# PLANT PHYSIOLOGY

## TRANSPORT IN PLANTS

**1.** Over small distance, substances can move by :

(1) Diffusion

(2) Cytoplasmic streaming

(3) Active transport

(4) All of the above

**2.** Substances that have a……. moiety, find it difficult to pass through the membrane.

(1) Hydrophilic (2) Hydrophobic

(3) Neutral (4) Lipophilic

**3.** Transport methods those require special membrane proteins also show :

(1) Always uphill movement

(2) Always movement according to concentration gradient

(3) Always transport saturation

(4) Always ATP expenditure

**4.** Which of the following statements are correct?

(A) If two systems containing water are in contact, random movement of water molecules will result in net movement of water down a gradient of free energy is called diffusion.

(B) The less the solute molecules in a solution, the lower is the solute potential

(C) If a pressure greater than atmospheric pressure is applied to a solution, its water potential increases.

(D) By convention, the water potential of pure water at standard temperature which is not under any pressure, is taken to be zero i.e. minimum value of water potential.

(1) A and B (2) A and C

(3) B and D (4) C and D

**5.** Imbibition :

(1) is a special type of osmosis

(2) involve adsorbtion

(3) is the characteristic feature of lipophilic coloids

(4) occurs against the water potential gradient

**6.** All the following statements are correct except that :

(1) the symplastic movement of absorbed water may be aided by cytoplasmic streaming

(2) the xylem vessels and tracheids are non living conduits so are parts of the apoplast

(3) the movement through the apoplast does not involve crossing the cell membrane

(4) the apoplastic system is the system of interconnected protoplasts that is continuous through the plant, except at the casparian strips of the endodermis in the roots.

**7.** As various ions from the soil are actively transported into the vascular tissues of the roots, water follows and increases the pressure inside the xylem. This pressure :

(1) is responsible for water loss from leaves in liquid phase

(2) may re-establish the continuity of water column in xylem

(3) is considered as positive pressure

(4) All of the above

**8.** The cause of the opening or closing of the stomata is:

(1) a change in the turgidity of the guard cells

(2) the crescent shape of thick and nonelastic outer wall of the guard cells

(3) the longitudinal orientation of cellulose microfibrils in the inner walls of guard cells

