PREVIEW QUESTION BANK

Module Name : PLANT SCIENCE-ENG
Exam Date : 14-Jul-2023 Batch : 10:00-12:00

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
Objective Question				
1	301	"The two strands of a DNA double helix are antiparallel". It means- 1. The two strands are not parallel. 2. The two strands are parallel but their orientations are opposite in direction. 3. The two strands are parallel in an alternative form of DNA. 4. The two strands are opposite to parallel in Z form. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
2	302	The 'Eastern Blot' is a powerful molecular biology technique used primarily to identify and study the- 1. Double helical structure of the DNA 2. Differences in the post-translational modifications in protein across various species 3. Single-stranded RNA molecule 4. Dynamism in a protein molecule A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
3	303	If an X-linked recessive disorder is in Hardy-Weinberg equilibrium and the incidence in males equals 1 in 100, then the expected incidence of affected homozygous females would be- 1. 1 in 100 2. 1 in 1000 3. 1 in 10000 4. 1 in 100000 A1 : 1 A2 : 2	4.0	1.00

		A3 : 3 A4 : 4		
Objective Question				
4	304	Normal adult hemoglobin (HbA) consists of- 1. Two alpha (α) and two beta (β) chains 2. Two alpha (α) and two gamma (γ) chains 3. Two alpha (α) and two delta (δ) chains 4. Four gamma (γ) chains A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
5	305	The probability of an individual in a population carrying two specific alleles of a human DNA marker, each of which has a fequency of 0.2, will be- 1. 0.02 2. 0.04 3. 0.08 4. 0.16 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
6	306	On average, how many fragments would a restriction enzyme, which recognizes a specific 5-base sequence in DNA, be expected to cleave a double-stranded bacteriophage with a genome size of 6066 bp into? 1. About 1212 2. About 120 3. About 60 4. About 6 A1 : 1 A2 : 2	4.0	1.00

		A3 : 3 A4 : 4		
Objective Question				
7	307	For which one of the following activities, the multiple copies of a specific gene/DNA sequence obtained through PCR can NOT be used for- 1. Site directed mutagenesis 2. Determination of sex of an embryo 3. Estimation of recombination frequency 4. *In vitro* regeneration of a complete organism A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
8	308	'Genetic imprinting', a process of gene silencing, is postulated to be caused by- 1. Differential rate of replication 2. Differential states of methylation 3. Absence of complementary allele 4. Non-inheritance of the target allele A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
9	309	The transgenic tomato variety 'FlavrSavr' had a greatly improved shelf-life and general quality. Which one of the following technologies was used to achieve this feat? 1. Genome editing 2. Antisense RNA 3. RNA interference 4. RNA editing A1 : 1 A2 : 2 A3 : 3	4.0	1.00

		A4 : 4		
Objective Question				
10	310	Which one of the following activities is NOT practiced in the Bulk method of breeding? 1. A large population is grown in every generation. 2. F_2 and subsequent generations are maintained and advanced as bulk. 3. Off-season nurseries and greenhouse facilities are used to advance the generation. 4. No pedigree records are maintained. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
11	311	When two species can not be crossed directly due to incompatibility, a third species is used to make the target gene transfer possible, which is called as- 1. Parachute species 2. Backing species 3. Bridge species 4. Rescue species A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
12	312	When two lines possessing two different alleles of resistance (say, *DM1* and *DM2*) for a particular disease are crossed, the two alleles interact to induce disease resistance response in the hybrid without pathogen attack and produce necrotic lesions. Such a phenomenon is referred to as- 1. Hypersensitive reaction 2. Hyper-insensitive reaction 3. Induced immune response 4. Autoimmune response A1 : 1 A2 : 2 A3 : 3	4.0	1.00

		A4 : 4		
Objective Question				
13	313	If the values of phenotypic and environmental variances are 6.8 and 1.2, respectively, the heritability (broad sense) of the trait would be- 1. 8.23% 2. 82.3% 3. 823% 4. 0.823% A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
14	314	In a Mendelian dihybrid cross, out of 400 F_2 generation plants, how many will be homozygous for at least one gene? 1. 100 2. 200 3. 300 4. 400 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
15	315	Which of the following describes a 'gene' correctly? (A). Genes are located on chromosome (B). Gene is a discrete particle (C). Recombination can happen within a gene (D). One gene can encode more than one polypeptide Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (A), (B) and (D) only. 3. (B), (C) and (D) only. 4. (A), (C) and (D) only.	4.0	1.00

		A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
16	316	The 'One gene-one enzyme' hypothesis was challenged by several researchers for its validity. The reasons are- (A). Many enzymes are composed of more than one polypeptide encoded by different genes. (B). Product of many genes are not enzymes (C). Genes contain introns, which do not codes for any amino acids (D). Several related polypeptides can be obtained from a single gene through alternate splicing Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (B), (C) and (D) only. 3. (A), (B), and (D) only. 4. (A), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
17	317	In a mapping study, it was found that two genes- A and B are showing independent assortment. The probable reasons for this independent assortment are- (A). A and B are not linked (B). A and B are loosely linked (C). A and B are located in two different chromosome (D). A and B are located on the same chromosome but placed far away (> 50cM) from each other. Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (B), (C) and (D) only. 3. (A), (C) and (D) only. 4. (A), (B) and (D) only. A1 : 1 A2 : 2 A3 : 3	4.0	1.00

