CUET UG 2026 Agriculture May 15 Shift 1 Question Paper with Solutions PDF

Question Paper with Solutions

Conducted by the National Testing Agency (NTA)

Time Allowed: 60 Minutes **Maximum Marks: 250**

General Instructions

(i) This is the Agriculture question paper of CUET (UG) 2026, conducted by the National Testing Agency (NTA) in Computer Based Test (CBT) mode.

(ii) The paper contains 50 multiple choice questions. All questions are compulsory.

(iii) The duration of this test paper is 60 minutes. The maximum score is 250 marks.

(iv) Each question has four options. Select the one correct answer for each question.

(v) Marking scheme: $+5$ marks for a correct answer, -1 mark for an incorrect answer, and 0 marks for an unanswered question.

(vi) For questions based on a passage or table, read the given material carefully and answer the questions that follow.

Agriculture (250 marks)

1. DNA is [5 marks]

(A) Monomer of deoxyribonucleotides

(B) Polymer of deoxyribonucleotides

(C) Monomer of ribonucleotides

(D) Polymer of ribonucleotides

Correct Answer: (B) Polymer of deoxyribonucleotides

Solution:

Concept:

- DNA is deoxyribonucleic acid, a nucleic acid whose repeating units are deoxyribonucleotides.
- Each deoxyribonucleotide contains deoxyribose sugar, a phosphate group and one nitrogenous base; many such units form a polynucleotide chain.

Step 1: Identify the repeating unit A deoxyribonucleotide is one building block of DNA. The prefix deoxyribo identifies the sugar as deoxyribose. A single building block is a monomer, whereas a molecule made by joining many building blocks is a polymer. DNA contains many nucleotide residues rather than just one.

Step 2: Classify the complete molecule Adjacent deoxyribonucleotides are joined through phosphodiester bonds in the sugar-phosphate backbone. Thus each DNA strand is a polymer of deoxyribonucleotides. The usual DNA molecule contains two complementary polynucleotide strands. Complementary base pairing holds the strands together; it does not change the identity of their repeating units.

Step 3: Eliminate the remaining descriptions Option (A) describes an isolated deoxyribonucleotide as though it were the complete DNA molecule, so its use of monomer is incorrect. Option (C) also describes a monomer and specifies ribonucleotides, the units associated with RNA. Option (D) correctly uses polymer but specifies ribonucleotides rather than deoxyribonucleotides; that description applies to RNA. Only option (B) has both the correct molecular size classification and the correct nucleotide type.

Step 4: Conclusion DNA is a polymer of deoxyribonucleotides. Hence, the correct option is (B).

Quick Tip to Solve: Check both words: DNA is a polymer, and its sugar is deoxyribose; RNA is a polymer of ribonucleotides.

2. Match the LIST-I with LIST-II

	LIST-ICharacteristics		LIST-IIScientific terminology
A.	**2n-1**	**I.**	**Trisomy**
B.	**2n+1**	**II.**	**Monosomy**
C.	**2n-2**	**III.**	**Tetrasomy**
D.	**2n+2**	**IV.**	**Nullisomy**

Choose the correct answer from the options given below: [5 marks]

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

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

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

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

Correct Answer: (B) A-II, B-I, C-IV, D-III

Solution:

Concept:

- Aneuploidy changes the number of individual chromosomes rather than adding or removing complete chromosome sets.
- The normal diploid complement is denoted by $2n$; the sign and number following it indicate the loss or gain relative to that complement.

Step 1: Match the chromosome losses For A, $2n-1$ means that one chromosome is missing from one homologous pair. This condition is monosomy, so A matches II. For C, $2n-2$ denotes the loss of both homologues of one chromosome pair in the standard terminology used here. This is nullisomy, so C matches IV. Nullisomy is distinct from double monosomy, in which one chromosome is absent from each of two different pairs.

Step 2: Match the chromosome gains For B, $2n+1$ means that one extra chromosome is present: one chromosome type has three copies rather than two. This is trisomy, so B matches I. For D, $2n+2$ denotes two extra homologues of one chromosome type, giving four copies of that type. This is tetrasomy, so D matches III. It is not tetraploidy, which would involve four complete sets, $4n$.

Step 3: Compare the complete code Combining the four independently determined matches gives A-II, B-I, C-IV and D-III. Option (B) reproduces all four matches. Option (A) interchanges the loss and gain terminology and also reverses nullisomy and tetrasomy. Option (C) has the correct final two pairs but reverses A and B. Option (D) assigns each of the listed conditions to an incompatible change in chromosome number.

Step 4: Conclusion The matching is A-II, B-I, C-IV, D-III. Hence, the correct option is (B).

Quick Tip to Solve: Use minus for losses and plus for gains: one lost is monosomy, a pair lost is nullisomy, one extra is trisomy, and two homologues extra is tetrasomy.

3. Arrange the following biological processes into correct sequence

A. Transcription

B. Replication

C. Translation

D. Gene expression

Choose the correct answer from the options given below: [5 marks]

(A) A, B, C, D

(B) A, C, B, D

(C) B, A, C, D

(D) D, B, C, A

Correct Answer: (C) B, A, C, D

Solution:

Concept:

- Replication copies DNA, transcription produces RNA from a DNA template, and translation uses the message in mRNA to synthesise a polypeptide.
- Gene expression is the production of a functional gene product. For a protein-coding gene, transcription and translation are stages of expression, rather than expression being a separate obligatory chemical reaction after translation.

Step 1: Identify the information flow B is replication, the copying of genetic information in DNA. A is transcription, in which the relevant DNA sequence supplies the information for an RNA transcript. C is translation, in which ribosomes read the mRNA codons and assemble the corresponding amino acid sequence. For the simplified progression requested by the options, replication is placed before transcription and transcription before translation.

Step 2: Interpret the final term carefully D is gene expression. The question uses this term as the final realised outcome of the preceding information-processing sequence: the genetic information becomes manifested through its product. Strictly, replication is not a required preliminary step each time a gene is expressed, and transcription and translation together constitute expression of a protein-coding gene. The listed terms therefore overlap biologically. Nevertheless, among the offered sequences, B, A, C, D is the intended central-dogma ordering.

Step 3: Select the consistent listed sequence Option (C) gives B, A, C, D and preserves the required transcription-before-translation relation after placing DNA copying first. Option (A) inserts replication between transcription and translation. Option (B) places replication after translation. Option (D) begins with the expression outcome and puts translation before transcription. Those arrangements do not represent the intended simplified progression of genetic information described by the question.

Step 4: Conclusion The intended sequence is replication, transcription, translation and gene expression, with gene expression understood as the overall outcome rather than a separate subsequent reaction. Hence, the correct option is (C).

Quick Tip to Solve: First fix transcription before translation; among the choices, select the sequence placing DNA copying first and the expression outcome last.

4. Which among the following is not the objective of plant breeding [5 marks]

(A) Breeding for higher yield

(B) Breeding for disease resistance

(C) Breeding for improved plant food quality

(D) Breeding for higher meat and milk

Correct Answer: (D) Breeding for higher meat and milk

Solution:

Concept:

- Plant breeding develops crop varieties with useful heritable characters through selection and other breeding methods.
- Major crop-improvement objectives include increased yield, resistance to diseases and pests, and improved nutritional or processing quality of plant produce.

Step 1: Identify the normal crop objectives Higher yield is a direct plant-breeding objective because an improved variety can produce more useful crop output under suitable growing conditions. Disease resistance is also an objective: resistant plants suffer less damage and help maintain productivity. Improved plant food quality is another objective, including desirable nutritional composition, cooking quality or processing characteristics. Therefore options (A), (B) and (C) all belong to plant improvement.

Step 2: Separate crop products from animal products Meat and milk are products obtained from livestock. Selecting animals for greater milk production or suitable meat-production traits is an aim of animal breeding and livestock improvement. Plants themselves do not produce meat or milk. Improved fodder crops can support livestock production indirectly, but that does not make breeding directly for meat and milk a plant-breeding objective.

Step 3: Apply the negative wording The question asks which option is not an objective, so a genuine crop-improvement aim must be excluded from the answer. Options (A), (B) and (C) each state a recognised plant-breeding target, whereas option (D) concerns animal productivity. This distinction follows the organism being bred and the trait improved, rather than the broad fact that both crop cultivation and livestock production are agricultural activities.

Step 4: Conclusion Breeding for higher meat and milk is an animal-breeding objective, not a plant-breeding objective. Hence, the correct option is (D).

Quick Tip to Solve: For a NOT question, classify the product first: grain, fruit and crop quality concern plants, while meat and milk concern livestock.

5. Down syndrome is caused by [5 marks]

(A) Trisomy of Chromosome 21

(B) Tetrasomy of Chromosome 21

(C) Disomy of Chromosome 21

(D) Monosomy of Chromosome 21

Correct Answer: (A) Trisomy of Chromosome 21

Solution:

Concept:

- Down syndrome is an aneuploid condition associated with an extra copy of chromosome 21. Aneuploidy means gain or loss of individual chromosomes rather than a complete chromosome set.
- The prefix tri- indicates three copies; a normal diploid cell has two copies of chromosome 21.

Step 1: Identify the chromosome-number change In the common form of Down syndrome, nondisjunction during gamete formation produces a gamete carrying two copies of chromosome 21. Fusion with a normal gamete adds another copy, producing three copies in the zygote. The usual chromosome number is therefore 47 rather than 46, and the chromosome constitution may be written as 47,XX,+21 or 47,XY,+21.

Step 2: Compare the alternatives Trisomy of chromosome 21 is precisely the extra-copy condition described above. Tetrasomy would mean four copies, disomy means the normal two copies, and monosomy means only one copy. Those three terms therefore do not describe the characteristic chromosome abnormality responsible for Down syndrome.