(4) All of the above

**9.** Most of the nitrogen in plants is transported in :

(1) Organic form via phloem

(2) Organic form via xylem

(3) Inorganic form via phloem

(4) Inorganic form via xylem

**10.** In plants the accepted mechanism for the translocation of sugars from source to sink :

(1) involves the modest push by root pressure

(2) involves the transport according to pressure potential gradient

(3) is completely based upon transpiration pull

(4) Does not requires metabolic energy

**11.** Mineral translocation in plants is carried out by :

(1) Xylem exclusively

(2) Phloem exclusively

(3) Mainly xylem & little bit by phloem

(4) Mainly phloem & little bit by xylem

**12.** Diffusion is very important to plants since it is the only means for :

(1) Water translocation in root

(2) Gaseous movement within plant

(3) Mineral translocation in root

(4) Sugar transport from source to sink

**13.** Which of the following is not a similarity between facilitated diffusion and active transport ?

(1) Transport saturation

(2) Sensitivity towards protein inhibitors

(3) Selectivity

(4) Uphill transport

**14.** Water will move from it's region of :

(1) lower $\psi_p$ to higher $\psi_p$

(2) lower $\psi_s$ to higher $\psi_s$

(3) lower $\psi_w$ to higher $\psi_w$

(4) higher $\psi_w$ to lower $\psi_w$

**15.** Which of the following is ultimately responsible for enlargement of plant cells ?

(1) Osmotic pressure

(2) Turgor pressure

(3) Wall pressure

(4) Osmotic potential

**16.** Beside water potential gradient, which of the following is also prerequisite for imbibition ?

(1) permeable membrane

(2) impermeable membrane

(3) affinity between adsorbant & liquid

(4) selectively permeable membrane

**17.** Regarding mycorrhiza select out the incorrect statement :

(1) they have large surface area

(2) the fungus provides minerals & water

(3) roots provide nitrogenous compounds

(4) it can never be of obligate nature

**18.** Which of the following is not observed during stomatal opening ?

(1) High turgidity of guard cells

(2) Radially oriented microfibrils

(3) Outer wall bulge out

(4) Low turgor of guard cells

**19.** Which of the following is not a significance of transpiration ?

(1) Absorption of water

(2) Absorption of minerals

(3) Cooling of leaf surface

(4) Maintain the shape and structure of plant

## MINERAL NUTRITION

**20.** Which of the following is the method by which essential elements were identified in plants ?

(1) Plant ash analysis

(2) Hydroponics

(3) Plant tissue culture

(4) Nitrogen fixation

**21.** Which of the following essential elements is required by plants in excess of 10 m mole $kg^{-1}$ of dry matter?

(1) Magnesium (2) Manganese

(3) Molybdenum (4) Selenium

**22.** Choose the pair from the following in which one element is essential to plant while other is beneficial but not essential.

(1) Copper and Molybdenum

(2) Sodium and Silicon

(3) Chlorine and Cobalt

(4) Selenium and Cobalt

**23.** Which of the following element is an activator for both ribulose bisphosphate carboxylase oxygenase enzyme and phosphoenol pyruvate carboxylase enzyme?

(1) Zinc (2) Copper

(3) Magnesium (4) Chlorine

**24.** Choose the pair from the following in which both the elements share common function during photosynthesis in plants.

(1) Chlorine and Magnesium

(2) Potassium and Phosphorus

(3) Boron and Molybdenum

(4) Manganese and Chlorine

**25.** If deficiency symptoms of any element appear first in the senescent leaves, this element should not be :

(1) Calcium (2) Nitrogen

(3) Potassium (4) Magnesium

**26.** Which of the following bacteria oxidise the ammonia into nitrite?

(1) *Nitrococcus*

(2) *Nitrobacter*

(3) Both (1) and (2)

(4) *Thiobacillus*

**27.** Which of the following is correct regarding non leguminous plant *Alnus*?

(1) Free living nitrogen fixation by *Beijernickia*

(2) Free living nitrogen fixation by *Frankia*

(3) Symbiotic nitrogen fixation by filamentous microbe

(4) Symbiotic nitrogen fixation by *Rhizobium*

**28.** During biological nitrogen fixation the energy input is :

(1) 16 ATP for each $NH_3$

(2) 8 ATP for two $NH_3$

(3) 32 ATP for two $NH_3$

(4) 8 ATP for each $NH_3$

**29.** During nitrogen metabolism in plants, transaminase enzyme is used in conversion of :

(1) Glutamic acid into other amino acids

(2) α-Ketoglutaric acid into glutamic acid

(3) Glutamic acid into glutamine

(4) $NH_4^+$ into glutamic acid

**30.** Proper aeration is required in hydroponics.

(1) to avoid the toxicity of minerals

(2) for translocation of mineral from root to shoot

(3) for absorption of minerals

(4) to decrease the osmotic pressure in root cells

**31.** Which of the following is not a beneficial element for plant life ?

(1) Na (2) Sr

(3) Si (4) Co

**32.** Water potential of a cell is mainly determined by which of the following element ?

(1) $Mg^{++}$ (2) $Ca^{++}$

(3) $K^+$ (4) $Fe^{2+}$

**33.** The element is said to be deficient, when present:

(1) below critical concentration

(2) above critical concentration

(3) at critical concentration

(4) both below and above critical concentration

**34.** Deficiency symptoms of element can be visualised by what kind of changes ?

(1) Physiological changes

(2) Morphological changes

(3) Chemical changes

(4) Anatomical changes

**35.** Deficiency symptoms for which of the following element tend to appear first in young tissues?

(1) N & P (2) N & Ca

(3) Ca (4) S & K

**36.** Mn toxicity leads to Ca deficiency by :

(1) competing with Ca uptake

(2) inhibiting translocation to shoot apex

(3) competetive inhibition for enzymes

(4) All of the above

**37.** What is the major fate of $NH_3$ produced by ammonification ?

(1) Volatilise to re-enter in the atmosphere

(2) Absorbed by plants

(3) Converted into nitrates

(4) Denitrification

**38.** In which of the following root tissues nodule formation is initiated after successful infection ?

(1) Epidermis (2) Cortex

(3) Endodermis (4) Root hairs

**39.** First stable product of biological nitrogen fixation is:

(1) HN = NH

(2) $H_2N - NH_2$

(3) $NH_3$

(4) $NO_3^-$ or $NO_2-$

## PHOTOSYNTHESIS

**40.** During photosynthesis, plants mainly utilise the red and blue regions of visible spectrum, for the first time it was concluded by :