		A4 : 4		
Objective Question				
18	318	The objections to the 'Dominance Hypothesis' of heterosis and inbreeding depression are- (A). Mostly, it is not possible to isolate inbreds as vigorous as hybrids (B). Asymmetrical distribution of quantitative traits in the F_2 population (C). Magnitude of heterosis in inbred lines has increased over time, which was not expected as per the hypothesis (D). Faster inbreeding depression in tetraploids Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (A), (B) and (D) only. 3. (A), (C) and (D) only. 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
19	319	Geographical Indication (GI) includes which of the following items? (A). Goods of handicraft (B). Natural products (C). Old archaeological structures (D). Agricultural produce Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (A), (B) and (D) only. 3. (A), (C) and (D) only. 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
20	320		4.0	1.00

		Merits of the Pedigree method of selection in crops include- (A). It offers enough opportunity for natural selection to influence the population (B). It takes less time than the Bulk method to develop a new variety (C). Breeders get maximum opportunity to use their skills and judgment for the selection of desirable plants (D). Transgressive segregants for yield and other quantitative traits may be recovered Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (A), (B) and (D) only. 3. (A), (C) and (D) only. 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
21	321	The main similarities between the synthetics and composite varieties of crops are- (A). Both are relevant to allogamous species (B). Both can be reconstituted exactly and easily (C). Both have a broad genetic base (D). Both are mixtures of several homozygotes and heterozygotes Choose the ***correct*** answer from the options given below: 1. (A), (C) and (D) only. 2. (A), (B) and (C) only. 3. (A), (B), and (D) only. 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
22	322		4.0	1.00

The activities happening during RNA editing are-
(A). A change in RNA base sequence after transcription

(B). Usual addition or occasional deletion of 'U' residues

(C). Occasional addition of 'C' residues

(D). Proceeding with the editing in the 5'-3' direction of mRNA

Choose the ***correct*** answer from the options given below:

1. (A), (B) and (C) only.
2. (A), (B) and (D) only.
3. (A), (C) and (D) only.
4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

23 323 4.0 1.00

Match **List-I** with **List-II**

List-I	**List-II**
Situation	**Nomenclature**
(A). A point mutation that leads to failure of expression of one allele	(I). Silent mutation
(B). A point mutation that does not alter the encoded amino acid	(II). Gain-of-function
(C). A mutation, which also results in the disturbance of the activity of the normal gene or protein	(III). Loss-of-function
(D). A mutation that results in different or increased protein activity	(IV). Dominant negative effect

Choose the **correct** answer from the options given below:

1. (A) - (III), (B) - (I), (C) - (II), (D) - (IV)
2. (A) - (III), (B) - (I), (C) - (IV), (D) - (II)
3. (A) - (IV), (B) - (I), (C) - (III), (D) - (II)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

24 324 4.0 1.00

Match **List-I** with **List-II**

List-I	**List-II**
Situation	**Chromosome nomenclature**
(A). A chromosome that has lost material from both ends with the fusion of the sticky ends	(I). Balanced reciprocal translocation
(B). Two chromosomes that have exchanged segments without loss or gain of any material	(II). Acrocentric
(C). A chromosome that contains a segment that has turned upside down and includes the centromere	(III). Ring chromosome
(D). A chromosome in which the centromere is very close to one end	(IV). Pericentric chromosome

Choose the **correct** answer from the options given below:

1. (A) - (III), (B) - (I), (C) - (IV), (D) - (II)
2. (A) - (II), (B) - (I), (C) - (IV), (D) - (III)
3. (A) - (III), (B) - (IV), (C) - (II), (D) - (I)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

25 325

Match **List-I** with **List-II**

List-I	**List-II**
Law/ hypothesis	**Proposer's name**
(A). Horizontal resistance	(I). N I Vavilov
(B). Gene-for-gene hypothesis	(II). R H Painter
(C). Law of parallel variation	(III). Harold Flor
(D). Mechanism of insect resistance	(IV). J E Vander Plank

4.0 1.00

Choose the **correct** answer from the options given below:

1. (A) - (III), (B) - (IV), (C) - (II), (D) - (I)
2. (A) - (IV), (B) - (III), (C) - (I), (D) - (II)
3. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

26 326 4.0 1.00

Match **List-I** with **List-II**

List-I	**List-II**
Name of the scientist	**Major activities/ discoveries**
(A). Johannsen	(I). X-ray diffraction
(B). Rosalind Franklin	(II). Colinearity of DNA sequence and amino acids
(C). Clarence P Oliver	(III). Coined the term 'gene'
(D). Charles Yanofsky	(IV). Recombination within a gene

Choose the **correct** answer from the options given below:

1. (A) - (II), (B) - (I), (C) - (IV), (D) - (III)
2. (A) - (III), (B) - (I), (C) - (II), (D) - (IV)
3. (A) - (III), (B) - (I), (C) - (IV), (D) - (II)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