Step 3: Conclusion Down syndrome is caused by trisomy of chromosome 21. Hence, the correct option is (A).

Quick Tip to Solve: Remember the association Down syndrome–trisomy 21; use tri-, tetra-, di- and mono- to check the chromosome-copy counts.

6. Microbes are useful as

A. Biocontrol agents

B. Biofertilizers preparation

C. Biogas production

D. Fermentation

Choose the correct answer from the options given below: [5 marks]

(A) A, B and D only

(B) A and D only

(C) A, B, C and D

(D) B, C and D only

Correct Answer: (C) A, B, C and D

Solution:

Concept:

- Microorganisms have useful roles in agriculture, waste treatment and industrial production. Different groups perform different functions, so one useful role does not exclude another.
- Biocontrol suppresses pests or pathogens biologically; biofertilizers improve nutrient availability through living microbial activity.

Step 1: Check the agricultural uses Statement A is correct: Bacillus thuringiensis and Trichoderma are examples of microbes used in biological pest or disease control. Statement B is also correct: Rhizobium, Azotobacter and certain cyanobacteria are used as biofertilizers because they contribute to nutrient supply, especially biological nitrogen fixation.

Step 2: Check energy production and fermentation Statement C is correct because methanogenic archaea act during anaerobic decomposition to produce methane-rich biogas. Statement D is correct because microbes carry out fermentation; yeast produces ethanol and carbon dioxide from sugars, while lactic acid bacteria convert milk into curd. Thus none of the four listed applications should be excluded. The alternatives omitting B, C or A are incomplete.

Step 3: Conclusion All four statements A, B, C and D describe useful microbial activities. Hence, the correct option is (C).

Quick Tip to Solve: For lists of microbial uses, attach an example to each statement: Bt, Rhizobium, methanogens and yeast.

7. Nostoc is a . [5 marks]

(A) Virus

(B) Fungi

(C) Protozoa

(D) Cyanobacteria

Correct Answer: (D) Cyanobacteria

Solution:

Concept:

- Nostoc is a filamentous cyanobacterium, traditionally called a blue-green alga. Cyanobacteria are photosynthetic prokaryotes rather than true eukaryotic algae.
- Its cells lack a membrane-bound nucleus. In nitrogen-fixing forms, specialized cells called heterocysts provide conditions suitable for nitrogen fixation.

Step 1: Recognize the organism Nostoc forms chains of cells embedded in a gelatinous matrix and performs oxygenic photosynthesis using chlorophyll a. These features, together with its prokaryotic cell organization, place it among cyanobacteria. Its ability to fix atmospheric nitrogen also explains its importance in soil fertility and as a biological nitrogen source.

Step 2: Eliminate the other groups A virus is acellular and can reproduce only within a host cell; Nostoc is a cellular organism. Fungi are eukaryotic heterotrophs and do not carry out chlorophyll-based photosynthesis. Protozoa are eukaryotic organisms rather than prokaryotic photosynthetic filaments. Consequently, none of those three groups is the appropriate classification.

Step 3: Conclusion Nostoc belongs to the cyanobacteria. Hence, the correct option is (D).

Quick Tip to Solve: When Nostoc or Anabaena appears in a classification question, connect blue-green algae with photosynthetic cyanobacteria.

8. Which of the following are polysaccharides? A. Cellulose B. Hemicellulose C. Lignin D. Glucose. Choose the correct answer from the options given below: [5 marks]

(A) A, B and D only

(B) A, C and D only

(C) A, B, C and D

(D) A, B and C only

Correct Answer: A and B only; none of the printed combinations is scientifically correct.

Solution:

Concept:

- A polysaccharide is a carbohydrate polymer made from many monosaccharide units joined by glycosidic bonds. A material can be a plant cell-wall polymer without being a polysaccharide.
- Cellulose and hemicellulose are polysaccharides; lignin is a complex phenolic polymer, while glucose is a monosaccharide.

Step 1: Classify the four substances Cellulose consists of long chains of glucose residues linked by beta-1,4 glycosidic bonds, so statement A qualifies. Hemicelluloses are heterogeneous carbohydrate polymers containing sugar residues, so statement B also qualifies. Lignin is formed from phenylpropanoid-derived units and is not a sugar polymer; statement C does not qualify. A single glucose molecule is a simple sugar, not a polysaccharide, so statement D does not qualify.

Step 2: Compare the scientifically correct set with the choices The correct set is A and B only, which is absent from the printed options. The first three options include glucose, and the fourth includes lignin. The supplied answer key selects option (D), A, B and C only, but that grouping incorrectly classifies lignin as a polysaccharide. Cell-wall association does not change its chemical classification, so a unique scientifically correct printed option cannot be selected.

Step 3: Conclusion Only cellulose and hemicellulose, A and B, are polysaccharides. No printed option is fully correct. The supplied key gives (D), but lignin is a phenolic polymer, so that keyed grouping is scientifically incorrect.

Quick Tip to Solve: Distinguish chemical class from location: cellulose, hemicellulose and lignin occur in cell walls, but lignin is not a carbohydrate.

9. Which of the following are fat soluble vitamins?

A. Vitamin-A

B. Vitamin-B

C. Vitamin-C

D. Vitamin-D

Choose the correct answer from the options given below: [5 marks]

(A) A and D only

(B) A, B and D only

(C) A and C only

(D) A, C and D only

Correct Answer: (A) A and D only

Solution:

Concept:

- Vitamins are grouped as fat-soluble or water-soluble according to their solubility and absorption.
- The fat-soluble group consists of vitamins A, D, E and K; the B-group vitamins and vitamin C are water-soluble.

Step 1: Classify the listed vitamins Vitamin A is fat-soluble and is associated with normal vision and epithelial health. Vitamin D is also fat-soluble and supports calcium and phosphorus metabolism. Thus statements A and D belong to the required group.

Step 2: Eliminate the water-soluble members The label Vitamin B denotes the B-complex group, which is water-soluble. Vitamin C is also water-soluble. Consequently, any combination containing B or C cannot consist only of fat-soluble vitamins. Option (B) includes B, option (C) includes C and omits D, and option (D) includes C. Only option (A) contains precisely A and D.

Step 3: Conclusion Vitamin A and vitamin D are the fat-soluble vitamins in the given list. Hence, the correct option is (A).

Quick Tip to Solve: Recall the complete fat-soluble set as A, D, E and K, then select only its members.

10. A typical angiosperm embryo sac has___ [5 marks]

(A) Seven nuclei and eight cells

(B) Eight nuclei and eight cells

(C) Seven nuclei and seven cells

(D) Eight nuclei and seven cells

Correct Answer: (D) Eight nuclei and seven cells

Solution:

Concept:

- The typical angiosperm female gametophyte is the Polygonum-type embryo sac.
- At maturity it is described as seven-celled and eight-nucleate because the central cell contains two polar nuclei.

Step 1: Count the cells at the two ends At the micropylar end, the egg apparatus consists of one egg cell and two synergids, giving three cells. At the chalazal end there are three antipodal cells. These two groups therefore contribute six cells, each containing one nucleus.

Step 2: Include the central cell and compare the counts The large central cell is the seventh cell and initially contains two polar nuclei. Thus the cell count is three plus three plus one, or seven, whereas the nuclear count is three plus three plus two, or eight. Seven nuclei and eight cells reverses the counts; eight cells incorrectly counts the two polar nuclei as separate cells; seven nuclei misses one polar nucleus. The standard mature embryo-sac description is therefore eight nuclei and seven cells.

Step 3: Conclusion A typical angiosperm embryo sac is eight-nucleate and seven-celled. Hence, the correct option is (D).

Quick Tip to Solve: Count the central cell once as a cell but count its two polar nuclei separately.

11. The combined loss of water from plants and soil surface is called [5 marks]

(A) Transpiration

(B) Evaporation

(C) Evapotranspiration

(D) Radiation

Correct Answer: (C) Evapotranspiration

Solution:

Concept:

- Evaporation is the conversion of liquid water into vapour from exposed surfaces such as soil.
- Transpiration is the loss of water vapour from a plant, mainly through stomata; evapotranspiration combines these losses.

Step 1: Identify the two water-loss pathways Water can leave the soil surface directly by evaporation. Water absorbed by roots can also move through the plant and leave the aerial parts as vapour by transpiration. The question explicitly includes both the plant pathway and the soil-surface pathway, so neither component alone is sufficient.

Step 2: Choose the combined term Evapotranspiration is the combined loss through evaporation and transpiration from a cropped land surface. Transpiration, option (A), covers the plant component only. Evaporation, option (B), covers the direct surface component only. Radiation, option (D), is energy transfer and may supply energy for water loss, but it is not the name of the combined loss itself. Option (C) names both processes together.

Step 3: Conclusion The combined loss of water from plants and the soil surface is evapotranspiration. Hence, the correct option is (C).

Quick Tip to Solve: When a question mentions both crop or plant water loss and soil water loss, combine them as evapotranspiration.

12. The process of pollen transfer from the anther to the stigma of same flower before anthesis is called- [5 marks]

(A) Xenogamy

(B) Allogamy

(C) Geitonogamy

(D) Cleistogamy

Correct Answer: (D) Cleistogamy

Solution:

Concept:

- Anthesis is the opening of a flower; self-pollination can occur within a flower before it opens.
- Cleistogamous flowers remain closed, allowing pollen from their own anthers to reach their own stigma.

Step 1: Use the same-flower and timing clues The pollen donor and receptive stigma are in the same flower, so the transfer is a form of self-pollination rather than transfer between plants. The additional phrase before anthesis means that this takes place before the flower opens. Among the given alternatives, cleistogamy is the condition associated with such closed-flower self-pollination.

