) Lady's finger (D) Peanut
6. aestivation in which members of a whorl lie close but do not overlap
(A) vexillary (B) valvate (C) imbricate (D) Twisted
7. A flower is zygomorphic when
(A) Any transverse section divides it into two equal halves
(B) Only one transverse section divides it into two equal halves
(C) Every vertical section passing through its centre divides it into two equal halves
(D) Only one vertical section passing through its centre divides it into two equal halves
8. Four kinds of whorls arranged successively on the swollen end of the stalk, called
(A) Thalamus (B) Receptacle
(C) Both (A) and (B) (D) None of these
9. In a multicarpellary, syncarpous and unilocular ovary, if the ovules are arranged in a column (in the centre) this is defined as
(A) Marginal placentation (B) Parietal placentation
(C) Axile placentation (D) Free central placentation
10. Basal placentation develops when the ovary has
(A) Single ovule (B) Many ovules
(C) Many locules (D) Single ovule in each locule

DPP No. : 28

CHAPTER - PLANT MORPHOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION E : Flower

1. Ovary is one chambered but it maybe two or more chambered due to formation of the false septa and ovules develop on the inner wall of the ovary or on peripheral part. In this case placentation is
(A) Parietal (B) Marginal (C) Axile (D) Basal
2. The flower of which plant is zygomorphic ?
(A) Bean (B) Datura (C) Mustard (D) Canna

SECTION F : Fruit

3. Aggregate fruit develops from
(A) Multicarpellary, apocarpous ovary (B) Multicarpellary ovary
(C) Multicarpellary, syncarpous ovary (D) Monocarpellary ovary
4. Mango and coconut belong to
(A) Berries (B) Pomes (C) Drupes (D) Pepo
5. The fruit is a characteristic of
(A) Gymnosperms only (B) Dicots only (C) Monocots only (D) Flowering plants only
6. Thick and fleshy pericarp is differentiated into
(A) Epicarp and endocarp (B) Epicarp, mesocarp and endocarp
(C) Epicarp and sporocarp (D) Sporocarp and cystocarp
7. In mango and coconut, the fruit (drupe) develops from-
(A) Monocarpellary, superior ovaries and are one seeded
(B) Monocarpellary, superior ovaries and are many seeded
(C) Polycarpellary, superior ovaries and is one seeded
(D) Polycarpellary, superior ovaries and are many seeded
8. In coconut
(A) Mesocarp is fibrous (B) Endosperm is edible
(C) Both (D) Mesocarp is edible
9. The edible part of Litchi is
(A) Epicarp (B) Mesocarp (C) Endocarp (D) aril
10. The edible part of *Mangifera indica* is
(A) Epicarp (B) Mesocarp (C) Endocarp (D) Pericarp

DPP No. : 29
CHAPTER - PLANT MORPHOLOGY

Total Marks : 40
Single choice Objective

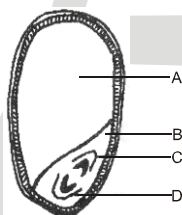
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SECTION F : Fruit

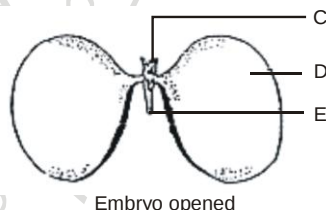
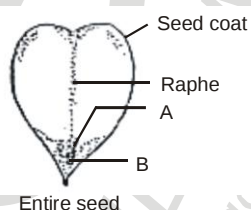
- Aggregate fruit, Etaerio of berries is found in
(A) Custard apple (B) Mulberry (C) Lotus (D) Pineapple
- One of the following is a dry indehiscent fruit
(A) Caryopsis (B) Pod (C) Follicle (D) Lomentum

SECTION G : Seeds

- Name the plant from seeds of which oil is obtained
(A) Cicer arietinum (B) Saccharum officinarum
(C) Saccharum munja (D) Arachis hypogea
- The diagram represents the L.S of monocot seed. Choose the correct combination of labelling



- (A) (A) Aleurone layer (B) Scutellum (C) Coleoptile (D) Coleorrhiza
(B) (A) Seed coat (B) Scutellum (C) Coleoptile (D) Coleorrhiza
(C) (A) Epithelium (B) Scutellum (C) Coleoptile (D) Coleorrhiza
(D) (A) Endosperm (B) Scutellum (C) Coleoptile (D) Coleorrhiza
- After fertilization ovules develop into
(A) Tegmen (B) Seed
(C) Cotyledons (D) None of these
 - Given below is the diagram of a typical structure of dicotyledonous seeds. In which one of the options all the five parts A, B, C, D and E are correct ?



- | | A | B | C | D | E |
|--|---------------|-----------|----------|-----------|-----------|
| | (A) Hilum | Micropyle | Radicle | Cotyledon | Plumule |
| | (B) Hilum | Micropyle | Plumule | Cotyledon | Radicle |
| | (C) Micropyle | Hilum | Plumule | Cotyledon | Radicle |
| | (D) Hilum | Micropyle | Plumule | Radicle | Cotyledon |
- In the cereals, the cotyledon is called
(A) Coleorrhiza (B) Pericarp (C) Scutellum (D) None of these
 - All structures within the seed coat are called
(A) Endosperm (B) Cotyledon (C) Embryo (D) Kernel
 - The seedcoat has 2 layers, the outer and inner The is a scar on the seedcoat through which the developing seeds are attached to the fruit. Above the — — — is a small pore called the
- (A) Testa, tegmen, hilum, hilum, micropyle (B) Tegmen, testa, hilum, hilum, micropyle
(C) Testa, tegmen, micropyle, micropyle, hilum (D) Tegmen, testa, micropyle, micropyle, hilum

10. Match the Column-I with Column-II and choose the correct option :

Column I		Column II	
A	Edible mesocarp	i	Coconut
B	Endospermic seed	ii	Mango
C	Fibrous mesocarp	iii	Bean
D	Non endospermic seed	iv	Castor
E	Ovules	v	Future fruit
F	Ovary	vi	Future seed

- A** **B** **C** **D** **E** **F**
 (A) (ii) (iv) (vi) (i) (iii) (v)
 (B) (i) (iii) (v) (ii) (iv) (vi)
 (C) (vi) (v) (iv) (iii) (ii) (i)
 (D) (ii) (iv) (i) (iii) (vi) (v)

DPP No. : 30

CHAPTER - PLANT MORPHOLOGY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION H : Families of flowering plants

1. Syncarpous, hypogynous, trilocular ovary with axile placentation is found in
(A) Liliaceae (B) Cucurbitaceae (C) Ranunculaceae (D) None of these
2. One of the following statement is not applicable to Solanaceae
(A) Adnation (epipetalous) (B) Swollen axile placenta
(C) Bicarpellary superior ovary (D) Monocarpellary, superior ovary
3. Pentamerous, actinomorphic flowers, bicarpellary ovary with oblique septa and fruit as a capsule or berry are characteristic feature of
(A) Liliaceae (B) Asteraceae (C) Brassicaceae (D) Solanaceae
4. A dot on the top of the floral diagram indicates
(A) Stem (B) Mother axis (C) Father axis (D) Floral parts
5. Bicarpellary gynoecium and oblique ovary occur in
(A) Mustard (B) Banana (C) Pisum (D) Brinjal
- 6.



Pisum sativum (pea)



Solanum nigrum (mokoi)



Allium cepa (onion)

The above species belong to which of the following families respectively

- (A) Liliaceae, Compositae, Malvaceae (B) Fabaceae, Solanaceae, Liliaceae
(C) Compositae, Malvaceae, Liliaceae (D) Solanaceae, Fabaceae, Liliaceae
7. Choose the correct description of the flower depicted in the floral diagram given below



- (A) United, valvate sepals; free, imbricate petals; free stamens; unilocular ovary with axile placentation
(B) United, valvate sepals; free, twisted petals; free stamens; unilocular ovary with marginal placentation
(C) United, valvate sepal; free imbricate petals; free stamens; unilocular ovary with marginal placentation
(D) United, valvate sepal; free, imbricate petals, epipetalous stamens, unilocular ovary with marginal placentation
8. Match the column I with Column II

	Column I (Members of fabaceae)		Column II (Economic importance)
A	Gram, sem, moong, soyabean	I	Medicine
B	Soyabean, groundnut	II	Ornamentals
C	Indigofera	III	Fodder
D	Sunhemp	IV	Fibres
E	Sesbania, Trifolium	V	Dye
F	Lupin, sweet pea	VI	Edible oil
G	Muliathi	VII	Pulses

- (A) A - I, B - II, C - III, D - IV, E - V, F - VI, G - VII
(B) A - VII, B - VI, C - V, D - IV, E - III, F - II, G - I
(C) A - II, B - IV, C - VI, D - I, E - III, F - V, G - VII
(D) A - I, B - III, C - V, D - VII, E - II, F - IV, G - VI