27 327 4.0 1.00

Match **List-I** with **List-II**

List-I	**List-II**
Nomenclature	**Act of pollination**
(A). Ornithophily	(I). Pollination by water
(B). Entomophily	(II). Pollination by air
(C). Hydrophily	(III). Pollination by bird
(D). Anemophily	(IV). Pollination by insect

Choose the **correct** answer from the options given below:

1. (A) - (III), (B) - (II), (C) - (I), (D) - (IV)
2. (A) - (II), (B) - (I), (C) - (III), (D) - (IV)
3. (A) - (III), (B) - (IV), (C) - (II), (D) - (I)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

28 328 4.0 1.00

Match **List-I** with **List-II**

List-I	**List-II**
Name of the crop disease	**Name of the crop**
(A). Red rot	(I). Soybean
(B). Karnal bunt	(II). Rape seed & Mustard
(C). White rust	(III). Sugarcane
(D). YMV	(IV). Wheat

Choose the **correct** answer from the options given below:

1. (A) - (IV), (B) - (III), (C) - (I), (D) - (II)
2. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
3. (A) - (III), (B) - (IV), (C) - (II), (D) - (I)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

29 329 4.0 1.00

Match **List-I** with **List-II**

List-I	**List-II**
Name of Institute	**Head Office is located at**
(A). Central Potato Research Institute	(I). Hyderabad
(B). Indian Institute of Rice Research	(II). Ludhiana
(C). National Institute of Plant Biotechnology	(III). Shimla
(D). Indian Institute of Maize Research	(IV). New Delhi

Choose the **correct** answer from the options given below:

1. (A) - (II), (B) - (III), (C) - (I), (D) - (IV)
2. (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
3. (A) - (III), (B) - (I), (C) - (II), (D) - (IV)
4. (A) - (III), (B) - (I), (C) - (IV), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

30 330 4.0 1.00

Match **List-I** with **List-II**

List-I	**List-II**
Organisms used	Principles of Genetics established
(A). *Streptococcus pneumonae*	(I). Chromosomal theory of inheritance
(B). *Drosophila malenogaster*	(II). Fine structure of a gene
(C). *Neurospora crassa*	(III). DNA is the genetic material
(D). T2 bacteriophage *rII* locus)	(IV). One gene-one enzyme

Choose the **correct** answer from the options given below:

1. (A) - (III), (B) - (IV), (C) - (II), (D) - (I)
2. (A) - (III), (B) - (I), (C) - (IV), (D) - (II)
3. (A) - (II), (B) - (I), (C) - (IV), (D) - (III)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

31 331 4.0 1.00

Breeding a crop variety involves several activities. Arrange the steps of a plant breeding program in correct chronological order-
(A). Selection of superior recombinants

(B). Collection, evaluation, and selection of diverse genotypes for hybridization

(C). Hybridization among selected parental genotypes

(D). Multilocational testing and release of a variety for commercial release

Choose the **correct** answer from the options given below:

1. (B), (C), (A), (D).
2. (D), (B), (C), (A).
3. (B), (A), (D), (C).
4. (C), (B), (D), (A).

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

32 | 332 | 4.0 | 1.00

During the expression of a gene in a eukaryotic organism, a series of events happen one after another. Arrange the following steps of gene expression in eukaryotes chronologically i.e. from the first to the last
(A). Movement of the matured mRNA from the nucleus to the cytoplasm

(B). Formation of transcript (pre-mRNA) in the nucleus

(C). Removal of the introns, joining the exons, and addition of 5'cap and poly-A tail to the pre-mRNA

(D). Attachment of the mRNA with the Ribosome for translation in the cytoplasm

Choose the **correct** answer from the options given below:

1. (B), (C), (A), (D).
2. (D), (B), (C), (A).
3. (B), (A), (D), (C).
4. (C), (B), (D), (A).

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

33 | 333 | 4.0 | 1.00

The development of a synthetic variety in a cross-pollinated crop involves several activities that are performed serially one after another. Here are a few activities of synthetic variety development in a crop. Arrange the steps in chronological order i.e. from the beginning to the end.
(A). Production of the synthetic variety

(B). Collection of inbreds and testers (OPVs)

(C). Top cross or poly-cross test for GCA and selection of inbreds as parental lines

(D). Multilocation testing of the synthetic variety and distribution

Choose the **correct** answer from the options given below:

1. (B), (C), (D), (A).
2. (B), (C), (A), (D).
3. (B), (A), (D), (C).
4. (C), (B), (D), (A).