Step 2: Distinguish the other alternatives Xenogamy involves transfer between flowers on different plants of the same species. Allogamy refers to cross-fertilisation or outcrossing and does not describe self-pollination in a closed flower. Geitonogamy is pollen transfer between different flowers on the same plant, so it fails the same-flower condition. Cleistogamy ensures self-pollination within a closed flower, making it the intended term. The general same-flower transfer is autogamy, but that term is not an option; the before-opening clue selects cleistogamy here.

Step 3: Conclusion Self-pollination in the closed flower before anthesis corresponds to cleistogamy among the listed choices. Hence, the correct option is (D).

Quick Tip to Solve: Same flower suggests autogamy; a closed flower or transfer before opening points to cleistogamy.

13. Match the LIST-I with LIST-II

LIST-IBreed	LIST-IICharacteristic
A. Sahiwal	I. Exotic breed
B. Ongole	II. Draught purpose breed
C. Nagori	III. Dual purpose breed
D. Holstein Friesian	IV. Milch purpose breed

Choose the correct answer from the options given below: [5 marks]

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

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

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

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

Correct Answer: (B) A-IV, B-III, C-II, D-I

Solution:

Concept:

- Indigenous cattle breeds are grouped by their main utility as milch, draught or dual-purpose breeds.
- An exotic breed originates outside India; this describes origin rather than a separate productive function.

Step 1: Match the distinctive breeds Sahiwal is a well-known indigenous milch breed, selected for milk production, so A matches IV. Nagori is valued chiefly for draught work, so C matches II. Holstein Friesian is an exotic dairy breed, so D matches I. Its dairy use does not change its match to the origin category supplied here.

Step 2: Complete and check the matching Ongole supplies the dual-purpose match in this classifi-

cation, giving B-III. Thus the complete combination is A-IV, B-III, C-II, D-I. Option (A) incorrectly calls Sahiwal exotic. Option (C) makes Nagori a milch breed and Sahiwal dual-purpose. Option (D) assigns Sahiwal to draught and Ongole to milch, so it also fails the listed classification.

Step 3: Conclusion The matches are Sahiwal-IV, Ongole-III, Nagori-II and Holstein Friesian-I. Hence, the correct option is (B).

Quick Tip to Solve: Fix Sahiwal as milch and Holstein Friesian as exotic first; then check Nagori as draught before choosing the complete code.

14. Which of the following sequence is correct about general measures for prevention of contagious diseases in livestock and poultry? A. Treatment of affected animals B. Destroy contaminant fodder by burning C. Identification of diseased animal D. Isolation of the diseased animal. Choose the correct answer from the options given below: [5 marks]

(A) A, B, C, D

(B) A, D, B, C

(C) C, D, B, A

(D) C, B, D, A

Correct Answer: (C) C, D, B, A

Solution:

Concept:

- Contagious diseases spread from infected animals to susceptible animals through contact or contaminated materials.
- Control begins by recognising infection and separating its source; contaminated feed must also be removed.

Step 1: Identify and separate the source First identify the diseased animal, C, so that the source of infection is recognised. Next isolate the diseased animal, D, from the healthy livestock or poultry. Isolation restricts direct contact and limits further exposure while the remaining control measures are arranged.

Step 2: Remove contamination and treat affected animals Destroy contaminated fodder by burning, B, to remove a possible source of infection, and then treat affected animals, A, in the sequence requested. The complete order is C, D, B, A. Options (A) and (B) start treatment before identifying the diseased animal. Option (D) delays isolation until after fodder destruction; the correct listed sequence isolates the animal immediately after identification.

Step 3: Conclusion The required sequence is identification, isolation, destruction of contaminated fodder and treatment: C, D, B, A. Hence, the correct option is (C).

Quick Tip to Solve: For a disease-control sequence, locate the diseased animal first and isolate it immediately before considering the remaining measures.

15. Sequence the following crops in the order of cereals, pulses, fibre and oilseed crops

A. Sesame

B. Pigeonpea

C. Cotton

D. Maize

Choose the correct answer from the options given below: [5 marks]

(A) D, B, C, A

(B) A, B, C, D

(C) B, A, D, C

(D) C, B, D, A

Correct Answer: (A) D, B, C, A

Solution:

Concept:

- Field crops are classified by their principal economic produce, such as grain, pulse, fibre or oil.
- The requested order is cereal, pulse, fibre and oilseed; retain that order while assigning the crop letters.

Step 1: Assign each crop to its group Maize, D, is a cereal grown for its starchy grain. Pigeonpea, B, is a pulse crop whose dry seed is used as dal. Cotton, C, is a fibre crop, and sesame, A, is an oilseed crop grown for its oil-rich seeds. These are the principal crop-use groups asked for here.

Step 2: Arrange the letters in the requested order Writing the crops in the order cereal, pulse, fibre and oilseed gives maize, pigeonpea, cotton and sesame. Their letters therefore read D, B, C, A. Option (B) starts with sesame, an oilseed, rather than a cereal. Option (C) starts with pigeonpea, a pulse. Option (D) starts with cotton, a fibre crop. Only option (A) preserves all four required categories in order.

Step 3: Conclusion The correct crop sequence is maize, pigeonpea, cotton, sesame: D, B, C, A. Hence, the correct option is (A).

Quick Tip to Solve: Write the group order above the crop letters; maize supplies cereal and sesame supplies oilseed, fixing the two ends.

16. Match the LIST-I with LIST-II

LIST-I: Crop		LIST-II: Crop group	
A.	Wheat	I.	Fibre
B.	Bajra	II.	Oilseed
C.	Groundnut	III.	Millet
D.	Cotton	IV.	Cereal

Choose the correct answer from the options given below: [5 marks]

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

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

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

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

Correct Answer: (D) A-IV, B-III, C-II, D-I

Solution:

Concept:

- Crop-group matching uses each crop's principal economic product and its standard agronomic category.
- Although millets are cereals broadly, bajra is matched to the more specific millet category when both labels are provided.

Step 1: Match grain crops to the supplied categories Wheat is a cereal, so A matches IV. Bajra is pearl millet, so B matches III. The specific millet category distinguishes bajra from wheat in this matching exercise; it does not imply that millets lie outside the broad cereal group.

Step 2: Match oilseed and fibre crops and check the code Groundnut is an oilseed crop, so C matches II. Cotton is a fibre crop, so D matches I. Combining the four assignments gives A-IV, B-III, C-II, D-I. Every alternative (A), (B) and (C) matches wheat to fibre, which is incorrect. Option (B) gets bajra and groundnut right but assigns cotton to cereal, so the whole code is still wrong.

Step 3: Conclusion The matches are wheat-cereal, bajra-millet, groundnut-oilseed and cotton-fibre: A-IV, B-III, C-II, D-I. Hence, the correct option is (D).

Quick Tip to Solve: Use the specific category for bajra: pearl millet. Anchor cotton to fibre and groundnut to oilseed to verify the entire code.

17. The kharif season in the cultivation of crops refers to- [5 marks]

(A) Summer season

(B) Spring season

(C) Rainy season

(D) Winter season

Correct Answer: (C) Rainy season

Solution:

Concept:

- Indian field crops are commonly grouped into kharif, rabi and summer (zaid) seasons according to the climatic period in which they are grown.
- Kharif crops are associated with the southwest monsoon: rainfall supplies much of their water during establishment and growth.

Step 1: Identify the climatic period The kharif crop season begins with the arrival of monsoon rains, generally in June or July in much of India. Crops such as rice, maize and bajra are commonly sown during this rainy period and harvested after their growth cycle. Thus the defining feature is the rainy season, rather than simply a high air temperature.

Step 2: Eliminate the other seasons Summer by itself describes the hot period and also includes the separate zaid crop season before the monsoon. Spring is a transition between winter and summer, not the usual name for kharif cultivation. Winter corresponds to the rabi season, with crops such as wheat. These distinctions select rainy season from the four alternatives.

Step 3: Conclusion The kharif season refers to the rainy or monsoon season. Hence, the correct option is (C).

Quick Tip to Solve: Link kharif with monsoon sowing and rabi with winter sowing; do not identify a crop season from temperature alone.

18. Which of the following crop has less water requirement for its cultivation? [5 marks]

(A) Maize

(B) Bajra

(C) Rice

(D) Sugarcane

Correct Answer: (B) Bajra

Solution:

Concept:

- Water requirement is the water needed by a crop over its growth period; drought adaptation allows some crops to grow with relatively limited moisture.
- Bajra, or pearl millet, is adapted to hot, dry conditions and is a characteristic crop of low-rainfall, semi-arid regions.

Step 1: Identify the low-water crop Among the listed crops, bajra has the lowest water requirement and is particularly suitable for dryland cultivation. Its drought tolerance and efficient use of available moisture permit production where water supply is inadequate for more water-demanding crops. This comparative adaptation is what the question tests.

Step 2: Compare the alternatives Maize can be grown without standing water, but generally needs more reliable moisture than bajra, especially at critical reproductive stages. Rice commonly requires a large water supply in its usual lowland cultivation. Sugarcane is a long-duration crop with a high total water demand. Neither absence of flooding in maize nor the fact that all four are cultivated crops makes their seasonal requirements equal.

Step 3: Conclusion Bajra requires less water for cultivation than the other crops listed. Hence, the correct option is (B).

Quick Tip to Solve: For a low-water crop among maize, bajra, rice and sugarcane, first identify the drought-adapted millet: bajra.

19. Identify the correct sequence in terms of scientific name of different millets namely finger millet, pearl millet, foxtail millet and kodo millet.