9. Colchicine is obtained from a member of
(A) Solanaceae (B) Liliaceae (C) Fabaceae (D) Brassicaceae
10. Trimerous flowers, superior ovary, axile placentation is characteristic of
(A) Liliaceae (B) Papilionaceae (C) Cucurbitaceae (D) Solanaceae

DPP No. : 31

CHAPTER - PLANT ANATOMY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION A : Plant Tissues

1. Histogen theory was proposed by
(A) Bailey (B) Haberlandt
(C) Hanstein (D) Schmidt
2. Epiblema in roots derived from
(A) Protoderm (B) Procambium (C) Ground meristem (D) Calyptragen
3. Which tissue is derived from plerome
(A) Epidermis (B) Endodermis (C) Cortex (D) Vascular tissue
4. Tunica corpus theory is related with
(A) Root apex (B) Lateral meristems
(C) Root cap (D) Shoot apex (Apical meristem)
5. Specialised parenchyma cells which store tannins, oils and crystals of calcium oxalate are called
(A) Sclereids (B) Idioblasts (C) Stone cells (D) Conjunctive tissue
6. Aerenchyma is helpful in plants by
(A) Giving flexibility to plants (B) Giving mechanical strength to plants
(C) Promoting photosynthesis (D) Providing buoyancy in hydrophytes
7. Mechanical tissue consisting of living cells is
(A) Sclerenchyma (B) Collenchyma
(C) Chlorenchyma (D) Parenchyma
8. Collenchyma tissue is characterised by
(A) Elongated cells with thickening at the corners
(B) Isodiametric cells with deposits of cellulose and pectin over the corners
(C) Elongated cells with deposits of cellulose and pectin all over the wall
(D) Isodiametric cells with thickening all over the wall
9. Parenchyma cells in between xylem and phloem bundles in roots are called as
(A) Conjunctive tissue (B) Complimentary tissue
(C) Cambial tissue (D) None of the above
10. Phloem parenchyma is absent in
(A) Sunflower stem (B) Maize stem
(C) Cucurbita stem (D) Beet root stem

DPP No. : 32
CHAPTER - PLANT ANATOMY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION A : Plant Tissues

1. Which one is correct ?
(A) Anatomy - Internal morphology, study of internal structure
(B) Tissue - A group of cells having a common origin and usually performing a common function
(C) Permanent tissue has more power of mitosis
(D) 1 and 2
2. Which one is correct about intercalary meristem ?
(A) It occurs between mature tissue
(B) It occurs in grasses and regenerate parts removed by grazing herbivores
(C) It is a primary meristem
(D) All
3. Secondary tissues of a plant
(A) Add to the length of roots and shoots
(B) Add to the diameter of existing roots and shoots
(C) Are found only in the embryo
(D) Are found only in the seedling
4. Which of the following is the living element of xylem
(A) Fibre (B) Parenchyma (C) Tracheid (D) Vessel
5. Which one is correct ?
(A) Permanent tissues having all cells similar in structure and function, are simple tissues
(B) Permanent tissues having different types of cell are complex tissue
(C) Parenchyma, collenchyma and sclerenchyma are simple tissue
(D) All
6. I. Forms major component within organs
II. Cell wall-thin, cellulosic
III. Shape of cells - generally isodiametric
IV. Intercellular space - Present / absent
V. Photosynthetic, storage or secretory in function
The above characters are attributed to
(A) Collenchyma (B) Parenchyma (C) Sclerenchyma (D) Vascular tissue
7. Dead cells with narrow lumen, lignified cell wall with a few or numerous pits and serving a mechanical function only are called
(A) Collenchyma (B) Xylem (C) Aerenchyma (D) Sclerenchyma
8. Which of the following statement is incorrect about sclereids (stone cells)
(A) Various shaped
(B) Highly thickened + lignified cell wall and lumen is narrow
(C) Commonly found in the fruits, wall of nuts, seed coats of legumes and leaves
(D) They are types of parenchyma
9. Angiospermic xylem consists of
(A) Vessels + Tracheids only (B) Tracheids + Fibres only
(C) Vessel, tracheids, fibres and parenchyma (D) Parenchyma and fibres only
10. In pteridophytes and gymnosperms, xylem consists of all except
(A) Vessel (B) Tracheid (C) Fibre (D) Parenchyma

DPP No. : 33
CHAPTER - PLANT ANATOMY

Total Marks : 40
Single choice Objective

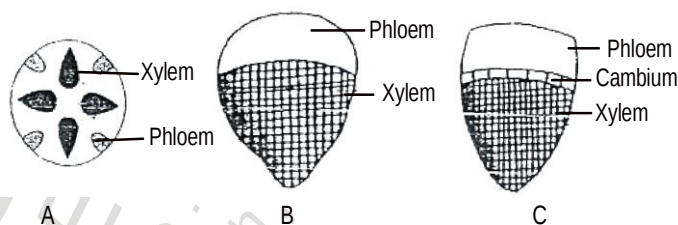
Max. Time : 10 min.
(D marks 1 min.)

SECTION A : Plant Tissues

- In angiosperm phloem
(A) Both the sieve tube elements and companion cells have nuclei
(B) Sieve tube elements have nuclei but companion cells do not
(C) The companion cells have nuclei but the sieve tube elements do not
(D) Neither the companion cells nor sieve tube elements have nuclei
- The living and non-lignified component of vascular bundle is / are
(A) Vessel and tracheids (B) Vessel and phloem
(C) Wood fibre and phloem (D) Wood parenchyma and sieve tube
- Complex tissue comprises
(A) Xylem and phloem (B) Heterogeneous tissue
(C) Conductive tissue (D) All of these
- Albuminous cells of gymnosperms are equivalent to
(A) Sieve tubes (B) Sieve cells (C) Companion cells (D) Cork cambium
- I. Sclerenchymatous cells
II. Much elongated unbranched and tapering ends
III. Needle like shape
IV. Cell wall thick
V. Dead cells
VI. Found in secondary phloem
Which of the following cells is defined by the above characters?
(A) Sieve tube (B) Phloem parenchyma
(C) Phloem fibre/bast fibre (D) Companion or albuminous cell
- Which of the following bast fibres is of great commercial value
(A) Jute (B) Flax (C) Hemp (D) All
- The intrafascicular cambium
(A) Is a simple permanent tissue (B) Is a meristematic tissue
(C) Is a complex permanent tissue (D) Is a secondary meristem

SECTION B : Tissue System

8.



What type of vascular bundles are A, B and C

- (A) Radial, close collateral conjoint, open collateral conjoint
(B) Close collateral conjoint, open collateral conjoint, Radial
(C) Open collateral conjoint, Close collateral conjoint, Radial
(D) Bicollateral, Concentric, Radial
- Ground / fundamental tissue system is made up of
(A) Parenchyma (B) Collenchyma (C) Sclerenchyma (D) All
- Guard cells differ from epidermal cells in having
(A) Specific shape (B) Chloroplast
(C) Heterogeneous nature of cell (D) All

DPP No. : 34
CHAPTER - PLANT ANATOMY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION B : Tissue System

1. Trichomes, hairs, stomata, etc are included under
(A) Ground tissue system (B) Vascular tissue system
(C) Epidermal tissue system (D) None
2. Xylem and phloem are present on the same radius, such a vascular bundle is called
(A) Radial (B) Bicollateral
(C) Concentric (D) Conjoint

SECTION C : Anatomy of plant parts

3. Well developed pith is seen in
(A) Monocot root and monocot stem (B) Dicot root and dicot stem
(C) Monocot root and dicot stem (D) Dicot root and monocot stem
4. In leaves, protoxylem elements
(A) Face towards adaxial side (B) Face towards abaxial surface
(C) Are surrounded by metaxylem (D) Are scattered in the middle
5. Which one is correct about bulliform / motor cell
(A) It is seen in grasses
(B) It is large-sized, thin-walled colourless, vacuolate cells on the adaxial surface
(C) It helps in rolling of leaf to minimise water loss when it is flaccid
(D) All

SECTION D : Secondary Growth

6. During secondary growth, a complete ring is formed by
(A) Only fascicular cambia
(B) Only interfascicular cambia
(C) Fascicular (vascular) cambia and interfascicular cambia
(D) Fascicular cambia + Phellogen
7. Which one is a false statement
(A) The 1° and 2° phloem get gradually crushed due to the continued formation and accumulation of 2° xylem
(B) 1° xylem remains more or less intact in or near the centre
(C) Secondary growth is increasing length of the axis
(D) None
8. The activity of cambium is under the control of
(A) Many physiological factors (B) Many environmental factors
(C) Both (D) Only photoperiod
9. Annual or growth ring consists of
(A) Alternate rings of heart and early wood (B) Alternate rings of sapwood and heart wood
(C) Alternate rings of early and late wood (D) Alternate rings of porous and non-porous wood
10. Autumn wood or late wood is formed
(A) In winter (B) In spring
(C) Throughout the year (D) In rainy season

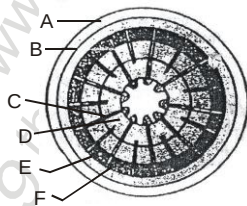
DPP No. : 35
CHAPTER - PLANT ANATOMY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION D : Secondary Growth