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

34	334	Marker-assisted backcross breeding (MABB) is a systematic approach to transferring a gene from a donor genotype to a recipient variety of crops. Here is a list of activities performed in a standard MABB program. Arrange the activities serially i.e. performed first to the last. (A). Production of F_1 hybrids through hybridization between the donor and the recipient genotypes (B). Foreground and background selection and backcrossing (or selfing) (C). Hybridity testing and backcrossing with the recipient variety (D). Selection of donor and the recipient variety based on target gene Choose the **correct** answer from the options given below: 1. (B), (A), (C), (D). 2. (A), (D), (C), (B). 3. (D), (A), (C), (B). 4. (C), (B), (D), (A). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

35	335	Given below are two statements: Statement (I): In a standard PCR amplification with a co-dominant marker, a pair of primers (Forward and Reverse) is used. Statement (II): In a standard PCR, only the segment of DNA whose 3'-ends are complementary to the two primers used only gets amplified In light of the above statements, choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are correct. 2. Both Statement (I) and Statement (II) are incorrect. 3. Statement (I) is correct but Statement (II) is incorrect. 4. Statement (I) is incorrect but Statement (II) is correct. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

36	336		4.0	1.00

		Given below are two statements: Statement (I): Mutation is an important source of genetic variations existing in any organism Statement (II): The rate of mutations, however, is the same in both spontaneous and induced mutations. In light of the above statements, choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are correct. 2. Both Statement (I) and Statement (II) are incorrect. 3. Statement (I) is correct but Statement (II) is incorrect. 4. Statement (I) is incorrect but Statement (II) is correct. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
37	337	Given below are two statements: Statement (I): An epigenetic change is an alteration in gene expression associated with alternative chromatin or methylation state without any change in the DNA sequence Statement (II): The alternative epigenetic states are not heritable either through mitosis or meiosis In light of the above statements, choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are correct. 2. Both Statement (I) and Statement (II) are incorrect. 3. Statement (I) is correct but Statement (II) is incorrect. 4. Statement (I) is incorrect but Statement (II) is correct. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
38	338		4.0	1.00

		Given below are two statements: Statement (I): Reciprocal recurrent selection (RRS) simultaneously improves two different populations in their ability to combine well with each other Statement (II): RRS is, however, inferior to the Recurrent Selection for GCA and Recurrent Selection for SCA when dominance is either complete or incomplete In light of the above statements, choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are correct. 2. Both Statement (I) and Statement (II) are incorrect. 3. Statement (I) is correct but Statement (II) is incorrect. 4. Statement (I) is incorrect but Statement (II) is correct. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
39	339	Given below are two statements, one is labeled as Assertion (A), and the other one is labeled as Reason (R). Assertion (A): The seeds obtained from a hybrid can not be used for raising the next crop, and need to produce fresh hybrid seeds for sowing in the next season Reason (R): Selfing, segregation, and inbreeding decrease heterosis in the seeds of hybrid crops. In light of the above statements, choose the *most appropriate* answer from the options given below. 1. Both (A) and (R) are correct and (R) is the correct explanation of (A). 2. Both (A) and (R) are correct but (R) is NOT the correct explanation of (A). 3. (A) is correct but (R) is not correct. 4. (A) is not correct but (R) is correct. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
40	340		4.0	1.00

Given below are two statements:
Statement (I): In usual terms, recombination frequency between any pair of genes does not exceed 50%

Statement (II): In a situation of 4-strands double cross-over, recombination frequency becomes 100%

In light of the above statements, choose the *most appropriate* answer from the options given below.

1. Both Statement (I) and Statement (II) are correct.
2. Both Statement (I) and Statement (II) are incorrect.
3. Statement (I) is correct but Statement (II) is incorrect.
4. Statement (I) is incorrect but Statement (II) is correct.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

41	341	Who is considered as Father of Plant Pathology? 1. Anton de Bary 2. PMA Millardet 3. EJ. Butler 4. Robert Koch A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

42	342	Which of the following bacterial pathogen is believed have originated in Andes region in South America, and spread to other continents 1. *Xanthomonas oryzae* pv. *oryzae* 2. *Ralstonia solanacearum* 3. *Xanthomonas axonopodis* pv. *punicae* 4. *Agrobacterium tumefaciens* A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question				
43	343	Great French Wine Blight was caused by 1. *Plasmapara viticola* 2. *Phylloxera vastatrix* 3. *Uncinula necator* 4. *Botrytis cinerea* A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
44	344	Wheat blast is one of the recent plant disease outbreaks in Asia (A). Wheat blast is caused by *Puccinia graminis* (B). Wheat blast is caused by *Fusarium graminearum* (C). Wheat blast is caused by *Magnaporthe oryzae* Triticum (D). Wheat blast primarly affect spikes and panicles Choose the ***correct*** answer from the options given below: 1. (C) and (D) only. 2. (B) and (D) only. 3. (A) and (B) only 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
45	345		4.0	1.00

(A). *Agrobacterium* causes crown gall in apple

(B). *Agrobacterium* causes gall by multiplying within the gall

(C). *Agrobacterium* incites gall by transferring T-DNA

(D). *Agrobacterium* need wounds to incite gall

Choose the ***correct*** answer from the options given below:

1. (A), (B) and (D) only.
2. (B) and (D) only.
3. (A), (C) and (D) only
4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question				
46	346	Monocyclic diseases are incited by soilborne pathogens (A). Monocyclic diseases are usually observed in perennial crops (B). Monocyclic disease complete one life cycle in a year (C). Monocyclic disease can be controlled by soil treatment (D). Monocyclic diseases are usually endemic in a particular location Choose the ***correct*** answer from the options given below: 1. (A), (B) and (D) only. 2. (A), (B) and (C) only. 3. (B), (C) and (D). 4. (A), (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
47	347		4.0	1.00