A. ***Pasapalum scrobiculatum***

B. ***Eleusine corocana***

C. ***Pennisetum glaucum***

D. ***Setaria italica*** [5 marks]

(A) A, B, C, D

(B) B, C, D, A

(C) B, A, D, C

(D) C, B, D, A

Correct Answer: (B) B, C, D, A

Solution:

Concept:

- A sequence question must preserve the order of the common names in the question and then substitute the matching scientific-name letters.
- Finger millet is *Eleusine coracana*, pearl millet is *Pennisetum glaucum*, foxtail millet is *Setaria italica*, and kodo millet is *Paspalum scrobiculatum*.

Step 1: Match each millet with its letter Finger millet matches entry B, pearl millet matches entry C, foxtail millet matches entry D and kodo millet matches entry A. The intended identities are clear despite the spelling errors in the printed entries for finger millet and kodo millet; their standard spellings are given in the concept above.

Step 2: Keep the requested order Reading the matches in the stated order, finger, pearl, foxtail and kodo, gives B, C, D, A. The sequence A, B, C, D starts with kodo rather than finger millet. B, A, D, C places kodo at the pearl-millet position and pearl at the kodo position. C, B, D, A reverses the first

two crops. Only the second option preserves all four matches.

Step 3: Conclusion The correct sequence is B, C, D, A. Hence, the correct option is (B).

Quick Tip to Solve: Write the four common names in order before assigning letters; matching correctly but rearranging the requested order loses the sequence.

20. Phalaris minor is a most prevalent weed in wheat and it is most effectively controlled by the use of the herbicide. [5 marks]

(A) Sulfosulfuron

(B) 2,4-D

(C) Atrazine

(D) Butachlor

Correct Answer: (A) Sulfosulfuron

Solution:

Concept:

- *Phalaris minor* is a grass weed of wheat, so the herbicide must control the grassy weed while being selective to the crop.
- Sulfosulfuron is a selective post-emergence herbicide used in wheat for control of susceptible *Phalaris minor*; herbicide choice depends on the crop and target weed.

Step 1: Match the herbicide to the crop and weed Sulfosulfuron is the appropriate choice among the listed herbicides for the wheat–Phalaris combination. It inhibits acetolactate synthase in susceptible weeds, interfering with branched-chain amino acid synthesis and weed growth. Its selective use in wheat distinguishes it from herbicides commonly associated with other crops or weed groups.

Step 2: Exclude the other herbicides 2,4-D primarily controls broad-leaved weeds and is not the appropriate choice for this grass weed. Atrazine is commonly associated with weed control in crops such as maize, rather than selective control of Phalaris in wheat. Butachlor is mainly used as a pre-emergence herbicide in rice. Therefore these alternatives do not match the specified crop–weed combination. Resistance can affect field performance, but does not change the intended comparison among these options.

Step 3: Conclusion Sulfosulfuron is the herbicide identified for control of Phalaris minor in wheat among the alternatives. Hence, the correct option is (A).

Quick Tip to Solve: Identify whether the weed is a grass or broad-leaved plant, then match both the target weed and crop before selecting a herbicide.

21. Which of the following cultivated crop is non-tillering in nature? [5 marks]

(A) Rice

(B) Wheat

(C) Maize

(D) Bajra

Correct Answer: (C) Maize

Solution:

Concept:

- Tillering is the production of lateral shoots from buds at the basal nodes of a cereal plant. A tiller may develop its own leaves and, if productive, a flowering head.
- The cultivated growth habit is used to distinguish a normally single-stemmed cereal from cereals in which basal tillers contribute to the crop stand.

Step 1: Identify the usual growth habit of maize Maize is conventionally classified as a non-tillering cereal crop. Under normal cultivation, a plant develops one dominant main stalk, which bears its tassel at the top and ears at the nodes. Although some genotypes or unusual growing conditions can produce basal suckers, such occasional shoots do not change its standard agronomic classification.

Step 2: Eliminate the tillering cereals Rice produces basal tillers, several of which can become panicle-bearing shoots. Wheat also tillers from the crown, and productive tillers carry spikes. Bajra, or pearl millet, can form basal tillers that bear earheads. Thus rice, wheat and bajra all exhibit the tillering habit asked about, whereas maize is the exception among these four crops.

Step 3: Conclusion Maize is the non-tillering cultivated cereal in the given list. Hence, the correct option is (C).

Quick Tip to Solve: For cereal growth-habit questions, connect rice and wheat with productive basal tillers; maize usually has a single dominant main stalk.

22. Which of the following is a major parasitic weed in Sorghum? [5 marks]

(A) Cynadon dactylon

(B) Striga asiatica

(C) Cyprus rotundus

(D) Trianthema portulastrum

Correct Answer: (B) Striga asiatica

Solution:

Concept:

- A parasitic weed obtains resources from a living host by forming a specialised attachment called a haustorium. It differs from an ordinary weed that competes independently for light, water and nutrients.
- Striga, commonly called witchweed, is a root parasite of cereals and is an important weed problem

in sorghum.

Step 1: Identify the host-parasite association Striga asiatica attacks roots of sorghum. Its haustorial connections allow the parasite to withdraw water and nutrients from the host, reducing crop growth and yield. Much of its damaging early development occurs below the soil surface, before its shoots become conspicuous. This association directly matches the question, which asks for a major parasitic weed rather than merely a weed occurring in the field.

Step 2: Distinguish the remaining weeds Cynodon dactylon is a perennial grassy weed that spreads through stolons and rhizomes. Cyperus rotundus is a sedge with underground tubers, and Trianthema portulacastrum is a broad-leaved weed. These weeds compete with crops but do not establish the characteristic parasitic attachment of Striga. Therefore the second named option is the only root-parasitic weed in the list.

Step 3: Conclusion Striga asiatica is a major parasitic weed of sorghum. Hence, the correct option is (B).

Quick Tip to Solve: When sorghum and a parasitic weed appear together, recall Striga (witchweed); distinguish parasitism from ordinary weed competition.

23. Arrange the following crops in the order of oilseed, sugar, fodder, fibre. A. Sugarcane B. Jute C. Castor D. Bajra-Napier. Choose the correct answer from the options given below: [5 marks]

(A) C, A, D, B

(B) A, B, C, D

(C) B, A, D, C

(D) C, B, D, A

Correct Answer: (A) C, A, D, B

Solution:

Concept:

- Crops can be classified by their principal economic product: oilseeds yield oil, sugar crops supply sugar, fodder crops feed livestock, and fibre crops provide fibres.
- In a sequence question, first match each letter to its crop use and then write the letters in the exact order requested.

Step 1: Assign each crop to its use category Castor, labelled C, is grown for oil extracted from its seeds, so it is the oilseed crop. Sugarcane, labelled A, is cultivated for its sugar-rich stalk juice and belongs to the sugar-crop category. Bajra-Napier, labelled D, is a vigorous forage hybrid grown as green fodder for livestock. Jute, labelled B, provides bast fibre from its stem and is therefore the fibre crop.

Step 2: Arrange the letters and check the options The required order is oilseed, sugar, fodder, fibre. Substituting the identified letters gives C, A, D, B. Option (B) starts with sugarcane instead of an oilseed; option (C) starts with jute, a fibre crop; and option (D) incorrectly places jute in the sugar position and sugarcane in the fibre position. Only option (A) retains all four correct associations.

Step 3: Conclusion The required sequence is C, A, D, B: castor, sugarcane, Bajra-Napier and jute. Hence, the correct option is (A).

Quick Tip to Solve: Solve crop-sequence questions by writing the product beside each crop first; then translate the requested product order into letters.

24. Black soils belong to which of the following order of soil classification? [5 marks]

(A) Vertisols

(B) Inceptisols

(C) Aridisols

(D) Gelisols

Correct Answer: (A) Vertisols

Solution:

Concept:

- In soil taxonomy, Vertisols are clay-rich soils with strong shrinking and swelling behaviour. Their expanding clay minerals create deep cracks on drying and swelling when wetted.
- The typical Indian black cotton soils are associated with the Vertisol order; the key diagnostic idea is their shrink-swell nature rather than colour alone.

Step 1: Relate black-soil properties to the order Black soils characteristically contain a high proportion of clay and retain considerable water. During dry periods they shrink and develop wide, deep cracks, while wetting causes the clay to swell. Repeated expansion and contraction can mix the soil and produce slickensides. These features are characteristic of Vertisols and explain the conventional classification of black soils used in this question.

Step 2: Rule out the other soil orders Inceptisols are soils with relatively weak profile development; that description does not express the distinctive shrink-swell behaviour of typical black soils. Aridisols develop under arid conditions and are associated with dry-region soil processes. Gelisols are soils influenced by permafrost in very cold regions. Neither aridity nor permafrost defines the black cotton soils referred to here, leaving Vertisols as the matching order.

Step 3: Conclusion Black soils are conventionally placed in the Vertisol order. Hence, the correct option is (A).

Quick Tip to Solve: Link black cotton soil with wide dry-season cracks and swelling clay; these properties point directly to Vertisols.

25. Which of the following nutrient helps in the nodule formation in leguminous plants [5 marks]

(A) Sodium

(B) Manganese

(C) Boron

(D) Zinc

Correct Answer: (C) Boron

Solution:

Concept:

- Leguminous plants form root nodules through a symbiotic association with nitrogen-fixing Rhizobium bacteria.
- Boron is a micronutrient involved in cell-wall development and the normal development of tissues, including the legume root-nodule association.