(1) Jan Ingenhousz (2) Joseph Priestley

(3) T.W. Engelmann (4) Cornelius Van Niel

**41.** Which of the following conclusions regarding photosynthesis was proved by using radioisotopic techniques ?

(1) Light is essential

(2) $O_2$ comes from $H_2O$ and not from $CO_2$

(3) Glucose is stored as starch

(4) Exchange of gases with environment

**42.** The dark reactions of the photosynthesis :

(1) occur in darkness

(2) are not light dependent

(3) are not directly light driven

(4) occur in membrane system of chloroplast

**43.** Electrons from which of follwing reduces $NADP^+$ to $NADPH+H^+$ during Z-scheme of photosynthesis?

(1) Photosystem-I (2) Water

(3) Carbon dioxide (4) Photosystem-II

**44.** During photosynthesis the stroma lamellae of chloroplast could perform :

(1) the process of dark reaction in which ATP utilised

(2) the process of light reaction which produce $NADPH+H^+$

(3) the process of dark reaction which utilise $NADPH+H^+$

(4) the process of light reaction which produce ATP

**45.** Which of the following statements are correct regarding synthesis of ATP in chloroplast during photosynthesis ?

(A) Splitting of water in stroma helps in creation of proton gradient

(B) Cytochrome complex helps in the release of protons in the lumen of thylakoid by accepting electrons from hydrogen carrier.

(C) Movement of protons across the membrane to the stroma through the $F_0$ of the ATPase is coupled with ATP synthesis.

(D) Reduction of $NADP^+$ to $NADPH+H^+$ is also a cause for creation of proton gradient.

(1) All statements are correct

(2) C and D

(3) A and B

(4) B, C and D

**46.** What is the correct ratio of ATP utilisation in steps of Calvin cycle?

(1) Reduction : Regeneration :: 1 : 1

(2) Reduction : Regeneration :: 2 : 1

(3) Reduction : Regeneration :: 2 : 2

(4) Reduction : Regeneration :: 1 : 2

**47.** The cells of $C_4$ plants those are rich in RuBisCO enzyme, also have which of the following characteristic (s)?

(1) Intercellular spaces absent

(2) Thick walls impervious to gaseous exchange

(3) Large number of chloroplast

(4) All of the above

**48.** The productivity is better in $C_4$ plants because :

(1) they increase the intracellular concentration of $CO_2$ in mesophyll cells

(2) in these plants RuBisCO has much greater affinity for $O_2$ than for $CO_2$

(3) these plants can prevent competitive binding phenomena related to RuBisCO

(4) these plants minimise the carboxylase activity of RuBisCO

**49.** $C_3$ plants respond to higher $CO_2$ concentration by showing increased rates of photosynthesis because:

(1) Current availability of $CO_2$ levels is limiting to the $C_3$ plants

(2) $C_3$ plants show saturation at about 360 $\mu\ell L^{-1}$ concentration of $CO_2$

(3) these plants responds to high $CO_2$ concentration even in low light conditions

(4) in these plants RuBisCO shows only carboxylation

**50.** $2H_2A + CO_2 \xrightarrow{light} 2A + CH_2O + H_2$

in this given equation $H_2A$ represents to :

(1) Suitable reducible compounds

(2) Suitable oxidisable compound

(3) Suitable buffer

(4) Both (1) and (2)

**51.** The membrane system of chloroplast is responsible for :

(1) Trapping the light energy

(2) Synthesis of ATP & NADPH

(3) Enzymatic reactions for $CO_2$ incorporation

(4) Both (1) and (2)