- Phellogen cuts
(A) Cork / phellogen inside and secondary cortex (phelloderm) outside
(B) Cork outside and phelloderm inside
(C) Both cork and phelloderm inside
(D) Both cork and phelloderm outside
- Main water conducting element of xylem in homoxylous plant is
(A) Tracheary element (B) Vessel (C) Tracheid (D) Xylem parenchyma
- Interfascicular cambia originate from cells of
(A) Medullary ray (B) Cortex (C) Endodermis (D) Fascicular cambia
- Secondary growth occurs due to activity of
(A) Cork cambium (B) Interfascicular cambium
(C) Vascular cambium (D) Both (A) and (C)
- Which one is correct about the secondary growth?
(A) Youngest secondary phloem is just outside the cambium while youngest secondary xylem inside the cambium
(B) Oldest secondary phloem is just inside the primary phloem while oldest secondary xylem is just above pith
(C) Secondary medullary ray passes through both secondary xylem and secondary phloem
(D) All
- Bark refers to all the tissues exterior to the
(A) Cork cambium (B) Pericycle (C) Vascular cambium (D) Periderm
- Annual or growth ring consists of
(A) Two consecutive rings of spring wood
(B) Two alternate rings of spring wood and autumn wood
(C) Two consecutive rings of Autumn wood
(D) Two alternate rings of sap wood and heart wood
- At places, the cork contains aerating pores called
(A) Stomata (B) Lenticels (C) Hydathode (D) Pneumatophore
- In dicot root, the cambium is
(A) Completely primary in origin (B) Completely secondary in origin
(C) Primary as well as secondary in origin (D) Derived from endodermis
- Refer to the figure showing secondary growth in dicot stem and identify A to F



- A - Phellem, B - Phellogen, C - Medullary rays, D - Secondary xylem, E - Secondary phloem, F - Cambium ring
- A - Phellem, B - Phellogen, C - Medullary rays, D - Secondary phloem, E - Secondary xylem, F - Cambium ring
- A - Phellogen, B - Phellem, C - Medullary rays, D - Secondary xylem, E - Secondary phloem, F - Cambium ring
- A - Phellem, B - Phellogen, C - Cambium ring, D - Secondary xylem, E - Secondary phloem, F - Medullary rays

DPP No. : 36

CHAPTER - PLANT ANATOMY

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION E : Miscellaneous

1. **Assertion:** Euglena shows both holophytic and holozoic nutrition in nature.
Reason: Euglena has chl a, b as higher plants & heterotrophic nutrition as animals
(A) (B) (C) (D)
2. **Assertion:** In some plants, entire inflorescence gives rise to fruit.
Reason: Pineapple and Fig have composite fruit.
(A) (B) (C) (D)
3. **Assertion :** Diatoms are chief producers in oceans.
Reasons : Diatomous earth is used in filtration of oils and syrup.
(A) (B) (C) (D)
4. **Assertion :** Both vascular cambium and cork cambium take part in formation of annual rings in dicot stem.
Reason : Both of them are secondary in origin.
(A) (B) (C) (D)
5. **Assertion :** In Ascomycetes and Basidiomycetes well distinct dikaryotic phase present during sexual life
Reason : During sexual reproduction of Ascomycetes and Basidiomycetes, plasmogamy is immediately followed by karyogamy
(A) (B) (C) (D)
6. **Assertion :** F_1 particles are present in the inner mitochondrial membrane.
Reason : An electron gradient formed on the inner mitochondrial membrane, forms ATP.
(A) (B) (C) (D)
7. **Assertion :** The tendril of *Cucurbita* and tendril of Pea plants are homologous organs.
Reason : Structurally dissimilar and functionally same organs represents homologous organs.
(A) (B) (C) (D)
8. **Assertion :** Secondary xylem and secondary phloem both are redifferentiated tissue.
Reason : Both of the tissue once again lose the capacity to divide, but mature to perform specific functions.
(A) (B) (C) (D)
9. **Assertion :** Different plant groups shows different patterns of life cycles.
Reason : During life cycle there is alternation of generation between diploid gametophyte and haploid sporophyte.
(A) (B) (C) (D)
10. **Assertion :** *Cycas* shows both zoodiogamy and siphonogamy
Reason : *Cycas* is a living fossil.
(A) (B) (C) (D)

DPP No. : 37
CHAPTER - PLANT PHYSIOLOGY- II
PHOTOSYNTHESIS IN HIGHER PLANTS

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

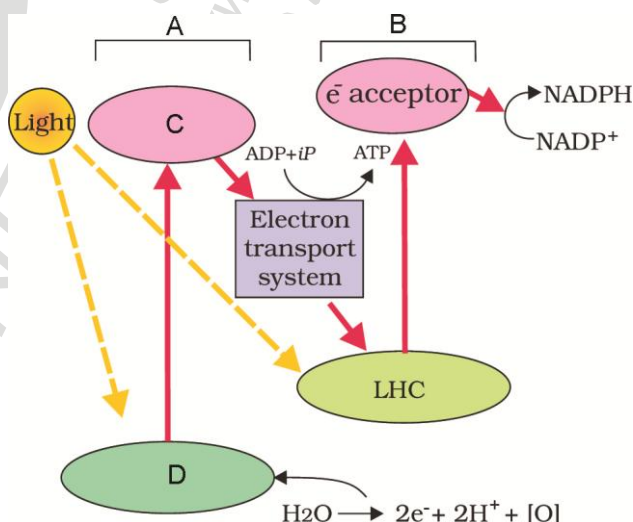
SECTION A : Introduction (Early experiments), site of photosynthesis and photosynthetic pigments

1. In bacterial photosynthesis, the hydrogen donor is
(A) H_2O (B) H_2SO_4
(C) NH_3 (D) H_2S

SECTION B : Light reaction and ETS

2. The reaction centre for PS-I and PS-II are
(A) P_{700} and P_{680} respectively (B) P_{680} and P_{700} respectively
(C) P_{580} and P_{700} respectively (D) P_{700} and P_{580} respectively
3. The first event in photosynthesis is
(A) Synthesis of ATP
(B) Photoexcitation of chlorophyll and ejection of electron
(C) Photolysis of water
(D) Evolution of oxygen
4. The source of O_2 liberated in photosynthesis in green plants is
(A) Photosynthetic enzyme (B) Carbohydrate present in leaf
(C) Water (D) Carbon dioxide
5. In cyclic photophosphorylation which one of the following is formed?
(A) ATP (B) NADP and ATP
(C) $\text{NADH}+\text{H}^+$ and O_2 (D) $\text{NADPH}+\text{H}^+$, ATP and O_2
6. Which of the following sequence correctly represents the flow of electrons during photosynthesis?
(A) $\text{NADPH} \rightarrow \text{Chlorophyll} \rightarrow \text{Calvin cycle}$
(B) $\text{H}_2\text{O} \rightarrow \text{NADPH} \rightarrow \text{Calvin cycle}$
(C) $\text{NADPH} \rightarrow \text{Electron transport chain} \rightarrow \text{O}_2$
(D) $\text{NADPH} \rightarrow \text{O}_2 \rightarrow \text{CO}_2$
7. Chemiosmotic theory of ATP synthesis in chloroplasts and mitochondria is based on
(A) Membrane potential (B) Accumulation of Na^+ ions
(C) Accumulation of K^+ ions (D) Proton gradient

8.



Which of the following is correctly labelled for the given figure?

- (A) A : PSII ; B : PSI ; C : e- acceptor; D: LHC
(B) A: LHC; B : e- acceptor; C : PSI; D : PSII
(C) A: PSI ; B : PSII ; C : e- acceptor; D : LHC
(D) A: e- acceptor; B : LHC; C : PSII; D : PSI

9. Wavelength of PAR is

- (A) 200 – 400 nm (B) 400 – 700 nm
(C) 700 – 900 nm (D) 100 – 200 nm

10. Consider the following four statements A, B, C, and D. Select the right option for two correct state ments

- A. Z scheme of light reaction takes place in presence of PSI only
B. Only PS I is functional in cyclic photophosphorylation
C. Cyclic photophosphorylation results into synthesis of ATP and NADPH₂
D. Stroma lamellae lack PSII as well as NADP
- (A) C and D (B) B and D (C) A and B (D) B and C

DPP No. : 38

**CHAPTER - PLANT PHYSIOLOGY- II
PHOTOSYNTHESIS IN HIGHER PLANTS**

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION C : Dark Reaction C_3 -cycle, C_4 cycle, Photorespiration, CAM - cycle and Factors.