Step 1: Connect the nutrient with nodule development The question asks about formation of nodules rather than simply the supply of nitrogen to a crop. Boron supports the development and functioning of the root tissues involved in the symbiosis. A boron deficiency can impair infection and normal nodule development, thereby reducing the benefit of biological nitrogen fixation. Among the nutrients listed, this is the characteristic association being tested.

Step 2: Compare the listed nutrients Sodium is beneficial to some plants but is not the standard nutrient associated with legume nodule formation. Manganese is particularly associated with enzyme activation and photosynthetic processes. Zinc supports enzyme systems and growth regulation, but it is not the intended nodule-formation nutrient here. Boron is therefore selected. Molybdenum, often remembered in connection with nitrogen fixation, is a different micronutrient and is not an offered option; its role should not displace the appropriate listed answer.

Step 3: Conclusion Boron helps in normal nodule formation in leguminous plants. Hence, the correct option is (C).

Quick Tip to Solve: Distinguish nodule development from the biochemical reduction of nitrogen: boron supports nodulation, while molybdenum is associated with nitrogenase function.

26. Which of the following vegetables is leading in total area and production in India? [5 marks]

(A) Tomato

(B) Brinjal

(C) Potato

(D) Chilli

Correct Answer: (C) Potato

Solution:

Concept:

- The importance of a vegetable crop can be compared by cultivated area and total harvested production; these are different from yield per unit area.
- Potato is a major staple vegetable grown on a large scale in India and is the leading crop among the vegetables offered in this question.

Step 1: Identify the large-scale vegetable crop Potato is grown extensively for its edible underground stem tubers. Its broad cultivation, high tuber output and importance in fresh consumption and processing give it a leading place in Indian vegetable production. The question seeks the crop associated with the overall scale of cultivation and output, not the crop with the highest price, nutrient concentration or number of fruits on one plant.

Step 2: Eliminate the alternative crops Tomato is an important fruit vegetable, and brinjal is also widely cultivated, but neither is the expected leading crop in the area-and-production comparison given here. Chilli is grown for green fruits and for dry spice use; it does not replace potato as the intended answer to this vegetable-crop comparison. Of the four listed crops, potato is the standard answer. No annual numerical totals are needed to identify the crop, and area should not be confused with the yield obtained from one hectare.

Step 3: Conclusion The vegetable intended as leading in total area and production in India is potato. Hence, the correct option is (C).

Quick Tip to Solve: For this comparison, link potato with large-scale tuber production; do not confuse total output with yield per hectare or the market value of a crop.

27. The ideal temperature for mango cultivation is . [5 marks]

(A) 5 to 10°C

(B) 10 to 15°C

(C) 15 to 20°C

(D) 24 to 30°C

Correct Answer: (D) 24 to 30°C

Solution:

Concept:

- Mango is a tropical to subtropical fruit crop whose active growth is favoured by warm conditions.

- The ideal general cultivation temperature must be distinguished from the cooler conditions that may influence floral induction at a particular growth stage.

Step 1: Match mango with a warm climate A general ideal range for mango cultivation is about 24–$30^\circ C$. Warm conditions support active vegetative growth and the development of this tropical fruit crop. Mango is sensitive to frost, especially when young, so a low-temperature range cannot represent its general optimum for cultivation. The question concerns the crop as a whole rather than one brief stage of flowering.

Step 2: Compare all four temperature ranges The range 5–$10^\circ C$ is much too cool for ideal active growth. The ranges 10–$15^\circ C$ and 15–$20^\circ C$ are also cooler than the stated general optimum. Cooler weather can have a role in flowering under suitable conditions, but that does not make those ranges the ideal overall cultivation temperature. The warmest offered range, 24–$30^\circ C$, therefore fits the climatic requirement.

Step 3: Conclusion The ideal temperature for mango cultivation is 24–$30^\circ C$. Hence, the correct option is (D).

Quick Tip to Solve: When asked for the general optimum of mango, select a warm tropical range; keep this separate from cooler weather associated with floral induction.

28. Interveinal chlorosis in crops is a typical characteristic of nutrient deficiency symptom of -

[5 marks]

(A) Potassium

(B) Manganese

(C) Zinc

(D) Phosphorus

Correct Answer: (B) Manganese

Solution:

Concept:

- Chlorosis is loss of the normal green colour of a leaf. Interveinal chlorosis means yellowing between veins while the veins remain relatively green.
- Manganese participates in photosynthetic and enzyme processes; its deficiency characteristically produces interveinal chlorosis, often with fine speckling.

Step 1: Recognise the pattern of yellowing The diagnostic phrase is interveinal chlorosis. It describes the position of the yellow tissue, rather than a uniform yellowing of the entire leaf or scorching confined to its edges. Manganese deficiency commonly gives this interveinal pattern, particularly on younger leaves, and may develop small necrotic spots. This makes manganese the characteristic nutrient intended in the question.

Step 2: Distinguish the other deficiencies Potassium deficiency is more typically identified by yellowing and scorching along older-leaf margins. Phosphorus deficiency more commonly gives stunted growth with dark green or purplish coloration. Zinc deficiency can also cause chlorotic bands

or interveinal yellowing in some crops, but its characteristic diagnostic associations include small leaves, shortened internodes and rosetting. Thus chlorosis alone is not a universal field diagnosis; within this conventional symptom-matching question, manganese is the keyed and best intended answer rather than potassium or phosphorus.

Step 3: Conclusion The typical deficiency symptom intended is manganese deficiency. Hence, the correct option is (B).

Quick Tip to Solve: Read the location of chlorosis: manganese suggests interveinal yellowing, potassium suggests marginal scorch, and phosphorus often suggests purpling.

29. The herbicides applied after the emergence of weeds and crops are called as_____. [5 marks]

(A) Post-emergence herbicides

(B) Pre-emergence herbicides

(C) Pre-plant herbicides

(D) Pre-harvest herbicides

Correct Answer: (A) Post-emergence herbicides

Solution:

Concept:

- Herbicides are classified by the time of application relative to planting and the emergence of the crop or weeds.
- Post-emergence treatment is made after seedlings have emerged above the soil surface; the timing term itself does not specify the chemical used.

Step 1: Identify the timing described The question explicitly says that both weeds and crops have emerged. A treatment at this stage is described as post-emergence. The prefix post means after, so it directly matches the stated stage of crop and weed development.

Step 2: Eliminate the other stages Pre-emergence herbicides are applied before emergence, generally after sowing. Pre-plant herbicides are applied before planting the crop. Pre-harvest describes application before harvesting, a much later reference point, and does not name the general class defined by emergence. Thus neither the two pre-treatment terms nor the harvest-based term fits the wording.

Step 3: Conclusion The herbicides are post-emergence herbicides. Hence, the correct option is (A).

Quick Tip to Solve: Use emergence as the reference event: pre means before emergence and post means after emergence.

30. Localized death of tissue usually characterized by browning and desiccation is termed as_____. [5 marks]

(A) Chlorosis

(B) Necrosis

(C) Cracking

(D) Burning

Correct Answer: (B) Necrosis

Solution:

Concept:

- Necrosis means death of cells or tissues in a living plant and may produce local brown, dry areas.
- Chlorosis is yellowing caused by loss or inadequate formation of chlorophyll; tissue death is a different symptom.

Step 1: Match the defining symptom The decisive phrase is localized death of tissue. Dead plant tissue commonly becomes brown and dries out, producing a necrotic spot or lesion. Browning together with desiccation therefore supports the technical term necrosis.

Step 2: Distinguish the alternatives Chlorosis primarily describes yellowing and does not by itself mean that cells have died. Cracking describes a physical split in the plant surface or organ. Burning can describe a scorch-like injury or its appearance, but it is not the general pathological definition of localized tissue death. Necrosis is the term that accounts for both the death and the associated dry brown appearance.

Step 3: Conclusion Localized tissue death with browning and desiccation is necrosis. Hence, the correct option is (B).

Quick Tip to Solve: Separate colour change from tissue death: yellowing suggests chlorosis, while dead dry brown tissue indicates necrosis.

31. The recommended seed rate per hectare for hybrid tomato is- [5 marks]

(A) 100 to 125 gram

(B) 200 to 250 gram

(C) 300 to 450 gram

(D) 600 to 850 gram

Correct Answer: (A) 100 to 125 gram

Solution:

Concept:

- A seed rate is the mass of seed needed to establish a crop on a specified land area; here that area is one hectare.
- Hybrid tomato is normally raised in a nursery and transplanted, allowing a comparatively small quantity of high-quality seed to supply the required plants.

Step 1: Recall the hybrid recommendation The standard seed-rate range tested for hybrid tomato is 100 to 125 grams per hectare. This is the seed used to raise the seedlings needed for transplanting the hectare, rather than a mass of seedlings or the quantity of fruit seed harvested from the crop.

Step 2: Compare the listed ranges The first range, 100 to 125 grams, matches the hybrid recommendation. The ranges 200 to 250, 300 to 450 and 600 to 850 grams all specify larger quantities and do not match this recommendation. In particular, the word hybrid is essential: a seed rate recalled for a different variety type or a different nursery practice should not replace the hybrid range asked here.

Step 3: Conclusion The recommended seed rate is 100 to 125 grams per hectare. Hence, the correct option is (A).

Quick Tip to Solve: When recalling tomato seed rates, identify whether the question specifies a hybrid before selecting the numerical range.

32. The term Standard, Spray, Pot-mums and Cascade are related to training of_____. [5 marks]

(A) Marigold

(B) Rose

(C) Chrysanthemum

(D) Canna

Correct Answer: (C) Chrysanthemum

Solution:

Concept:

- Training and pinching regulate plant shape, branching and the number and arrangement of flowers in ornamental crops.
- Standard, spray, pot-mum and cascade are recognized forms of training or presentation in chrysanthemum cultivation.