Ug99 is new race of *Puccinia graminis* f. sp. *tritici*

(A). Ug99 was first emerged in Uttar Pradesh

(B). Ug99 was first emerged in Uganda in 1999

(C). Ug99 was first emerged in Uganda in 1998

(D). Subvariants of Ug99 is emerged recently

Choose the ***correct*** answer from the options given below:

1. (A), (B) and (D) only.
2. (B) and (C) only.
3. (C) and (D) only
4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

48 348 4.0 1.00

Match **List-I** with **List-II**

List-I	**List-II**
Virus	**Transmission Vector**
(A). Gemini virus	(I). Aphids
(B). Potyvirus	(II). Thrips
(C). Badna virus	(III). Mealybug
(D). Tospo virus	(IV). White fly

Choose the **correct** answer from the options given below:

1. (A) - (IV), (B) - (I), (C) - (III), (D) - (II)
2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
3. (A) - (II), (B) - (I), (C) - (IV), (D) - (III)
4. (A) - (IV), (B) - (III), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

49 349 4.0 1.00

Match **List-I** with **List-II**

List-I	**List-II**
Repository	**Place/Location**
(A). ITCC	(I). England
(B). MTCC	(II). Belgium
(C). LMG	(III). Chandigargh
(D). NCPPB	(IV). New Delhi

Choose the **correct** answer from the options given below:

1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
2. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
3. (A) - (IV), (B) - (III), (C) - (I), (D) - (II)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

50 350 4.0 1.00

Match **List-I** with **List-II:**

List-I	**List-II**
Journal	**Country of Publication**
(A). Plant Pathology	(I). USA
(B). Phytopathology	(II). UK
(C). Journal of Plant Pathology	(III). Italy
(D). Journal of Mycology and Plant Pathology	(IV). India

Choose the **correct** answer from the options given below:

1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
2. (A) - (II), (B) - (I), (C) - (III), (D) - (IV)
3. (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
4. (A) - (II), (B) - (IV), (C) - (I), (D) - (III)

A1 : 1

A2 : 2

A3 : 3

		A4 : 4		
Objective Question				
51	351	Biotrophic fungal pathogen, *Puccinia graminis* f. sp. *tritici* is a threat to agriculture (A). *Puccinia graminis* f. sp. *tritici* enter through stomata (B). *Puccinia graminis* f. sp. *tritici* forms haustoria in the plant cell (C). *Puccinia graminis* f. sp. *tritici* can infect colateral weed plants in wheat fields (D). *Puccinia graminis* f. sp. *tritici* can infect dicot plants also Choose the **correct** answer from the options given below: 1. (A), (B), (C), (D). 2. (A), (B), (D) only 3. (B), (A), (C) only 4. (C), (B) only A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
52	352	(A). Race 1 of *Fusarium oxysporum* f. sp. *cubense* do not infect Cavendish banana (B). Race 4 of *Fusarium oxysporum* f. sp. *cubense* infects Cavendish banana (C). Race 4 *Fusarium oxysporum* f. sp. *cubense* is prevalent in India (D). Race 1 *Fusarium oxysporum* f. sp. *cubense* infect Gros Michel banana Choose the **correct** answer from the options given below: 1. (A), (B), (C) only. 2. (A), (B), (C), (D). 3. (B), (A), (D) 4. (C), (B), (D) only A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
53	353		4.0	1.00

		Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : Active dissemination and infection is observed in flagellated plant pathogens like *Phytophthora* Reason (R) : Root exudates attract zoospores of *Phytophthora* In light of the above statements, choose the *correct* answer from the options given below. 1. Both (A) and (R) are true and (R) is the correct explanation of (A). 2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A). 3. (A) is true but (R) is false. 4. (A) is false but (R) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
54	354	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : Bacterial pathogens needs wound or natural opening to enter the host Reason (R) : Bacterial plant diseases are mostly caused by Gram negative group In light of the above statements, choose the *correct* answer from the options given below. 1. Both (A) and (R) are true and (R) is the correct explanation of (A). 2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A). 3. (A) is true but (R) is false. 4. (A) is false but (R) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
55	355	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : Plant viruses multiplies within the plant cell expoliting cell machinary Reason (R) : Plant viruses lack elaborate metabolic capabilities In light of the above statements, choose the *correct* answer from the options given below. 1. Both (A) and (R) are true and (R) is the correct explanation of (A). 2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A). 3. (A) is true but (R) is false. 4. (A) is false but (R) is true.	4.0	1.00

		A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
56	356	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : False negative result will render the plant pathogen detection kit unusable Reason (R) : False negative results are due to poor sensitivity of the markers In light of the above statements, choose the *correct* answer from the options given below. 1. Both (A) and (R) are true and (R) is the correct explanation of (A). 2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A). 3. (A) is true but (R) is false. 4. (A) is false but (R) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
57	357	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : Host resistance is one of the best methods of plant disease management Reason (R) : New pathotype can make the resistance non durable In light of the above statements, choose the *correct* answer from the options given below. 1. Both (A) and (R) are true and (R) is the correct explanation of (A). 2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A). 3. (A) is true but (R) is false. 4. (A) is false but (R) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
58	358		4.0	1.00