**52.** How does PS-II supply electrons continuously ?

(1) by removing electrons from photon

(2) by removing electrons from $H_2O$

(3) by removing electrons from $CO_2$

(4) by removing electrons from constituent carotenoids

**53.** Which of the following is not always required for chemiosmosis ?

(1) Membrane (2) Proton pump

(3) OEC (4) ATPase

**54.** Classification of biosynthetic phase of dark reaction as $C_3$ & $C_4$ is primarily based on.

(1) Initial $CO_2$ fixation

(2) Final $CO_2$ assimilation

(3) First $CO_2$ receptor

(4) Number of ATP get consumed

**55.** Which of the following is not special about $C_4$ plants?

(1) Responsiveness to high light intensities

(2) Lack of photorespiration

(3) Greater productivity

(4) Scotoactive stomata

**56.** In $C_4$ plants there is no photorespiration, because :

(1) The have large number of chloroplast

(2) Increased $CO_2$ concentration at RuBisCO site

(3) Concentric arrangement of mesophyll cells

(4) Greater affinity of RuBisCO for $CO_2$

**57.** Which of the following is not a plant factor regulating photosynthesis ?

(1) Age of leaf

(2) Number of mesophyll cells

(3) Atmospheric $CO_2$ concentration

(4) Amount of chlorophyll

**58.** Increase in $CO_2$ concentration upto ..... percent can cause an increase in $CO_2$ fixation rate, beyond this the level can become damaging over long periods.

(1) 0.03 percent (2) 0.04 percent

(3) 0.045 percent (4) 0.05 percent

## RESPIRATION IN PLANTS

**59.** The energy released by oxidation of respiratory substrates :

(A) Comes out in a single step to increase the possibility of maximum ATP production

(B) is not used directly

(C) is used directly in the energy requiring processes of the organisms

(D) is trapped as chemical energy in the energy currency of the cell

(1) C and D are incorrect

(2) B and D are correct

(3) A and B are correct

(4) A and D are incorrect

**60.** How many ATP molecules and during which steps, are directly synthesised in EMP pathway from one glucose molecule?

(1) 4 ATP, 2 in each PEP to pyruvic acid and BiPGA to PGA

(2) 8 ATP, 4 in each PEP to pyruvic acid and BiPGA to PGA

(3) 2 ATP, 1 in each Glucose to Glucose-6-P and Fructose-6-P to Fructose 1, 6 BiP

(4) 4 ATP, 2 in each Glucose to Glucose-6-P and Fructose-6-P to Fructose 1, 6 BiP

**61.** Which of the following enzyme(s) is/are involved in the conversion of pyruvic acid into $CO_2$ and ethanol?

(1) Pyruvic acid dehydrogenase

(2) Alcohol decarboxylase

(3) Both (1) and (2)

(4) Pyruvic acid decarboxylase

**62.** The complete oxidation of one molecule of pyruvate by the stepwise removal of all the hydrogen atoms:

(1) leaving six molecules of $CO_2$

(2) leaving two molecules of $CO_2$

(3) leaving four molecules of $CO_2$

(4) leaving three molecules of $CO_2$

**63.** In aerobic respiration, the ultimate or final electron acceptor is :

(1) Atomic oxygen

(2) Molecular oxygen

(3) Cytochrome $a_3$

(4) Water

**64.** Fermentation differs from aerobic respiration :

(1) in having partial breakdown of glucose

(2) in producing less ATP per glucose

(3) in having slow oxidation of $NADH_2$ to $NAD^+$

(4) All of the above

**65.** Complete oxidation of which of the following respiratory substrate evolve less volume of $CO_2$ as compare to volume of $O_2$ consumed ?

(1) Fats

(2) Proteins

(3) Carbohyrates

(4) Both (1) and (2)

**66.** Enzymes differ from inorganic catalysts because enzymes get damaged at high temperatures. This difference :

(1) is applicable to all enzymes

(2) is not applicable to thermolabile enzymes

(3) is not applicable to the enzymes of thermophilic organisms

(4) is applicable to thermostable enzymes

**67.** An enzyme catalysing a transfer of a group, G between a pair of substrate S and S' as follows :

$$S - G + S' \longrightarrow S + S' - G$$

G = phosphate or hydrogen or any other group, the enzyme is related with which of the following class?

(1) Transferases (2) Dehydrogenases

(3) Both (1) and (2) (4) Either (1) or (2)

**68.** Enzyme, which catalyzes the breakdown of hydrogen peroxide to water and oxygen, has which type of cofactor?

(1) Tightly bound inorganic compound

(2) Tightly bound organic compound

(3) Permanently bound inorganic compound

(4) Loosely bound organic compound

**69.** What is the significance of respiration ?

(1) Production of cellular energy currency

(2) Provides carbon skeleton as precursor for synthesis of various chemicals

(3) loss of weight

(4) Both (1) and (2)