Step 1: Recognize the forms together In a standard chrysanthemum, a large terminal bloom is developed by controlling competing shoots or buds. Spray types carry several flowers, pot-mums form compact flowering pot plants, and cascade plants are trained into a trailing display. The collection of names therefore points to chrysanthemum.

Step 2: Check the crop choices Marigold is commonly pinched for branching, but this complete set of named forms is not its characteristic classification. Roses can also have standard and spray forms, so either word alone could mislead; the terms pot-mums and cascade in this group resolve the choice. Canna is grown for its foliage and flower spikes and is not associated with this training group.

Step 3: Conclusion These training forms are related to chrysanthemum. Hence, the correct option is (C).

Quick Tip to Solve: Use the distinctive term pot-mums to identify chrysanthemum when familiar words such as standard or spray occur with other flowers.

33. Fruit and vegetables are an important component of Indian agriculture due to A. High productivity of these crops B. Economically sustainable alternative for diversification C. High employment generation capacity D. High nutritional, medicinal and export potential. Choose the correct answer from the options given below: [5 marks]

(A) A, B and D only

(B) A, C and D only

(C) A, B, C and D

(D) B, C and D only

Correct Answer: (C) A, B, C and D

Solution:

Concept:

- Fruits and vegetables are high-value horticultural crops, with substantial output and returns per unit area under suitable management.
- Their importance includes farm diversification, labour employment, nutrition, processing and export earnings.

Step 1: Assess productivity and diversification Statement A is correct: many fruit and vegetable crops give high productivity per unit land. Statement B is also correct: they provide an economically useful alternative to dependence on a narrow cereal-based cropping system. Diversification spreads production and marketing opportunities; it does not mean that every horticultural crop is risk-free.

Step 2: Assess employment and product value Statement C is correct because nursery work, planting, crop care, repeated harvesting, grading, packing and processing require considerable labour. Statement D is correct because fruits and vegetables supply vitamins, minerals and other useful constituents, while many also have medicinal uses and export potential. Thus all four statements describe recognised contributions of horticulture. Options (A), (B) and (D) each omit a valid statement and are incomplete.

Step 3: Conclusion A, B, C and D are all correct. Hence, the correct option is (C).

Quick Tip to Solve: In an importance-of-horticulture question, check land productivity, diversification, jobs and product value separately.

34. Match the LIST-I with LIST-II

	LIST-I Means of fruits and vegetables maturity		LIST-II Related methods
A.	Visual means	I.	Ease of separation or abscission, firmness, specific gravity
B.	Physical means	II.	TSS, acidity, solid to acid ratio
C.	Chemical means	III.	Ethylene production
D.	Physiological method	IV.	Peel colour, size, drying of plant parts

Choose the correct answer from the options given below: [5 marks]

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

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

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

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

Correct Answer: (B) A-IV, B-I, C-II, D-III

Solution:

Concept:

- Maturity indices indicate whether produce has reached the appropriate harvesting stage; they may be visual, physical, chemical or physiological.
- Classify each index by what is observed or measured rather than by the instrument used to measure it.

Step 1: Match visible and physical characters Visual means (A) include peel colour, size and drying of plant parts, so A matches IV. Physical means (B) include firmness, specific gravity and ease of separation or abscission, so B matches I. These are features of the physical condition of the produce rather than measurements of its soluble constituents.

Step 2: Match composition and metabolic activity Chemical means (C) measure composition: total soluble solids (TSS), acidity and the solids-to-acid ratio. Therefore C matches II. Ethylene production is a physiological process associated with ripening, so physiological method (D) matches III. The complete sequence is A-IV, B-I, C-II, D-III. Option (A) misassigns every category; option (C) confuses visual, physical and chemical indices; option (D) incorrectly treats ethylene production as visual and acidity as physiological.

Step 3: Conclusion The correct matching is A-IV, B-I, C-II and D-III. Hence, the correct option is (B).

Quick Tip to Solve: Remember: appearance is visual, firmness is physical, sugars/acids are chemical, and ethylene production is physiological.

35. Match the LIST-I with LIST-II

LIST-IVariety	LIST-IICrop
A. Pusa Muskan	I. Marigold
B. Arka Bangara	II. Chrysanthemum
C. Pusa Shagun	III. Rose
D. Pusa Anmol	IV. Gladiolus

Choose the correct answer from the options given below: [5 marks]

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

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

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

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

Correct Answer: (D) A-III, B-I, C-IV, D-II

Solution:

Concept:

- A cultivar name identifies a selected variety within a crop species; matching requires the specific cultivar-crop association.
- The institutional prefix Pusa or Arka alone does not identify the flower crop, because each breeding programme develops several crops.

Step 1: Match the rose and marigold varieties Pusa Muskan is a rose variety, so A matches III. Arka Bangara is a marigold variety, so B matches I. The latter is a useful first check: options (A) and (C) incorrectly place Arka Bangara under chrysanthemum. Names should be matched to their established crop, not guessed from the literal meaning of the cultivar name.

Step 2: Complete the gladiolus and chrysanthemum matches Pusa Shagun is a gladiolus variety, so C matches IV. Pusa Anmol is a chrysanthemum variety, so D matches II. Combining all four associations gives A-III, B-I, C-IV, D-II, which is option (D). Option (B) has the marigold association right but assigns Pusa Muskan to chrysanthemum, Pusa Shagun to rose and Pusa Anmol to gladiolus. Options (A) and (C) also fail the full set of associations.

Step 3: Conclusion Pusa Muskan–Rose; Arka Bangara–Marigold; Pusa Shagun–Gladiolus; Pusa Anmol–Chrysanthemum. Hence, the correct option is (D).

Quick Tip to Solve: Use Arka Bangara–marigold as an anchor, then verify each of the three Pusa varieties independently.

36. What should be the most favorable temperature for tuber formation in potato? [5 marks]

(A) $8^{\circ}C$

(B) $12^{\circ}C$

(C) $14^{\circ}C$

(D) $17^{\circ}C$

Correct Answer: (D) $17^{\circ}C$

Solution:

Concept:

- Potato is a cool-season crop, and tuber initiation and development require a suitably cool temperature regime.
- The temperature that best favours tuber formation is different from the lowest temperature at which the plant can survive.

Step 1: Identify the appropriate optimum The most favourable temperature for potato tuber formation among the listed values is approximately $17^{\circ}C$. This falls in the cool, moderate range associated with good tuberization. During tuber formation, assimilates are directed into the swelling underground stolon tips that develop into tubers.

Step 2: Compare the four offered temperatures The alternatives $8^{\circ}C$, $12^{\circ}C$ and $14^{\circ}C$ are all cooler than the standard optimum represented by the options. A cool-season requirement does not mean that choosing the coldest value gives maximum tuber formation: very low temperatures slow plant growth and physiological activity. The question asks for the most favourable temperature, rather than a lower limit or merely a temperature at which some tubers could form. Therefore $17^{\circ}C$ is the best answer.

Step 3: Conclusion The most favourable temperature is $17^{\circ}C$. Hence, the correct option is (D).

Quick Tip to Solve: For potato tuberization, remember a moderate cool optimum near 17 degrees Celsius; do not select the coldest temperature automatically.

37. Brown heart of radish is due to the deficiency of_____. [5 marks]

(A) Calcium

(B) Boron

(C) Zinc

(D) Iron

Correct Answer: (B) Boron

Solution:

Concept:

- Brown heart is a physiological disorder in which the internal tissue of the radish root becomes brown. A physiological disorder can result from nutrient imbalance rather than infection.
- Boron is a micronutrient involved in cell-wall integrity and normal development of growing tissues.

Its deficiency is associated with internal browning in radish.

Step 1: Identify the characteristic deficiency symptom The decisive clue is brown heart in the edible root of radish. In this disorder, the internal tissues develop brown discoloration when boron supply is inadequate. Therefore, match the named disorder to boron deficiency, rather than treating every brown area as a disease caused by a pathogen.

Step 2: Eliminate the other nutrients Calcium is important for cell walls and membranes, but it is not the nutrient associated with the named brown-heart disorder here. Zinc deficiency more typically affects growth and leaf development. Iron deficiency is chiefly recognised by interveinal chlorosis of young leaves. Those associations do not match the internal browning of radish described in the question.

Step 3: Conclusion Brown heart of radish results from boron deficiency. Hence, the correct option is (B).

Quick Tip to Solve: Link brown heart of radish with boron; distinguish internal tissue browning from the young-leaf chlorosis associated with iron deficiency.

38. What should be the temperature for pasteurization of fruit juices? [5 marks]

(A) 30-40°C for 20-30 minutes

(B) 50-60°C for 20-30 minutes

(C) 70-80°C for 20-30 minutes

(D) 85-90°C for 20-30 minutes

Correct Answer: (D) 85-90°C for 20-30 minutes

Solution:

Concept:

- Pasteurization is a controlled heat treatment used to reduce spoilage organisms and inactivate enzymes in fruit juice. Both temperature and holding time determine the treatment.
- The conventional fruit-juice treatment represented in these choices is heating at $85–90^\circ C$ for 20–30 minutes. Pasteurization is different from complete sterilization.

Step 1: Select the stated temperature-time combination All four alternatives give the same holding period, 20–30 minutes, so the distinguishing variable is temperature. The appropriate combination in the listed conventional process is $85–90^\circ C$ for that period. Heat must be sufficient to check spoilage while preserving the usable quality of the juice.

Step 2: Compare the lower temperature ranges The $30–40^\circ C$ range is too low to represent the required pasteurization treatment. Heating at $50–60^\circ C$ also does not match this conventional juice-processing schedule. Although different products and processes can employ other validated schedules, $70–80^\circ C$ is not the prescribed combination among these choices for the stated holding period.