		Given below are two statements: Statement (I): PMA Millardet discovered chemical method of plant disease managment Statement (II): Millardet was a student of Anton de Bary In light of the above statements, choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are correct. 2. Both Statement (I) and Statement (II) are incorrect. 3. Statement (I) is correct but Statement (II) is incorrect. 4. Statement (I) is incorrect but Statement (II) is correct. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
59	359	Given below are two statements: Statement (I): *Xa21* gene confers resistance to bacterial blight in rice Statement (II): *Xa 21* is a receptor like kinase type of receptor In light of the above statements, choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are incorrect. 2. Both Statement (I) and Statement (II) are correct. 3. Statement (I) is correct but Statement (II) is incorrect. 4. Statement (I) is incorrect but Statement (II) is correct. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
60	360	Given below are two statements: Statement (I): Phytoplasmas are found in Phloem Statement (II): Phytoplasmas are transmitted by beetles In light of the above statements, choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are correct. 2. Both Statement (I) and Statement (II) are incorrect. 3. Statement (I) is correct but Statement (II) is incorrect. 4. Statement (I) is incorrect but Statement (II) is correct.	4.0	1.00

		A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
61	361	Given below are two statements: **Statement (I):** Lichens are the symbiotic associations between a photobiont and mycobiont **Statement (II):** The photosynthetic partner in lichens can be either be a green algae, a blue-green algae or both In light of the above statements,choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are false. 2. Both Statement (I) and Statement (II) are true. 3. Statement (I) is true but Statement (II) is false. 4. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
62	362	Which of the following traits are associated with Actinomycetes (A). Presence of peptidoglycan in the cell wall (B). Low G+C content in the DNA (C). Arial mycelia bearing asexual spores (D). Presence of 70S ribosomes Choose the ***correct*** answer from the options given below: 1. (A), (B) and (D) only. 2. (A), (C) and (D) only. 3. (B), (C) and (D) only 4. (A), (B) and (C) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				

63	363	Different crops grown in alternate rows in a cultivated field is an example of 1. Crop rotation 2. Combined Cropping 3. Alternate cropping 4. Intercropping A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
64	364	Given below are two statements: **Statement (I):** Mesosomes are the folded invaginations of bacterial plasma membrane that help in cell division **Statement (II):** Mesosomes reduce the surface area of plasma membrane In light of the above statements,choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are true. 2. Both Statement (I) and Statement (II) are false. 3. Statement (I) is true but Statement (II) is false. 4. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
65	365	Given below are two statements: **Statement (I):** Yeasts are unicellular fungi that do not show sexual reproduction **Statement (II):** Budding is asexual mode of reproduction observed in haploid and diploid yeast cells In light of the above statements,choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are true. 2. Both Statement (I) and Statement (II) are false. 3. Statement (I) is true but Statement (II) is false. 4. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2	4.0	1.00

A3 : 3

A4 : 4

Objective Question

66 366 4.0 1.00

Match **List-I** with **List-II**

List-I (Microorganism)	**List-II (Important Trait)**
(A). *Trichoderma viridae*	(I). Radiation tolerant bacteria
(B). *Methanobacterium*	(II). Biocontrol fungus
(C). *Deinococcus*	(III). Methanogenic archaea
(D). *Frankia*	(IV). Symbiotic actinobacteria

Choose the **correct** answer from the options given below:

1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
2. (A) - (II), (B) - (III), (C) - (I), (D) - (IV)
3. (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

67 367 4.0 1.00

Match **List-I** with **List-II**

List-I	**List-II**
(A). Zygospores	(I). Endospore
(B). Endotoxin	(II). MoFe-Protein
(C). Dipicolinic acid	(III). Sexual spores
(D). Nitrogenase	(IV). Fe-Protein
(E). Dinitrogenase reductase	(V). Gram negative bacteria

Choose the **correct** answer from the options given below:

1. (A) - (III), (B) - (V), (C) - (I), (D) - (II), (E) - (IV)
2. (A) - (III), (B) - (V), (C) - (II), (D) - (IV), (E) - (I)
3. (A) - (III), (B) - (V), (C) - (I), (D) - (IV), (E) - (II)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II), (E) - (V)

A1 : 1

		A2 : 2 A3 : 3 A4 : 4		
Objective Question				
68	368	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). **Assertion (A) :** GC rich dsDNA has higher melting point than the AT rich dsDNA **Reason (R) :** Hydrogen bonding energy of a guanine–cytosine (*GC*) pair is higher than a adenine–thymine (AT) pair In light of the above statements, choose the *correct* answer from the options given below. 1. Both (A) and (R) are true and (R) is the correct explanation of (A). 2. Both (A) and (R) are true and (R) is not the correct explanation of (A). 3. (A) is true but (R) is false. 4. (A) is false but (R) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
69	369	Which of the following exhibit catalytic function 1. mRNA 2. rRNA 3. tRNA 4. siRNA A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
70	370		4.0	1.00