- CO₂ acceptor in C_3 plants is
(A) Xylulose –5–phosphate (B) 3–phosphoglyceric acid
(C) Ribulose 1, 5 diphosphate (D) Phosphoenol pyruvic acid
- 3 PGA is first stable product of
(A) CAM cycle (B) C_3 cycle
(C) C_4 cycle (D) Krebs's cycle
- For fixing one molecule of CO₂ in Calvin cycle, are required
(A) 3 ATP + 1 NADPH₂ (B) 3 ATP + 2 NADPH₂
(C) 2 ATP + 3 NADPH₂ (D) 3 ATP + 3 NADPH₂
- The synthesis of one molecule of glucose during Calvin cycle requires
(A) 12 molecules of ATP and 18 molecules of NADPH₂
(B) 6 molecules of ATP and 12 molecules of NADPH₂
(C) 18 molecules of ATP and 12 molecules of NADPH₂
(D) 12 molecules each of ATP and NADPH₂
- No. of carboxylation in C_4 cycle is / are
(A) 1 (B) 2
(C) 5 (D) 3
- In leaves of C_4 plants malic acid synthesis during CO₂ fixation occurs in
(A) Bundle sheath (B) Mesophyll
(C) Epidermis (D) Guard cells
- Which one is a C_4 plant
(A) Potato (B) Mustard
(C) Onion (D) Wheat.
- Photorespiration is favoured by
(A) Low light and high O₂ (B) Low O₂ and high CO₂
(C) Low temperature and high O₂ (D) High O₂ and Low CO₂
- The following compounds are intermediates in the pathway of photorespiration.
a. Phosphoglycolate
b. Serine
c. Glyoxylate
d. Glycine
The correct sequence of their appearance in the pathway is
(A) b, a, c, d (B) a, c, d, b
(C) a, b, c, d (D) b, a, d, c
- Carbon assimilation occurs in bundle sheath cells of
(A) CAM plants (B) C_4 Plants
(C) C_3 plants (D) All the above.

DPP No. : 39

**CHAPTER - PLANT PHYSIOLOGY- II
RESPIRATION IN PLANTS**

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION A : Introduction, Glycolysis and Fermentation

1. Fermentation takes place in
(A) All micro organisms (B) All fungi
(C) All bacteria (D) Some fungi and some bacteria
2. The formation of $\text{NADH} + \text{H}^+$ occurs, during which of the following reaction of glycolysis –
(A) Glyceraldehyde 3 Phosphate $\rightarrow$ Dihydroxyacetone Phosphate.
(B) 3 PGAL $\rightarrow$ DPGA
(C) DPGA $\rightarrow$ 3 PGA
(D) 3 PGA $\rightarrow$ 2 PGA
3. Usain Bolt, an Olympic runner, at the end of a 100 meter sprint, will have more of the following in his muscles
(A) ATP (B) Pyruvic acid (C) Lactic acid (D) Carbon dioxide
4. Potato tubers stored in an atmosphere containing only 2-3% oxygen exhibit
(A) Anaerobic respiration (B) Fermentation
(C) Aerobic respiration (D) None of these
5. The potato growing in hilly areas is bigger in size due to
(A) High rate of photosynthesis at high altitude (B) Low rate of respiration at high altitude
(C) Due to formation of more fat (D) None of the above

SECTION B : Aerobic respiration – Link reaction and krebs cycle, Terminal oxidation, Pentose Phosphate Pathway (PPP) Respiratory balance sheet, Amphibolic pathway, Respiratory quotient

6. When one molecule of pyruvic acid is oxidized in CO_2 & H_2O then some substances are formed, which option has correct information.
(A) 2CO_2 , 1FADH.H^+ & 3NADH.H^+ form (B) 4NADH.H^+ , 3CO_2 , 2FADH.H^+ form
(C) 8NADH.H^+ , 2FADH.H^+ , 6CO_2 form (D) 1FADH.H^+ , 4NADH.H^+ , 3CO_2 form
7. 4C, 5C and 6C compounds are synthesized in kreb cycle. Select the correct option of these compounds
(A) Succinic acid, succinyl CO-A, Isocitric acid
(B) Malic acid, α -ketoglutaric acid, Fumaric acid
(C) α - ketoglutaric acid, oxalosuccinic acid, citric acid
(D) succinic acid, α - ketoglutaric acid, citric acid
8. Total how many protons are released on entry of NADH.H^+ in electron transport system?
(A) 2 Protons (B) 4 Protons (C) 6 Protons (D) 8 Protons
9. How many molecules of CO_2 are released during one kreb cycle?
(A) 4 (B) 2 (C) 6 (D) 3
10. If the level of solution rises in Ganong respirometer for a respiratory substrate then the RQ & substrate may be
(A) > 1 , organic acid (B) < 1 , Maturing fatty seeds
(C) < 1 , germinating Fatty seeds (D) > 1 Proteinaceous seeds

DPP No. : 40
CHAPTER - PLANT PHYSIOLOGY- II
RESPIRATION IN PLANTS

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION B : Aerobic respiration – Link reaction and krebs cycle, Terminal oxidation, Pentose Phosphate Pathway (PPP) Respiratory balance sheet, Amphibolic pathway, Respiratory quotient

- Oxidative phosphorylation takes place in
 (A) Cytosol (B) Inner membrane of mitochondria
 (C) Matrix of mitochondria (D) Oxysome
- An enzymes of TCA cycle are located in the mitochondrial matrix except one which is located in inner mitochondrial membrane in eukaryotes and in cytosol in prokaryotes. This enzyme is
 (A) Succinate dehydrogenase (B) Lactate dehydrogenase
 (C) Isocitrate dehydrogenase (D) Malate dehydrogenase
- Which transfer electrons in E.T.S (electron transport system)?
 (A) Phytochrome (B) F_1 particles
 (C) Fe – S (D) None of these
- Match the number of carbon atoms given in list –I with that of the compounds given in List–II and select the correct option.

S. No.	List I	S. No.	List II
A	4 C Compound	1	Acetyl CoA
B	2 C Compound	2	Pyruvate
C	5 C Compound	3	Citric acid
D	3 C Compound	4	α – keto glutaric acid
		5	malic acid

- (A) A $\rightarrow$ 2, B $\rightarrow$ 5, C $\rightarrow$ 3, D $\rightarrow$ 1 (B) A $\rightarrow$ 5, B $\rightarrow$ 1, C $\rightarrow$ 4, D $\rightarrow$ 2
 (C) A $\rightarrow$ 3, B $\rightarrow$ 1, C $\rightarrow$ 4, D $\rightarrow$ 2 (D) A $\rightarrow$ 5, B $\rightarrow$ 3, C $\rightarrow$ 1, D $\rightarrow$ 2
- Which of the following statements is / are not true?
 A. One ATP molecule yields 32 kJ of energy
 B. Pentose Phosphate Pathway was discovered by Dickens
 C. When tripalmitin is used as substrate, the R. Q. is 0.7
 D. Energy released by one molecule of glucose on complete oxidation corresponds to 1292 kJ
 (A) A, B and D only (B) C and D only (C) A and D only (D) A, C and D only
 - Which knowledge is obtained by knowing the value of R.Q.?
 (A) Type of substrate (B) Number of ATP produced
 (C) Type of intermediate products formed (D) None of the above
 - If the temperature is increased (above 35 $^{\circ}$ C).
 (A) Rate of decline of respiration will be earlier than decline of photosynthesis
 (B) Rate of decline of photosynthesis will be earlier than decline of respiration
 (C) Both decline simultaneously
 (D) Both do not show any fixed pattern
 - Energy liberated during the germination of seed can be detected in the form of
 (A) ATP (B) O_2 (C) Heat (D) CO_2
 - What is the value of RQ if 192 gms of O_2 is consumed and 264 gms of CO_2 is produced?
 (A) Less than one (B) More than one (C) Zero (D) Unity
 - The number of glucose molecules required to produce 38 ATP molecules under anaerobic conditions by a yeast cells is
 (A) 2 (B) 4 (C) 19 (D) 25

DPP No. : 41
CHAPTER - PLANT PHYSIOLOGY- II
RESPIRATION IN PLANTS

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION B : Aerobic respiration – Link reaction and krebs cycle, Terminal oxidation, Pentose Phosphate Pathway (PPP) Respiratory balance sheet, Amphibolic pathway, Respiratory quotient

- The inhibitor of oxidative phosphorylation is
(A) Azide (B) Cyanide (C) 2, 4-Dinitrophenol (D) None of these
- A normal 72 kg adult man requires about 2800 kcal. of energy per day, how many ATP molecules are required to produce such amount of energy
(A) 380 (B) 280 (C) 384 (D) 584
- If the volume of CO₂ liberated during respiration is more than the volume of O₂ used, the respiratory substance will be.
(A) Fats (B) Organic acids (C) Proteins (D) Carbohydrates
- R. Q. is 4 when respiratory substrate is
(A) Stearic acid (B) Oxalic acid (C) Lactic acid (D) PA
- Which of the following is used in conversion of pyruvic acid to acetyl Co-A
(A) Oxidative phosphorylation (B) Oxidative dehydrogenation
(C) Oxidative decarboxylation (D) Oxidative dehydration
- Injury leads to.....in respiration.
(A) Increase (B) Decrease (C) Remains constant (D) Increase or decrease
- R.Q. of Opuntia is
(A) 1 (B) Less than 1 (C) More than 1 (D) 0
- In prokaryotes, the mitochondria are absent even then Krebs cycle takes place. What is the site of krebs cycle in bacteria
(A) Ribosomes (B) Nucleoid (C) Cytoplasm (D) Mesosomes
- Terminal electron acceptor in ETS is
(A) Cytochrome a - a₃ (B) O₂ (C) Cytochrome (D) Ubiquinone
- "Mitchell's chemiosmotic theory" belongs to
(A) Krebs cycle (B) Oxidative phosphorylation
(C) Glycolysis (D) None of the above