Step 3: Conclusion The required treatment is $85–90^\circ C$ for 20–30 minutes. Hence, the correct option is (D).

Quick Tip to Solve: Read temperature and time together in preservation questions; a heating temperature without its holding period does not specify a pasteurization schedule.

39. Which of the following is not correct about the classification of annual flowers? [5 marks]

(A) Winter season annuals

(B) Rainy season annuals

(C) Late rainy season annuals

(D) Summer season annuals

Correct Answer: (C) Late rainy season annuals

Solution:

Concept:

- Annual flowering plants complete their life cycle within one growing season. In seasonal cultivation, they are commonly grouped as winter, summer and rainy-season annuals.
- This question asks for the incorrect classification, so the answer must be the entry outside the standard three seasonal groups.

Step 1: Recognise the accepted seasonal groups Winter-season annuals are grown during the cooler season; summer-season annuals suit the warmer season. Rainy-season annuals are the group suited to monsoon conditions. These three headings describe the usual seasonal classification used for growing annual flowers, rather than a classification by flower colour, plant height or life span.

Step 2: Locate the extra category Options (A), (B) and (D) name winter, rainy and summer seasonal annuals respectively, so each belongs to the standard classification. Late rainy season may describe a particular sowing or flowering time in practice, but late rainy-season annuals is not a separate standard group in the classification being tested. Therefore option (C) is the incorrect entry, even though its wording resembles the valid rainy-season category.

Step 3: Conclusion Late rainy-season annuals is not a standard separate class in this seasonal grouping. Hence, the correct option is (C).

Quick Tip to Solve: For a negative classification question, list the accepted groups first: winter, summer and rainy season. Then select the added category.

40. The immediate removal of field heat from the produce is known as_____. [5 marks]

(A) Pre-sorting

(B) Dumping

(C) Pre-cooling

(D) Trimming

Correct Answer: (C) Pre-cooling

Solution:

Concept:

- Field heat is the heat retained by freshly harvested produce at its field temperature. Prompt removal of this heat is a post-harvest operation called pre-cooling.
- Lowering produce temperature reduces the rates of respiration and deterioration before subsequent

storage or transport. Pre-cooling is distinct from grading or trimming.

Step 1: Match the operation to its purpose The question specifies immediate removal of field heat. The operation must therefore directly lower the temperature of freshly harvested produce. Pre-cooling does exactly this: it brings warm harvested produce down towards a suitable handling or storage temperature before the later stages of the marketing chain.

Step 2: Distinguish the remaining handling operations Pre-sorting separates unsuitable or defective material from the harvested lot; its main purpose is selection rather than heat removal. Dumping transfers produce from a container into the handling line and is not itself the name of the cooling operation. Trimming removes unwanted plant parts. Since none of these terms specifically means rapid removal of field heat, options (A), (B) and (D) are excluded.

Step 3: Conclusion The immediate removal of field heat from harvested produce is pre-cooling. Hence, the correct option is (C).

Quick Tip to Solve: Associate pre-cooling with temperature reduction immediately after harvest; associate pre-sorting with selection and trimming with removal of unwanted parts.

Goats and their importance in Indian livestock production and human health

Goats are vital part of rural India, valued for their hardiness and ability to survive in limited resources. India has a rich diversity of goat breeds each suitable for specific climates and production needs. Prominent dairy breeds include Jamunapari, Beetal, Barbari and Sirohi. The Jamunapari goat, often called as the 'Queen of goats', can yield more than 2 litres of milk per day. It is majestic breed of goat having convex nose line with a tuft of hair known as 'roman nose' or parrot mouth appearance. Angora, Saanen and Alpine are some of the important exotic breeds of goat. Goats are often referred as the 'poor man's cow, because they require lower investment than cattle and can survive on minimal or low quality feed, reproduce quickly, and provide continuous income through milk, meat, manure ad sale of kids. Their ability to thrive in drought-prone and resource-scarce regions makes them an indispensable asset for small and marginal farmers.

A major centre for goat research and breed improvement in the country is ICAR-Central Institute for Research on Goats CIRG located at Mathura, Uttar Pradesh, functioning under the Indian Council of Agricultural Research ICAR, Government of India.

The meat of mutton is called 'Chevon' and is widely consumed in the country and offers good remuneration to the goat rearing farmers. Goat's milk has seen rising demand due its digestibility and nutrition profile. They are rich in minerals like calcium, potassium, phosphorous and also vitamin-A. The easy digestibility in is the strongest advantage of goat's milk making it suitable for individuals as it supports energy metabolism, gut health and immunity.

41. Which of the breed of goat has distinct feature of roman nose? [5 marks]

(A) Jamunapari

(B) Beetal

(C) Sirohi

(D) Barberi

Correct Answer: (A) Jamunapari

Solution:

Concept:

- Breed identification uses distinctive external characters, such as the shape of the face, ears and body. A Roman nose is a convex facial profile rather than a straight or concave nose.
- The passage specifically associates the Roman-nose or parrot-mouth appearance with the Jamunapari goat. This explicit breed–feature association decides this question.

Step 1: Locate the defining feature The question asks for the goat breed with a distinct Roman nose. In the description of Jamunapari, the passage mentions a convex nose line with a tuft of hair and calls this the Roman-nose or parrot-mouth appearance. Thus the feature sought is a facial characteristic, not a measure of milk yield or an exotic origin. The passage also calls Jamunapari the Queen of goats, but that nickname is supporting identification rather than the feature asked for.

Step 2: Match the feature to the options Option (A), Jamunapari, is the breed directly described with this feature. Beetal, Sirohi and Barberi appear among the other goat breeds, but they are not the breed to which this description is attached in the passage. In a passage-based question, a general similarity between breeds does not outweigh the explicit statement. Therefore retain Jamunapari and reject options (B), (C) and (D) for the requested association.

Step 3: Conclusion The breed identified by the Roman-nose feature in this passage is Jamunapari. Hence, the correct option is (A).

Quick Tip to Solve: Link the words Roman nose and convex facial profile with Jamunapari when revising the goat-breed descriptions.

42. Angora is an important exotic breed of- [5 marks]

(A) Cattle

(B) Buffalo

(C) Sheep

(D) Goat

Correct Answer: (D) Goat

Solution:

Concept:

- A livestock breed is a recognisable group within an animal species. An exotic breed originates outside the country in which it is being discussed.
- The passage lists Angora, Saanen and Alpine as important exotic breeds of goat. The question asks for the animal species, not the product obtained from the breed.

Step 1: Identify the animal group in the passage Read the sentence listing Angora together with Saanen and Alpine. It explicitly describes these animals as important exotic breeds of goat. The word exotic gives the origin category; it does not change the animal from a goat to a sheep or to a large dairy animal. Thus Angora must be placed in the goat group for this question. This is a direct classification item, so no calculation or inference about milk quantity is required.

Step 2: Eliminate the other animal categories Cattle in option (A) and buffalo in option (B) are separate large-ruminant livestock groups and do not match the classification stated for Angora. Sheep in option (C) is a tempting distractor because fibre-producing animals are often associated with wool, but Angora here is a goat breed. Option (D), goat, agrees exactly with the passage. Select the species named in the relevant sentence rather than classifying the breed from a possible product association.

Step 3: Conclusion Angora is an important exotic breed of goat. Hence, the correct option is (D).

Quick Tip to Solve: Remember Angora with the exotic goat breeds Saanen and Alpine; do not classify every fibre-producing breed as sheep.

43. ICAR-Central Institute of Research on Goats CIRG is located at_____. [5 marks]

(A) Mathura

(B) Bareilly

(C) Karnal

(D) Salem

Correct Answer: (A) Mathura

Solution:

Concept:

- A livestock research institute is identified by both its subject of research and its location. The animal named in an institute title helps avoid confusion with other livestock centres.
- The passage states that ICAR-Central Institute for Research on Goats, abbreviated CIRG, is located at Mathura, Uttar Pradesh.

Step 1: Find the institute-location statement The question names the goat research institute CIRG. The paragraph about research and breed improvement states that this major centre is located at Mathura in Uttar Pradesh and functions under the Indian Council of Agricultural Research. The words Research on Goats and the abbreviation CIRG identify the same institute referred to in the question despite the minor variation in the wording of the institute name. The location to fill in is therefore Mathura.

Step 2: Compare each offered location Mathura in option (A) reproduces the location explicitly given in the passage. Bareilly, Karnal and Salem in options (B), (C) and (D) are other place names; none is supplied as the location of CIRG in the passage. A place being associated with agriculture or animal husbandry generally would not establish that this particular institute is there. Match the named institute and its stated location as a pair, rather than selecting a familiar agricultural city.

Step 3: Conclusion ICAR-Central Institute for Research on Goats is located at Mathura, Uttar Pradesh. Hence, the correct option is (A).

Quick Tip to Solve: Revise the pair CIRG–Mathura together, keeping the goat research institute distinct from other livestock institutes.

44. Which of the following animal is called as poor man's cow? [5 marks]

(A) Buffalo

(B) Sheep

(C) Goat

(D) Poultry

Correct Answer: (C) Goat

Solution:

Concept:

- The expression poor man's cow describes an animal that can supply useful livestock products with relatively small investment and limited resources.
- The passage applies this expression to goats because they require lower investment than cattle, tolerate limited feed resources and support rural livelihoods.

Step 1: Explain the expression in context The passage directly says that goats are often called the poor man's cow. It explains the comparison through lower investment than cattle, survival on minimal or low-quality feed, quick reproduction and income from milk, meat, manure and sale of kids. These are reasons goats are valuable to small and marginal farmers. The expression is an economic comparison about usefulness and affordability; it does not mean that a goat is biologically a cow or a breed of cattle.