		Given below are two statements: **Statement (I):** Irradiation with UV light causes mutations in DNA **Statement (II):** UV light causes formation of covalent bond between the thymine molecules on the same strand causing thymine dimerization In light of the above statements,choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are true. 2. Both Statement (I) and Statement (II) are false. 3. Statement (I) is true but Statement (II) is false. 4. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
71	371	Fungi deriving their nutrition from dead biomass all called 1. Endophytic fungi 2. Parasitic fungi 3. Saprophytic fungi 4. Symbiotic fungi A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
72	372	Statement (I): Oligotrophs can grow in environments with very low levels of nutrients Statement (II): Oligotrophs exhibit slow growth, low rate of metabolism and low population density as compared to copiotrophs 1. Both Statement (I) and Statement (II) are false. 2. Both Statement (I) and Statement (II) are true. 3. Statement (I) is true but Statement (II) is false. 4. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question				
73	373	The DNA sequence located upstream to a gene sequence where DNA polymerase binds is known as 1. Repressor 2. Binder 3. Promoter 4. Terminator A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
74	374	Nucleic acid in majority of the known plant viruses is 1. ssRNA 2. dsRNA 3. ssDNA 4. dsDNA A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
75	375	Koch's postulates were based on the studies conducted on which of the following disease 1. Tuberculosis 2. Hepatitis 3. Leprosy 4. Anthrax A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
76	376		4.0	1.00

		Second generation biofuels are made from 1. Sugar 2. Starch 3. Lignocellulosic biomass 4. Vegetable oil A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
77	377	Which of the following have the ability to convert nitrite to nitrate (A). *Nitrobacter* (B). *Nitrosomonas* (C). *Nitrosospira* (D). *Nitrococcus* Choose the ***correct*** answer from the options given below: 1. (A), (B) and (D) only. 2. (A) and (D) only. 3. (A), (C) and (D). 4. (B) and (C) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
78	378		4.0	1.00

Match **List-I** with **List-II**

List-I (ICAR Institutes)	**List-II (Located at)**
(A). National Dairy Research Institute	(I). Nagpur, Maharashtra
(B). Central Arid Zone Research Institute	(II). Bangalore, Karnataka
(C). . Central Institute of Cotton Research	(III). Jodhpur, Rajasthan
(D). National Bureau of Agriculturally Important Insects	(IV). Hyderabad, Telangana
(E). Indian Institute of Millets Research	(V). Karnal, Haryana

Choose the **correct** answer from the options given below:

1. (A) - (I), (B) - (III), (C) - (II), (D) - (V), (E) - (IV)
2. (A) - (V), (B) - (III), (C) - (II), (D) - (IV), (E) - (I)
3. (A) - (V), (B) - (III), (C) - (I), (D) - (II), (E) - (IV)
4. (A) - (V), (B) - (I), (C) - (II), (D) - (III), (E) - (IV)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

79 | 379 | 4.0 | 1.00

Who has been dubbed as the 'Millet queen of India' in 2023

1. Lahari Bai
2. Manohari Bai
3. Lal Bai
4. Lakshmi Bai

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

80 | 380 | 4.0 | 1.00

The first amino acid in any polypeptide chain of eukaryotes is

1. Leucine
2. Methionine
3. Iso-Leucine
4. Lysine

A1 : 1

		A2 : 2 A3 : 3 A4 : 4		
Objective Question				
81	381	Usually, rain disrupts pollination in the flowers; however, in certain crops, it favors pollination. In which of the following crops, rain favors pollination 1. Cardamon 2. Cinnamon 3. Pepper 4. Nutmeg A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
82	382	Various techniques are used to identify the variety of a crop. In which of the following crops, the 'seedling illumination test' is used for variety identification? 1. Oat 2. Wheat 3. Sorghum 4. Pearl millet A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
83	383	Nucleus seeds maintain the highest genetic purity. In carrots, which one of the following methods is used to produce the nucleus seeds? 1. Seed-to-seed method 2. Root-to-seed method 3. Stump-to-seed method 4. Bud-to-seed method A1 : 1	4.0	1.00

		A2 : 2 A3 : 3 A4 : 4		
Objective Question				
84	384	Germination (%) of the seeds is an important parameter of seed quality. The minimum standard for seed germination in cauliflower hybrid is- 1. 60% 2. 65% 3. 70% 4. 75% A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
85	385	The quantity (g) of the seed of a rice variety to be submitted to the PPV&FR Authority for conducting DUS testing for registration of the variety under the PPV&FR Act is- 1. 1500g 2. 2000g 3. 2500g 4. 3000g A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
86	386	A seed may be dormant due to several factors including physiological parameters. One of the reasons for the physiological dormancy of seed is- 1. Presence of anti-nutritional factors 2. Absence of light 3. Presence of excess stored food 4. Absence of plant growth regulators (PGRs), hormones, etc. A1 : 1	4.0	1.00