DPP No. : 42
CHAPTER - PLANT PHYSIOLOGY- II
PLANT GROWTH AND DEVELOPMENT

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION A : Growth and Development

1. Arithmetic growth can be mathematically expressed as

(A) $L_t = L_0 + rt$ (B) $W_t = W_0 e^{rt}$ (C) $\frac{dN}{dt} = rN$ (D) $\frac{dN}{dt} = rN \left[\frac{K-N}{K} \right]$

SECTION B : Introduction , Discovery of PGR, Auxin, Gibberellins and Cytokinins

2. The primary precursor of IAA is
(A) Phenyl alanine (B) Tyrosine
(C) Tryptophan (D) Leucine
3. Which of the following is 2, 4-D
(A) 2, 4 dichloroacetic acid (B) 2, 4 dichloroacetaldehyde
(C) 2, 4 dichloropropane (D) 2, 4 dichlorophenoxy acetic acid
4. The substances which have proved very effective to induce rooting from cut end of the stem is
(A) Phenyl acetic acid (B) α -naphthalene acetic acid
(C) Indole acetic acid (D) Indole butyric acid
5. Pruning makes the hedge plant dense because
(A) Injury induces dense growth
(B) Apical dominance is removed
(C) Root sprouts additional branches
(D) Pruning removes shade and allows germination of new seedlings to impart a dense growth
6. α -amylase synthesis is induced by
(A) IAA (B) G.A. (C) Cytokinin (D) IAA
7. The hormone which was discovered through 'foolish seedling' disease of rice is
(A) Indole-3-acetic acid (B) Ethylene
(C) Gibberellic acid (D) Kinetin
8. Genetic dwarfness can be overcome by treating with
(A) Cytokinin (B) Auxins (C) Gibberellins (D) Ethylene
9. A plant hormone used for inducing morphogenesis in plant tissue culture is
(A) Absciscic acid (B) Gibberellins (C) Cytokinins (D) Ethylene
10. Which of the following causes delaying of senescence in leaves
(A) Cytokinins (B) Auxins (C) Gibberellins (D) Ascorbic acid

DPP No. : 43
CHAPTER - PLANT PHYSIOLOGY- II
PLANT GROWTH AND DEVELOPMENT

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION - B : Introduction , Discovery of PGR, Auxin, Gibberellins and Cytokinins

- Zeatin has been obtained from
(A) Wheat (B) Rice (C) Maize (D) Oat
- Flowering in pine apple is initiated by
(A) NAA (B) Zeatin (C) ABA (D) Gibberellin
- Which of the following is function of cytokinin?
(A) Bolting (B) apical dominance (C) Senescence (D) Cell division
- Xylem differentiation is function of
(A) GA (B) Cytokinin (C) Auxin (D) Ethylene
- Which of the following causes initiation of roots in a callus in tissue culture ?
(A) A high auxin : cytokinin ratio
(B) A high cytokinin : auxin ratio
(C) Equal concentration of auxin and cytokinin
(D) Neither auxin nor cytokinin
- In which of the following respect the plant hormones differ from enzymes
(A) Required in less quantity (B) They are expended in the process
(C) They release some energy (D) None of the above

SECTION C : Ethylene

- Sprouting of potato tuber is due to
(A) Absciscic acid (B) Gibberellins (C) Cytokinins (D) Ethylene
- Which of the following initiates the development of female flowers in cucumbers
(A) Auxin (B) Cytokinin (C) Ethephon (D) Gibberellin
- Germination of peanut seed is initiated by
(A) GA (B) Cytokinin (C) IBA (D) Ethylene
- The ripening of fruits can be hastened by treatment with
(A) Gibberellic acid (B) Indole acetic acid (C) Florigen (D) Ethylene gas

DPP No. : 44
CHAPTER - PLANT PHYSIOLOGY- II
PLANT GROWTH AND DEVELOPMENT

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION - D : ABA

- Which of the following is not a effect of ABA.
(A) Initiation of dormancy in seeds (B) Formation of abscission layer in the leaves
(C) Closing of stomata (D) None of the above
- Absciscic acid treatment results in
(A) Leaf expansion (B) Stem elongation
(C) Stomatal closure (D) Root elongation
- Leaf abscission, fruit fall, bud dormancy occurs by which phytohormone
(A) Auxin (B) Cytokinin
(C) Gibberellins (D) Absciscic acid

SECTION - E : Photoperiodism and Vernalisation

- In which of the following biennial plant, vernalization is useful.
(A) Cabbage (B) Sugarbeet
(C) Carrot (D) All of the above
- Assertion** : In long day plant light is required more than critical photoperiod for flowering.
Reason : Sugarcane is long day plant
(A) (B) (C) (D)
- Photoperiodism is associated with the formation of
(A) Chlorophyll (B) Florigen (C) Auxin (D) Gibberellin
- Which of the following is a day neutral plant
(A) Maize (B) Paddy (C) Rye (D) Wheat
- Which of the following is a long day plant
(A) Xanthium (B) *Glycine max* (C) *Mirabilis jalapa* (D) *Spinacia oleracea*
- The low temperature treatment that reduces the period between sowing and flowering is called
(A) Chemotaxis (B) Vernalization (C) Freezing injury (D) None of the above

SECTION - F : Miscellaneous

- Match the **Column-I** & **Column-II** & pick up the correct combination.

	Column I		Column II
(a)	Replacement of cold treatment	(i)	Cytokinin
(b)	Climacteric fruit	(ii)	Auxin
(c)	Richmond & Lang Effect	(iii)	Ethylene
(d)	Human urine	(iv)	Gibberellin
		(v)	ABA

- (A) a → v, b → iii c → ii d → i
(C) a → ii, b → iv, c → iii, d → v

- (B) a → iv, b → iii, c → i, d → ii
(D) a → iv, b → iii, c → v, d → ii

DPP No. : 45
CHAPTER - PLANT PHYSIOLOGY-I
TRANSPORT IN PLANTS

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION A : Diffusion, Facilitated diffusion, osmosis, Active transport, DPD, Water potential, plasmolysis, imbibition

- When a grape is placed in concentrated sugar solution, then it will show
(A) Endosmosis (B) Exosmosis (C) Imbibition (D) None of these
- Dry wooden stakes, if driven into a small crack in a rock and then soaked, can develop enough pressure to split the rock. Such pressure is build up through the phenomenon of
(A) Imbibition (B) Deplasmolysis (C) Turgor pressure (D) Osmotic pressure
- The actual pressure with which water enters into cell is called
(A) DPD (B) OP (C) WP (D) Diffusion
- Select the incorrect statement.
(A) Pressure potential is negative in a plasmolyzed cell
(B) Solute potential is always negative
(C) Water potential equals solute potential in a fully turgid cell
(D) Water potential is chemical potential of water
- Which is not common in both facilitated transport and active transport?
(A) uphill transport (B) Highly selective
(C) Transport saturates (D) Requirement of special membrane proteins
- When a flaccid cell (eg. grapes) is placed in water, its
(A) OP decreases (B) TP increases (C) DPD decreases (D) All of the above

SECTION B : Transpiration, Guttation, Bleeding

- The metal ion involved in the stomatal regulation or Stomata will open, if there is accumulation of the following element in the guard cells
(A) Iron (B) Magnesium (C) Zinc (D) Potassium
- To cut stem, xylem sap come out due to
(A) Transpiration (B) Guttation (C) Root pressure (D) None of the above
- Excessive loss of water causes wilting of leaves, it can be prevented by
(A) Keeping the plant in bright light (B) Spraying the plant with alcohol
(C) Applying vaseline on the leaf surface (D) Adding high amounts of fertilizers to the soil
- Guttation is mainly due to
(A) Imbibition (B) Osmosis (C) High root pressure (D) Transpiration.