**70.** Plants donot present great demands for gaseous exchange because :

(1) They are autotrophic

(2) Photosynthesis and respiration work mutually

(3) In plants there is less need of energy

(4) Plants are regulators

**71.** Select out the correct sequence of glycolytic steps:

(1) PGAL $\rightarrow$ 3-PGA $\rightarrow$ 1,3-BiPGA $\rightarrow$ PEP

(2) PGAL $\rightarrow$ 1,3-BiPGA $\rightarrow$ PEP $\rightarrow$ 3-PGA

(3) PGAL $\rightarrow$ 1,3-BiPGA $\rightarrow$ 3-PGA $\rightarrow$ PEP

(4) PGAL $\rightarrow$ PEP $\rightarrow$ 1,3-BiPGA $\rightarrow$ 2-PGA

**72.** During respiration of *Yeast* which of the following enzyme is not used in oxygen stressed conditions ?

(1) Enolase

(2) Pyruvic acid decarboxylase

(3) Alcohol dehydrogenase

(4) Aconitase

**73.** How much amount of energy present in glucose, get released during lactic acid and alcohol fermentation?

(1) 7 percent

(2) less than seven percent

(3) more than seven percent

(4) always 2 percent

**74.** Pyruvic acid $\xrightarrow[\text{dehydrogenase}]{\text{Pyruvate}}$ Acetyl CoA + $CO_2 + NADH_2$

Inthis given reaction which of the following coenzyme is not used ?

(1) $Mg^{++}$ (2) $NAD^+$

(3) Co-A (4) TPP

**75.** TCA cycle starts with condensation of acetyl group with :

(1) OAA (2) Water

(3) NAD (4) both (1) and (2)

**76.** During TCA which of the following intermediate is a result of two successive decarboxylations ?

(1) Oxalosuccinic acid (2) α-ketoglutaric acid

(3) Succinyl Co-A (4) Cis aconitic acid

**77.** Which of the following ETC complex is directly involved in reduction of oxygen ?

(1) complex-I (2) complex-II

(3) comlex-III (4) comlex-IV

**78.** When proteins are respiratory substrates the ratio of $CO_2/O_2$ would be about :

(1) 1.0 (2) 0.7

(3) 0.9 (4) 1.3

## GROWTH & DEVELOPMENT

**79.** Which of the following statements are correct regarding growth?

(A) In plants, the form of growth is open and localised

(B) Swelling of piece of wood in water is considered as growth since it involve the increase in size

(C) Growth is accompanied by metabolic processes

(D) Growth, at a cellular level, is a result of increase in the amount of protoplasm

(1) All the statements are correct

(2) A and B

(3) B, C and D

(4) A, C and D

**80.** Meristematic phase of growth is characterised by :

(1) Increased vacuolation

(2) Maximal size in terms of protoplasmic modifications

(3) Cells those are rich in protoplasm and having thin cell walls with abundant plasmodesmata

(4) Cell enlargement

**81.** Which of the following is/are related to the type of growth in which both the progeny cells, arise from mother cell, retain the ability to divide?

(A) Sigmoid curve

(B) expressed as $W_1 = W_0 + rt$

(C) Linear curve

(D) Three phases - Lag, exponential and stationary

(1) A and D (2) A, B and D

(3) Only C (4) B and C

**82.** In plants, cells/tissues arising out of the same meristem have different structures at maturity, this statement shows that plants have :

(1) Open indeterminate growth

(2) Open determinate growth

(3) Open differentiation

(4) Capacity of dedifferentiation

**83.** Match the following :

| | |
|---|---|
| (A) Auxin | (i) Derivatives of carotenoids |
| (B) Gibberellin | (ii) Gas |
| (C) Cytokinin | (iii) Adenine derivatives |
| (D) Ethylene | (iv) Terpenes |
| (E) Abscisic acid | (v) Indole compounds |

(1) A - i, B - ii, C - iii, D - iv, E - v

(2) A - ii, B - i, C - v, D - iii, E - iv

(3) A - v, B - iv, C - iii, D - ii, E - i

(4) A - iv, B - iii, C - i, D - ii, E - v

**84.** Math the following :

| | |
|---|---|
| (A) Human urine | (i) Ethylene |
| (B) Coconut milk | (ii) $GA_3$ |
| (C) Ripened oranges | (iii) Auxin |
| (D) *Gibberella fujikuroi* | (iv) Cytokinin |