Step 2: Choose the animal that matches the description Option (C), goat, agrees with both the explicit wording and the supporting reasons. Buffalo in option (A) is a dairy animal but is not the animal given this title in the passage. Sheep in option (B) also supports rural livelihoods, yet it is not the named answer. Poultry in option (D) can provide eggs and meat but does not match the milk-producing animal described. Thus the other useful farm animals do not replace the direct identification of the goat.

Step 3: Conclusion The animal called the poor man's cow is the goat. Hence, the correct option is (C).

Quick Tip to Solve: Connect poor man's cow with the goat's low investment, feed tolerance and multiple sources of farm income.

45. The meat of the goat is called as_____. [5 marks]

(A) Mutton

(B) Poultry

(C) Pork

(D) Chevon

Correct Answer: (D) Chevon

Solution:

Concept:

- Animal products have specific commercial names that identify the animal from which they are obtained.
- Chevon is the specific name used for goat meat; mutton conventionally refers to sheep meat.

Step 1: Identify the animal product The question asks for the name of meat obtained from a goat. The goat passage associates goat rearing with meat production and uses the term Chevon. Thus the required term must identify goat meat, rather than a general category of farm animals.

Step 2: Eliminate the other names Mutton is conventionally sheep meat, even though the word is sometimes used loosely for goat meat in everyday Indian usage. Poultry denotes domesticated birds and their products, while pork is the meat of pigs. Chevon is the precise livestock-product term for goat meat and distinguishes it from all three alternatives.

Step 3: Conclusion Goat meat is called chevon. Hence, the correct option is (D).

Quick Tip to Solve: Pair chevon with goat, mutton with sheep and pork with pig to avoid confusion between livestock-product names.

Types of feed and their importance in animal nutrition

Cattle fodder is essential for maintaining animal health, improving milk yield and enhancing the overall farm productivity. In India, animal feed is broadly classified into green fodder, dry fodder, concentrate feed, preserved fodder and tree fodder, each contributing unique nutrients necessary for balance cattle nutrition. Green fodder provides moisture, vitamins, and digestible nutrients. The examples are bajra-napier hybrids, berseem, lucerne, mazie and sorghum. Leguminous fodder like berseem and lucerne are especially valued for their high protein content, which supports milk production and muscle development. Lucerne is also called as queen of fodder. The caution to be taken while using sorghum as green fodder as it contains hydrocyanic acid, especially in the young plans and when cultivated in drought stress conditions. High HCN is toxic to cattle and should be fed only after proper maturation.

Dry fodder supplies essential roughage for the animal health. It includes paddy straw, wheat straw, groundnut haulms and sorghum stover. Though they are low in protein, it provides necessary fibre and is often mixed with green fodder. Concentrate feeds are nutrient dense, which includes oil cakes, grains and bran. These are very significant for high yielding dairy cows, pregnant animals and growing calves due to their high protein and energy content. Silage made from maize and sorghum provides energy rich feed during the lean period.

Tree fodders are traditional source in many regions. Tress like subabul, banyan etc., provide protein rich leaves during dry seasons when green fodder is scarce. Tree fodders also support sustainable farming by preventing soil erosion and offering year round availability.

46. Which of the following feed gives good amount to vitamins to the farm animals? [5 marks]

(A) Green fodder

(B) Dry fodder

(C) Concentrates

(D) Hay

Correct Answer: (A) Green fodder

Solution:

Concept:

- Green fodder supplies moisture, vitamins and digestible nutrients in an animal ration.
- Different feed classes have different principal roles: dry roughage supplies fibre, while concentrates chiefly supply dense energy or protein.

Step 1: Identify the nutrient emphasis The question asks which feed supplies a good amount of vitamins. The feed passage explicitly states that green fodder provides moisture, vitamins and digestible nutrients. Fresh green plant material is therefore the feed category that directly matches the required nutritional role.

Step 2: Compare all feed categories Dry fodder is chiefly valued as a source of roughage and fibre. Concentrates are nutrient-dense feeds such as grains, oil cakes and bran, mainly used to supply energy and protein. Hay is dried, preserved fodder and can lose vitamins during drying and storage. These feeds remain useful components of a ration, but green fodder is the best answer to the particular vitamin-supply question.

Step 3: Conclusion Green fodder provides a good amount of vitamins to farm animals. Hence, the correct option is (A).

Quick Tip to Solve: Match the principal feed role to the question: green fodder for vitamins and moisture, dry fodder for roughage, and concentrates for dense nutrients.

47. Which of the following is a tree fodder? [5 marks]

(A) Lucerne

(B) Maize

(C) Subabul

(D) Berseem

Correct Answer: (C) Subabul

Solution:

Concept:

- Tree fodder consists of edible leaves and tender shoots harvested from fodder trees.
- Subabul is a fodder tree, whereas lucerne, berseem and maize are herbaceous field fodder crops.

Step 1: Identify the growth habit The defining word is tree. Subabul, also known as Leucaena leucocephala, is a woody fodder tree whose leaves are used in livestock feeding. The passage explicitly lists subabul among trees providing protein-rich leaves, especially when green fodder is scarce.

Step 2: Reject the herbaceous crops Lucerne is a herbaceous perennial leguminous fodder, rather

than a tree. Berseem is also a herbaceous leguminous fodder crop. Maize is a cereal grown for grain and green fodder. Although all three can feed livestock, their use as fodder does not make them tree fodders. Subabul alone has the tree growth habit required by the question.

Step 3: Conclusion Subabul is a tree fodder. Hence, the correct option is (C).

Quick Tip to Solve: Classify the plant by growth habit first: a fodder crop is tree fodder only when its edible material comes from a tree.

48. Haulm refers to the dry fodder of which of the following crop? [5 marks]

(A) Paddy

(B) Wheat

(C) Groundnut

(D) Sorghum

Correct Answer: (C) Groundnut

Solution:

Concept:

- Dry crop residues used as roughage have crop-specific names, including straw, stover and haulm.
- Groundnut haulms are the dried above-ground plant material remaining after the pods have been harvested.

Step 1: Match haulm to its crop The feed passage lists paddy straw, wheat straw, groundnut haulms and sorghum stover as examples of dry fodder. The word haulm in this list is specifically associated with groundnut. Its dried stems and leaves can be used as livestock roughage after harvesting the pods.

Step 2: Distinguish the other residue names Paddy and wheat leave cereal residues conventionally called straw. Sorghum residue is commonly called stover. Groundnut leaves and stems are called haulms. All four residues can be used as dry fodder, so the distinction depends on the correct crop-residue term rather than on whether the crop can feed animals.

Step 3: Conclusion Haulm here refers to the dry fodder of groundnut. Hence, the correct option is (C).

Quick Tip to Solve: Remember the passage pairs: paddy and wheat give straw, groundnut gives haulms, and sorghum gives stover.

49. HCN is found in which of the green fodder? [5 marks]

(A) Rice

(B) Maize

(C) Napier

(D) Sorghum

Correct Answer: (D) Sorghum

Solution:

Concept:

- Green fodder supplies nutrients to livestock, but its suitability also depends on the presence of toxic compounds. Hydrocyanic acid is abbreviated as HCN.
- Sorghum is the green fodder associated with HCN in the passage. The passage particularly cautions about young plants and plants grown under drought stress.

Step 1: Locate the warning about green fodder The passage states that caution is necessary when using sorghum as green fodder because it contains hydrocyanic acid. Thus, the name of the toxic compound in the question directly matches the warning attached to sorghum. The reference to young plants and drought stress identifies circumstances in which this warning is especially relevant.

Step 2: Compare the four crop options Rice is not the crop identified with the HCN warning in the passage. Maize is mentioned as a green fodder and as a crop used in silage, but the warning is not assigned to it. Napier is included among the examples of green fodder through bajra–napier hybrids, without the stated HCN association. Sorghum alone is explicitly connected with hydrocyanic acid, so it satisfies the specific relation asked rather than merely being a fodder crop.

Step 3: Conclusion HCN is associated with sorghum green fodder. Hence, the correct option is (D).

Quick Tip to Solve: Link the passage's HCN warning with sorghum, especially its young or drought-stressed growth, rather than selecting any crop simply because it is used as green fodder.

50. Which of the following is called as Queen of fodder? [5 marks]

(A) Berseem

(B) Lucerne

(C) Cowpea

(D) Stylo

Correct Answer: (B) Lucerne

Solution:

Concept:

- Fodder crops may be identified by familiar agricultural names as well as by their nutritive role. The title Queen of fodder is associated with lucerne.
- The passage identifies berseem and lucerne as leguminous fodders valued for their high protein content, then specifically gives the title Queen of fodder to lucerne.

Step 1: Identify the crop named in the passage The relevant sentence says that lucerne is also called Queen of fodder. This is a direct identification, so the answer does not require estimating which crop produces the most green material or which crop is most commonly grown. The question asks for the established name, and the passage explicitly supplies the crop to which that name applies.

Step 2: Eliminate the other named fodders Berseem is also a valuable leguminous fodder and is mentioned with lucerne for its high protein content, but the quoted title is not attached to berseem. Cowpea is a fodder legume, yet being a legume does not give it this particular title. Stylo is another fodder used for livestock, but it is not the crop identified as Queen of fodder. Only lucerne matches the specific designation in the question and the passage.

Step 3: Conclusion Lucerne is called Queen of fodder. Hence, the correct option is (B).

Quick Tip to Solve: Remember the exact pairing Queen of fodder–lucerne; do not confuse the crop's title with the broader group of protein-rich leguminous fodders.