DPP No. : 46
CHAPTER - PLANT PHYSIOLOGY-I
TRANSPORT IN PLANTS

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION B : Transpiration, Guttation, Bleeding

- Assertion :** Light is one of the important factor in transpiration
Reason : It induces stomatal opening and closing therefore, transpiration increases in light and decreases in dark.
(A) (B) (C) (D)
- Assertion :** Absciscic acid Causes stomatal closure
Reason : ABA increases availability of H^+ inside the guard cell cytoplasm.
(A) (B) (C) (D)
- Guttation is the process of elimination of water from plants through or Guttation occurs from the pores of leaves through which water comes out in the form of droplets are called or A specialized multicellular structure in leaves which excretes water droplets is called as
(A) Stomata (B) Hydathodes (C) Lenticels (D) Wounds
- Diagram

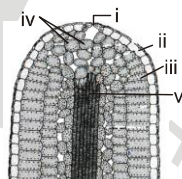


Figure of hydathode has a labelling what is correct

- i → Guard ii → Epithem iii → Mesophyll iv → Epithem v → vasculature cell
- i → Guard ii → epidermis iii → Mesophyll iv → Epithem v → vasculature cell
- i → water pore ii → epidermis iii → Mesophyll iv → epithem v → vasculature cell
- i → ostiole ii → epidermis iii → mesophyll iv → epithem v → vasculature

SECTION C : Ascent of sap, Mineral salt absorption, Translocation of organic solutes.

- Passive absorption of water by the root system is the result of
(A) Forces created in the cells of the root
(B) Increased respiratory activity in root cells
(C) Tension on the cell sap due to transpiration
(D) Osmotic Pressure in the shoot system
-(a)..... of endodermal cells are.....(b) where a plant adusts the quantity and types of solutes that reach the xylem. Here a & b.
(A) a = Lipoprotein layers, b = inhibitory points
(B) a = Protein layers, b = accelerating points
(C) a = Aquaporins, b = deacceleration points
(D) a = Transport proteins, b = control points
-(a)does not account for the majority of water transport, most plants meet their need by..... (b)....
(A) a → Root pressure, b → Transpiration pull
(B) a → Active transport, b → Root pressure
(C) a → Transpiration pull, b → Passive transport
(D) a → Osmosis, b → Active transport

SECTION D : Miscellaneous

- Select the incorrect option.
(A) Sieve tube – Enucleate, living, Translocation of solute is bidirectional, presence of cytoplasmic strands

- (B) vessels of xylems – Translocation of minerals & water is unidirectional, Dead, anucleated, thickening of lignin present.
- (C) Endodermis of root – Casparian strips on Radial & tangential walls, movement of water by symplast only, presence of passage cells and suberin.
- (D) Guard cells of leaf epidermis – Mostly kidney shaped, presence of chloroplast in all plant's guard cells, Turgor changes causes stomata opening, dumbbelled shaped in leaves of grasses.

9. Match the **column I** with appropriate items of **column II**.

Column I		Column II	
a.	Stomata	i	Ascent of sap
b.	Hydathode	ii	Absorption of water
c.	Root hair	iii	Transpiration
d.	Xylem vessel	iv	Guttation
e.	Source-sink relationship	v	Variable

(A) a → iii b → iv c → v d → i e → ii

(C) a → iii b → v c → iv d → i e → ii

(B) a → i b → ii c → iii d → iv e → v

(D) a → iii b → iv c → ii d → i e → v

10. Which pair is incorrect?

- (A) Cytoplasmic streaming in Hydrilla – Symplastic movement
- (B) Absorption of water & minerals in Pinus – Mycorrhiza
- (C) For opening of stomata – Longitudinally oriented cellular microfibrils of guard cells
- (D) Water channels – made up of eight aquaporins

DPP No. : 47
CHAPTER - PLANT PHYSIOLOGY-I
MINERAL NUTRITION

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION A : Methods to study mineral requirements of plants, Essential mineral elements, Role of macro and micronutrients, deficiency symptoms of essential elements, Toxicity of micronutrients

- Hydroponics is a method of
(A) Study of the development of soil (B) Study of soil protection
(C) Growth of plants in liquid culture medium (D) Growing plants in laboratory
- Which of the following element is not essential for plants
(A) Iron (B) Zinc (C) Potassium (D) Iodine
- Who gave the criteria of essentiality?
(A) R. Hill (B) F.F Blackman (C) M. P. Kaushik (D) D.L. Arnon
- Plants requiring two metallic compounds (minerals) for chlorophyll synthesis, are
(A) Fe and Ca (B) Fe and Mg (C) Cu and Ca (D) Ca and K
- Which of the following amino acids contain sulphur
(A) Asparagine (B) Serine
(C) Proline (D) Methionine
- The element that is required for pollen germination is
(A) Boron (B) Calcium
(C) Chlorine (D) Potassium.
- Excess of Manganese causes deficiency of
(A) Fe, Zn, Cu (B) Mg, Fe, Mo
(C) Ca, Mg, Zn (D) Fe, Mg, Ca
- Frame work elements in plants are
(A) Magnesium, copper and iron (B) Copper, carbon and oxygen
(C) Manganese, calcium and nitrogen (D) Carbon, hydrogen and oxygen
- Most common free ion in a cell is
(A) P (B) K (C) Fe (D) B
- If chlorophyll is burnt, what element will be left
(A) Fe (B) Na (C) Mg (D) Mn

DPP No. : 48
CHAPTER - PLANT PHYSIOLOGY-I
MINERAL NUTRITION

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION A : Methods to study mineral requirements of plants, Essential mineral elements, Role of macro and micronutrients, deficiency symptoms of essential elements, Toxicity of micronutrients

- The most abundant minerals of a living cell are
(A) C, H, O, N, Fe (B) C, H, O, K, Na (C) C, H, Fe, Mg, Ca (D) C, H, O, N, P
- Which of the following element is very essential for uptake and utilization of Ca^{2+} and membrane function.
(A) Phosphorus (B) Copper (C) Manganese (D) Boron
- Which one of the following elements in plants is not remobilised?
(A) Phosphorus (B) Calcium (C) Potassium (D) Nitrogen
- Which of the following is not caused by deficiency of mineral nutrition
(A) Necrosis (B) Etiolation (C) Chlorosis (D) Shortening of internodes
- Plants require sulphur for
(A) ATP synthesis (B) Protein synthesis
(C) Glucose synthesis (D) DNA replication.
- Mineral present in cytochrome is
(A) Fe (B) Cu (C) Mg (D) Mn.
- Component of nitrogenase and nitrate reductase is
(A) N (B) Mo (C) Co (D) No specific component.

SECTION B : Nitrogen Metabolism

- Which of the following one is free living nitrogen fixing aerobic bacteria
(A) Clostridium (B) Rhizobium
(C) Azotobacter (D) Rhodospirillum
- $\text{N}_2 + 8\text{e}^- + 8\text{H}^+ + 16\text{ATP} \longrightarrow 2\text{NH}_3 + \text{H}_2 + 16\text{ADP} + 16\text{iP}$ The above equation refers to
(A) Ammonification (B) Nitrification
(C) Nitrogen fixation (D) Reductive amination
- Which hormone help in nodule formation
(A) Auxin (B) Gibberellin
(C) Cytokinin (D) (A) & (C) both

DPP No. : 49
CHAPTER - PLANT PHYSIOLOGY-I
MINERAL NUTRITION

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

SECTION B : Nitrogen Metabolism

- Deficiency of which element causes deficiency of nitrogen
(A) Mo (B) K (C) Mn (D) S
- Bacteria that convert ammonia to nitrite belong to
(A) Nitrobacter (B) Nitrosomonas (C) Pseudomonas (D) Mycobacterium.
- Leghaemoglobin in root nodules of legumes
(A) Protects nitrogenase (B) Converts N_2 to NH_3
(C) Oxidises NO_2 to NO_3 (D) helps in development of infection threads

SECTION C : Miscellaneous

- With reference to soil critical element means
(A) Nitrogen and phosphorus (B) Nitrogen and potassium
(C) Potassium and chlorine (D) Nitrogen, phosphorus and potassium
- Read the following statements.
a. The deficiency of molybdenum causes whip tail disease of crucifers.
b. Mn^{++} is required for the synthesis of Auxin
c. Chlorosis in leaves occurs due to deficiency of Ca, Mg, Cu, K
d. Transport of sugar is regulated by boron.
pick up the incorrect statements
(A) a & b (B) b & d (C) c & d (D) b & c
- Deficiency of iron causes
(A) Bending of leaf tip
(B) Interveinal chlorosis first on young leaves
(C) Decrease of protein synthesis
(D) Reduced leaves and stunted growth
- Read the following statements
a. Dieback in plants is due to deficiency of copper
b. Reclamation disease occurs due to deficiency of zinc.
c. The deficiency of iron causes interveinal chlorosis in young leaves.
d. Ca^{2+} , Mg^{2+} , and K^+ are balancing elements that minimize the toxic effect of heavy elements
Pick up the correct statements.
(A) a, b, c, d (B) b, c, d (C) a, c, d (D) a, b, d
- The plant ash is an indication of
(A) Mineral salts absorbed by the plants (B) Organic matter of the plant
(C) Organic mineral salts and organic matter (D) None of the above
- Heterocysts are present in
(A) Riccia (B) Ulothrix (C) Albugo (D) Nostoc
- Azolla has a symbiotic relationship with
(A) Chlorella (B) Anabaena (C) Nostoc (D) Tolypothrix.