(1) A - iii, B - iv, C - i, D - ii

(2) A - i, B - ii, C - iii, D - iv

(3) A - iv, B - iii, C - ii, D - i

(4) A - ii, B - i, C - iv, D - iii

**85.** Match the following :

| | |
|---|---|
| (A) Cytokinin | (i) Weed free lawns |
| (B) Auxin | (ii) Brewing industry |
| (C) Abscissic acid | (iii) Root hair formation |
| (D) Ethylene | (iv) Overcome apical dominance |
| (E) Gibberellin | (v) Stress hormone |

(1) A - iv, B - i, C - v, D - ii, E - iii

(2) A - i, B - ii, C - v, D - iii, E - iv

(3) A - iii, B - iv, C - v, D - i, E - ii

(4) A - iv, B - i, C - v, D - iii, E - ii

**86.** Which of the following occur naturally in plants?

(1) 2, 4-dichlorophenoxyacetic acid

(2) Indole butyric acid

(3) Naphthalene acetic acid

(4) Kinetin

**87.** Plants, in which there is no correlation between exposure to light duration and induction of flowering response, are called :

(1) Day - neutral plants

(2) Long day plants

(3) Short day plants

(4) Monocarpic plants

**88.** Which of the following is not a biennial plant?

(1) Barley (2) Sugarbeet

(3) Cabbages (4) Carrots

**89.** Swelling of piece of wood when placed in water is not considered as growth because :

(1) It does not occur at expense of energy

(2) It is not a metabolic change

(3) It is reversible process

(4) It is extrinsic process

**90.** Plant growth is unique because :

(1) It is intrinsic

(2) It occurs at the expense of energy

(3) Plant retains the capacity for unlimited growth throughout their life

(4) Its accompanied by metabolic processes

**91.** Growth at a cellular level, is principally a consequence of increase in amount of :

(1) Cell wall material (2) Water

(3) Protoplasm (4) Cell sap

**92.** Cells with increased vacuolation, cell enlargement and new cell wall deposition are the characteristic features of which phase of growth ?

(1) Meristematic phase

(2) Elongation phase

(3) Maturation phase

(4) Differentiation phase

**93.** Trees showing seasonal activities, represent what kind of growth curve ?

(1) Sigmoid (2) Linear

(3) J-shaped (4) double sigmoid

**94.** Quantitative comparisions between the growth of living systems can be made by :

(1) Absolute growth rate

(2) Relative growth rate

(3) Exponential growth rate

(4) Both (1) and (2)

**95.** Nutrients both macro and micro essential elements are required by plant during growth for :

(1) Synthesis of protoplasm

(2) As source of energy

(3) Enzyme of activation

(4) All of the above

**96.** Parenchyma cells that are made to divide under controlled laboratory conditions during plant tissue culture, represents :

(1) Differentiation

(2) Dedifferentiation

(3) Redifferentiation

(4) Undifferentiated mass of cells

**97.** Which of the following is an intercellular intrinsic factor regulating development ?

(1) genetic constitution

(2) PGR

(3) Water

(4) Oxygen

**98.** Select out the incorrect match :

(1) GA - speed up malting process

(2) Auxin - Xylem differentiation

(3) Cytokinin - Adventitious shoot formation

(4) Ethylene - Lateral shoot growth

## ANSWERS KEY

| Que. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ans. | **4** | **1** | **3** | **2** | **2** | **4** | **4** | **1** | **2** | **2** | **3** | **2** | **4** | **4** | **2** | **3** | **4** | **4** | **2** | **2** |
| Que. | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| Ans. | **1** | **3** | **3** | **4** | **1** | **1** | **3** | **4** | **1** | **3** | **2** | **3** | **1** | **2** | **3** | **2** | **3** | **2** | **3** | **3** |
| Que. | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| Ans. | **2** | **3** | **1** | **4** | **4** | **2** | **4** | **3** | **1** | **2** | **4** | **2** | **3** | **1** | **4** | **2** | **3** | **4** | **2** | **1** |
| Que. | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| Ans. | **4** | **4** | **2** | **4** | **4** | **3** | **4** | **2** | **4** | **2** | **3** | **4** | **2** | **1** | **4** | **3** | **4** | **3** | **4** | **3** |
| Que. | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | | |
| Ans. | **1** | **3** | **3** | **1** | **4** | **2** | **1** | **1** | **3** | **3** | **3** | **2** | **1** | **4** | **4** | **2** | **2** | **4** | | |