DPP No. : 50
CHAPTER- LIVING WORLD

Total Marks : 80
Single choice Objective

Max. Time : 40 min.
(D marks 2 min.)

Section A : What is Living?

1. True statement regarding living organisms are that
 - i. Share common genetic material but to varying degree.
 - ii. Respond against stimulus
 - iii. Self replicating, evolving and self regulating
 - iv. Power of mutation and evolution

(A) i and iv (B) i, ii, and iii (C) i, ii, iii and iv (D) ii, iii
2. Although reproduction is one of the basic criterion characterize a living organism but exceptions come from

(A) some hybrids (mule, worker bee, pony) (B) viruses
(C) some sexually reproducing organisms (D) all of these
3. Non exceptional characteristic feature of living beings is

(A) metabolism (B) reproduction (C) growth (D) all of these
4. Living property of living organisms is estimated (determined) at the level of

(A) cell (B) tissue (C) organ (D) organ system
5. One of the most defining feature of life is the presence of

(A) cellular organization (B) molecular organization
(C) chemical organization (D) atomic organization
6. Photoperiod affects reproduction in seasonal breeders, both in plants and animals

(A) Above statement is cent percent true.
(B) Above statement is partially false because photoperiod does not affect animal reproduction.
(C) Above statement is partially true because photoperiod affects flowering and reproduction in plants only. The phenomenon called photoperiodism was discovered by **Garner** and **Allard**
(D) Above statement is cent percent false.
7. Read the following statements
 - i. All the organisms are aware of their surrounding (Irritability)
 - ii. All organisms, from prokaryotes to the most complex eukaryotes, can sense and respond to environmental cues
 - iii. In plants, growth by cell division occurs continuously throughout their life span but in animals, this growth is seen only up to a certain stage

The incorrect statement is/are

(A) i, ii, iii (B) Only iii (C) ii and iii (D) None of the above
8. Growth can not be taken as a defining property of living organisms because

(A) It occurs both in living and non living
(B) All living organisms do not exhibit growth
(C) In living organisms, growth occurs from inside.
(D) All
9. Growth, in unicellular organisms, is generally estimated on the basis of

(A) Cell division (B) Increasing cell size
(C) Increasing cell mass (D) Changing cell weight
10. Here are given few statements regarding living forms:
 - i. In majority of higher animals and plants, growth and reproduction are mutually exclusive events
 - ii. In unicellular organisms (both prokaryotes and eukaryotes) growth is normally defined on the basis of reproduction.
 - iii. Metabolism is a defining feature of all living organisms without exception.

True statements are

(A) i, ii, iii (B) ii, iii (C) i, ii (D) i, iii

DPP No. : 51
CHAPTER- LIVING WORLD

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

Section A : What is Living?

- Which one of the following is categorized under living form on the basis of one aspect but does not exhibit metabolism
(A) Mycoplasma (B) Slime mould (C) Methanobacteria (D) TMV
- You have observed that organisms die. Which of the following statements appear to you as scientifically sound ?
(A) An organism dies because all its cells die (B) Because organisms are born again
(C) Death is a natural part of life cycle (D) None of these
- Amoeba* and Yeast reproduce asexually by fission and budding respectively, because they are:
(A) Microscopic organisms (B) Heterotrophic organisms
(C) Unicellular organisms (D) Uninucleate organisms

Section B : Biodiversity and taxonomy

- The science which deals with classification, identification and naming of organisms is known as
(A) Physiology (B) Ecology (C) Systematics (D) Biology
- The father of taxonomy is
(A) Charles Darwin (B) John Ray (C) Julian Huxley (D) Carolus Linnaeus
- What is biodiversity?
(A) Total species present on earth
(B) Total known and described species present on earth
(C) Total species present on earth excluding viruses
(D) Total known and described species present on earth excluding viruses
- What is true about biodiversity?
(A) It is total known and described species present on earth
(B) It ranges between 1.7 – 1.8 millions
(C) Biodiversity is continuously increasing
(D) All of the above
- The number and types of organisms present on earth
(A) Refer to biodiversity (B) Refer to variation
(C) Refer to evolution (D) Refer to progressive evolution
- First act in taxonomy is
(A) Description (B) Identification (C) Naming (D) Classification
- Taxonomy based on determination of genetic relationships is
(A) Cytotaxonomy (B) Numerical taxonomy
(C) Biochemical taxonomy (D) Experimental taxonomy

DPP No. : 52
CHAPTER- LIVING WORLD

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

Section C : Nomenclature

- ICBN stand for
(A) International classification of biological nomenclature
(B) International class of biological nomenclature
(C) International code of botanical nomenclature
(D) International classification of biological naming
- Which one of the following organisms have same specific epithet, according to binomial nomenclature ?
(A) Mango and cow (B) Cow and Crow (C) Mango and Potato (D) None
- There is need to standardise the naming of living organisms such that a particular organism is known by same name all over the world. This process is called
(A) Nomenclature (B) Identification (C) Classification (D) Binomial nomenclature
- Binomial nomenclature seems to be difficult because a scientific name is derived from
(A) English (B) Sanskrit (C) Latin (D) French

Section D : Taxonomic categories

- Taxon is
(A) Any type of taxonomic grouping (B) A rank in hierarchial classification
(C) A constituent of taxonomic hierarchy (D) Category
- Species are considered
(A) A basic unit of classification
(B) The lowest unit of systematics
(C) Artificial concept of human mind which cannot be defined in absolute terms
(D) Real unit of classification devised by taxonomists
- Who was the first to describe that species is the unit of classification?
(A) John Ray (B) Huxley (C) Linnaeus (D) Candolle
- What is true for muscidae?
(A) It is a family (B) It is an order of Banana
(C) It is Genus of Housefly (D) It is second smallest Taxonomic category
- A group of plants or animals with similar traits of any rank is
(A) Species (B) Genus (C) Order (D) Taxon
- Related genera belong to same
(A) Variety (B) Family (C) Species (D) None of these

DPP No. : 53
CHAPTER- LIVING WORLD

Total Marks : 40
Single choice Objective

Max. Time : 10 min.
(D marks 1 min.)

Section E : Biological classification

- Linnaeus system of classification was based on
(A) Morphology (B) Ecology (C) Embryology (D) Cytology
- The main criteria of five Kingdom classification of whittaker is
(A) Mode of reproduction (B) Mode of nutrition
(C) No. of Flagella (D) Reserve food material
- In the classification of plants, the term cladistics refers to the
(A) Phylogenetic classification (B) Sexual classification
(C) Artificial classification (D) Natural classification
- The scientist who created the group protista for both unicellular plants and animals is
(A) Haeckel (B) Pasteur
(C) Lister (D) Koch
- In 5-kingdom classification, the kingdom that includes the blue-green algae, nitrogen fixing bacteria and methanogenic archaeobacteria, is.
(A) Plantae (B) Fungi
(C) Protista (D) Monera
- In Whittaker's five kingdom system of classification, eukaryotes are placed in
(A) three kingdoms (B) two kingdoms
(C) four kingdoms (D) all the five kingdoms

Section F : Taxonomical aids

- Flora, manuals and monographs are included in taxonomical aids because
(A) They help in correct identification
(B) They provide the index of the plant species found in particular area
(C) They are used in the study of anatomy
(D) Both (A) and (B)
- Science dealing with study of life at low temperature is
(A) Cryobiology (B) Craniology
(C) Kalology (D) Carcinology
- The term 'Biology' for the study of living organisms was coined by
(A) Lamarck and Triviramus (B) Huxley
(C) Purkinje and Von Mohl (D) Aristotle
- Which of the following is a store house of collected plant specimens that are dried, pressed and preserved on sheets?
(A) Arboretum (B) Museum
(C) Botanical Garden (D) Herbarium

ANSWER KEY

BOTANY

DPP No. : 01

- | | | | | | | |
|--------|--------|---------|--------|--------|--------|--------|
| 1. (D) | 2. (B) | 3. (A) | 4. (D) | 5. (C) | 6. (D) | 7. (D) |
| 8. (C) | 9. (B) | 10. (B) | | | | |

DPP No. : 02

- | | | | | | | |
|--------|--------|---------|--------|--------|--------|--------|
| 1. (B) | 2. (B) | 3. (D) | 4. (B) | 5. (B) | 6. (A) | 7. (D) |
| 8. (C) | 9. (D) | 10. (D) | | | | |

DPP No. : 03

- | | | | | | | |
|--------|--------|---------|--------|--------|--------|--------|
| 1. (B) | 2. (C) | 3. (B) | 4. (C) | 5. (D) | 6. (A) | 7. (B) |
| 8. (D) | 9. (B) | 10. (C) | | | | |

DPP No. : 04

- | | | | | | | |
|--------|--------|---------|--------|--------|--------|--------|
| 1. (C) | 2. (C) | 3. (C) | 4. (C) | 5. (B) | 6. (D) | 7. (B) |
| 8. (A) | 9. (B) | 10. (A) | | | | |

DPP No. : 05

- | | | | | | | |
|--------|--------|---------|--------|--------|--------|--------|
| 1. (D) | 2. (A) | 3. (C) | 4. (D) | 5. (C) | 6. (C) | 7. (D) |
| 8. (D) | 9. (D) | 10. (D) | | | | |

DPP No. : 06

- | | | | | | | |
|--------|--------|---------|--------|--------|--------|--------|
| 1. (A) | 2. (A) | 3. (A) | 4. (A) | 5. (A) | 6. (B) | 7. (D) |
| 8. (C) | 9. (C) | 10. (C) | | | | |

DPP No. : 07

- | | | | | | | |
|--------|--------|---------|--------|--------|--------|--------|
| 1. (C) | 2. (C) | 3. (C) | 4. (C) | 5. (D) | 6. (C) | 7. (A) |
| 8. (B) | 9. (A) | 10. (A) | | | | |

DPP No. : 08

- | | | | | | | |
|--------|--------|---------|--------|--------|--------|--------|
| 1. (D) | 2. (C) | 3. (B) | 4. (D) | 5. (B) | 6. (D) | 7. (C) |
| 8. (B) | 9. (D) | 10. (A) | | | | |

DPP No. : 09

- | | | | | | | |
|--------|--------|---------|--------|--------|--------|--------|
| 1. (B) | 2. (C) | 3. (D) | 4. (C) | 5. (A) | 6. (D) | 7. (A) |
| 8. (D) | 9. (B) | 10. (D) | | | | |

DPP No. : 10

- | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|
| 1. (C) | 2. (C) | 3. (B) | 4. (D) | 5. (B) | 6. (B) | 7. (C) |
|--------|--------|--------|--------|--------|--------|--------|

8. (D) 9. (D) 10. (C)

DPP No. : 11

1. (C) 2. (C) 3. (B) 4. (C) 5. (B) 6. (A) 7. (B)
8. (D) 9. (A) 10. (D)

DPP No. : 12

1. (B) 2. (C) 3. (D) 4. (B) 5. (B) 6. (C) 7. (C)
8. (C) 9. (D) 10. (A)

DPP No. : 13

1. (C) 2. (A) 3. (D) 4. (C) 5. (C) 6. (B) 7. (C)
8. (C) 9. (A) 10. (A)

DPP No. : 14

1. (A) 2. (D) 3. (D) 4. (B) 5. (B) 6. (C) 7. (D)
8. (D) 9. (D) 10. (D)

DPP No. : 15

1. (D) 2. (A) 3. (D) 4. (D) 5. (A) 6. (D) 7. (A)
8. (C) 9. (C) 10. (A)

DPP No. : 16

1. (A) 2. (B) 3. (A) 4. (D) 5. (A) 6. (C) 7. (D)
8. (B) 9. (D) 10. (C)

DPP No. : 17

1. (A) 2. (B) 3. (D) 4. (B) 5. (D) 6. (D) 7. (B)
8. (C) 9. (C) 10. (D)

DPP No. : 18

1. (C) 2. (B) 3. (C) 4. (C) 5. (D) 6. (B) 7. (A)
8. (D) 9. (C) 10. (A)

DPP No. : 19

1. (C) 2. (D) 3. (C) 4. (C) 5. (A) 6. (D) 7. (C)
8. (D) 9. (D) 10. (C)

DPP No. : 20

1. (B) 2. (C) 3. (A) 4. (D) 5. (B) 6. (D) 7. (A)
8. (B) 9. (D) 10. (B)

DPP No. : 21

1. (B) 2. (C) 3. (D) 4. (D) 5. (D) 6. (C) 7. (B)
8. (A) 9. (D) 10. (B)

DPP No. : 22

1. (D) 2. (C) 3. (A) 4. (B) 5. (B) 6. (D) 7. (A)
8. (C) 9. (C) 10. (A)

DPP No. : 23

1. (D) 2. (A) 3. (D) 4. (A) 5. (D) 6. (B) 7. (B)
8. (C) 9. (A) 10. (B)

DPP No. : 24

1. (B) 2. (B) 3. (C) 4. (B) 5. (D) 6. (B) 7. (A)
8. (A) 9. (D) 10. (B)

DPP No. : 25

1. (D) 2. (A) 3. (B) 4. (B) 5. (D) 6. (B) 7. (A)
8. (B) 9. (C) 10. (A)

DPP No. : 26

1. (A) 2. (D) 3. (A) 4. (B) 5. (C) 6. (D) 7. (D)
8. (B) 9. (B) 10. (B)

DPP No. : 27

1. (D) 2. (C) 3. (B) 4. (D) 5. (B) 6. (B) 7. (D)
8. (C) 9. (D) 10. (A)

DPP No. : 28

1. (A) 2. (A) 3. (A) 4. (C) 5. (D) 6. (B) 7. (A)
8. (C) 9. (D) 10. (B)

DPP No. : 29

1. (A) 2. (A) 3. (D) 4. (D) 5. (B) 6. (B) 7. (C)
8. (D) 9. (A) 10. (D)

DPP No. : 30

1. (A) 2. (D) 3. (D) 4. (B) 5. (D) 6. (B) 7. (C)
8. (B) 9. (B) 10. (A)

DPP No. : 31

1. (C) 2. (A) 3. (D) 4. (D) 5. (B) 6. (D) 7. (B)
8. (B) 9. (A) 10. (B)

DPP No. : 32

1. (D) 2. (D) 3. (B) 4. (B) 5. (D) 6. (B) 7. (D)
8. (D) 9. (C) 10. (A)

DPP No. : 33

1. (C) 2. (D) 3. (D) 4. (C) 5. (C) 6. (D) 7. (B)
8. (A) 9. (D) 10. (D)

DPP No. : 34

1. (C) 2. (D) 3. (C) 4. (A) 5. (D) 6. (C) 7. (C)
8. (C) 9. (C) 10. (A)

DPP No. : 35

1. (B) 2. (C) 3. (A) 4. (D) 5. (D) 6. (C) 7. (B)
8. (B) 9. (B) 10. (A)

DPP No. : 36

1. (A) 2. (A) 3. (B) 4. (D) 5. (C) 6. (C) 7. (D)
8. (A) 9. (C) 10. (B)

DPP No. : 37

1. (D) 2. (A) 3. (B) 4. (C) 5. (A) 6. (B) 7. (D)
8. (A) 9. (B) 10. (B)

DPP No. : 38

1. (C) 2. (B) 3. (B) 4. (C) 5. (B) 6. (B) 7. (C)
8. (D) 9. (B) 10. (B)

DPP No. : 39

1. (D) 2. (B) 3. (C) 4. (A) 5. (B) 6. (D) 7. (D)
8. (C) 9. (B) 10. (C)

DPP No. : 40

1. (D) 2. (A) 3. (C) 4. (B) 5. (C) 6. (A) 7. (B)
8. (C) 9. (D) 10. (C)

DPP No. : 41

1. (C) 2. (C) 3. (B) 4. (B) 5. (C) 6. (A) 7. (D)
8. (C) 9. (B) 10. (B)

DPP No. : 42

1. (A) 2. (C) 3. (D) 4. (D) 5. (B) 6. (B) 7. (C)
8. (C) 9. (C) 10. (A)

DPP No. : 43

1. (C) 2. (A) 3. (D) 4. (C) 5. (A) 6. (A) 7. (D)
8. (C) 9. (D) 10. (D)

DPP No. : 44

1. (D) 2. (C) 3. (D) 4. (D) 5. (C) 6. (B) 7. (A)
8. (D) 9. (B) 10. (B)

DPP No. : 45

1. (B) 2. (A) 3. (A) 4. (C) 5. (A) 6. (D) 7. (D)
8. (C) 9. (C) 10. (C)

DPP No. : 46

1. (A) 2. (A) 3. (B) 4. (C) 5. (C) 6. (D) 7. (A)
8. (D) 9. (D) 10. (C)

DPP No. : 47

1. (C) 2. (D) 3. (D) 4. (B) 5. (D) 6. (A) 7. (D)
8. (D) 9. (B) 10. (C)

DPP No. : 48

1. (D) 2. (D) 3. (B) 4. (B) 5. (B) 6. (A) 7. (B)
8. (C) 9. (C) 10. (D)

DPP No. : 49

1. (A) 2. (B) 3. (A) 4. (D) 5. (D) 6. (B) 7. (C)
8. (A) 9. (D) 10. (B)

DPP No. : 50

1. (C) 2. (A) 3. (A) 4. (A) 5. (A) 6. (A) 7. (D)
8. (A) 9. (A) 10. (A)

DPP No. : 51

1. (D) 2. (C) 3. (C) 4. (C) 5. (D) 6. (D) 7. (D)
8. (A) 9. (B) 10. (D)

DPP No. : 52

1. (C) 2. (A) 3. (A) 4. (C) 5. (A) 6. (A) 7. (A)
8. (A) 9. (D) 10. (B)

DPP No. : 53

1. (A) 2. (B) 3. (A) 4. (A) 5. (D) 6. (C) 7. (D)
8. (A) 9. (A) 10. (D)