		A2 : 2 A3 : 3 A4 : 4		
Objective Question				
87	387	The improved open-pollinated varieties (OPVs) in maize have the following advantages- (A). Easier to develop than hybrids (B). Seed production is simpler and relatively inexpensive (C). Superior in yield than the hybrids (D). Subsistence farmers can save their own seeds for planting in the following season Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (A), (B) and (D) only. 3. (A), (C) and (D) only. 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
88	388	Given below are the activities in the production of hybrid seeds of a crop. Find the correct group of activities- (A). Effective generation and maintenance of male sterile parent (B). Analysis of additive variance in the hybrid (C). Production of F_1 seeds through natural or manual pollination (D). Ensuring purity of the hybrid seeds through space or time isolation Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (A), (B) and (D) only. 3. (A), (C) and (D) only. 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question				
89	389	The procedure for taking 'field count' in broadly spaced crops such as cotton, chilies, castor, etc. includes the below-mentioned activities. Choose the most appropriate group of activities- (A). Enter the seed plot from a randomly selected site. (B). Inspect 1000 plants in any row. (C). Move across the seed plot covering all portions and take the requisite number of counts on the basis of the area of the seed plot. (D). Record in the inspection report the number of contaminants observed in each count. Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (A), (B) and (D) only. 3. (A), (C) and (D) only. 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
90	390	While submitting an application for registration of a crop variety in the PPV&FR Authority, the application must contain the following information. (A). Complete passport data of the parental lines from which the variety has been derived. (B). Geographical location in India from where the genetic material was taken. (C). Geographical location in India where the variety should not be grown. (D). Brief description of the variety including its DUS characteristics. Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (A), (B) and (D) only. 3. (A), (C) and (D) only. 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
91	391		4.0	1.00

Match **List-I** with **List-II**

List-I	**List-II**
Name of the crop	**The sample size for a grow-out test**
(A). Groundnut	(I). 250 tubers
(B). Paddy	(II). 1000 g
(C). Jute	(III). 500 g
(D). Sweet potato	(IV). 100 g

Choose the **correct** answer from the options given below:

1. (A) - (II), (B) - (III), (C) - (I), (D) - (IV)
2. (A) - (II), (B) - (IV), (C) - (III), (D) - (I)
3. (A) - (III), (B) - (II), (C) - (I), (D) - (IV)
4. (A) - (II), (B) - (III), (C) - (IV), (D) - (I)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

92 392

4.0 1.00

Match **List-I** with **List-II**

List-I	**List-II**
Type of germination/ birth	**Organisms where it is found**
(A). Epigeal germination	(I). Mangrove plant
(B). Viviparous germination	(II). Pea
(C). Oviparous germination (birth)	(III). Soybean
(D). Hypogeal germination	(IV). Birds

Choose the **correct** answer from the options given below:

1. (A) - (III), (B) - (I), (C) - (II), (D) - (IV)
2. (A) - (I), (B) - (III), (C) - (IV), (D) - (II)
3. (A) - (I), (B) - (IV), (C) - (II), (D) - (III)
4. (A) - (III), (B) - (I), (C) - (IV), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

93 393

Match **List-I** with **List-II**

List-I	**List-II**
Name of the crop	**No. of plants/ heads per field count**
(A). Tomato	(I). 1000 plants
(B). Pea	(II). 100 plants
(C). Soybean	(III). 1000 heads
(D). Wheat	(IV). 500 plants

Choose the **correct** answer from the options given below:

1. (A) - (II), (B) - (IV), (C) - (I), (D) - (III)
2. (A) - (II), (B) - (IV), (C) - (III), (D) - (I)
3. (A) - (IV), (B) - (II), (C) - (I), (D) - (III)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

94 394

Match **List-I** with **List-II**

List-I	**List-II**
Name of the crop	**Source of cytoplasm for hybrid seed production**
(A). Maize	(I). Wild abortive
(B). Sorghum	(II). Texas cytoplasm
(C). Rice	(III). Microcephalan
(D). Tobacco	(IV). Combined kafir

Choose the **correct** answer from the options given below:

1. (A) - (II), (B) - (IV), (C) - (III), (D) - (I)
2. (A) - (II), (B) - (IV), (C) - (I), (D) - (III)
3. (A) - (IV), (B) - (II), (C) - (I), (D) - (III)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

4.0 1.00

		A4 : 4		
Objective Question				
95	395	The steps of seed purity testing are listed below. Arrange the steps in chronological order i.e. from the first to the last (A). Critical examination of the sample and separating the pure seeds from other seeds, weeds, etc., and weighing them individually (B). Preliminary separation of the working sample (C). Calculate the percentage by weight of each component to one decimal place and prepare the report (D). Obtaining the working sample Choose the **correct** answer from the options given below: 1. (A), (B), (D), (C). 2. (D), (B), (C), (A). 3. (D), (B), (A), (C). 4. (C), (B), (D), (A). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
96	396	Activities happening during seed germination are listed below. Select the group having the correct order of activities- (A). Initiation of embryo growth (B). Resumption of metabolic activity in the rehydrated seed. (C). Rupture of seed coat and the emergence of seedling (D). Absorption of water by the dry seed Choose the **correct** answer from the options given below: 1. (B), (D), (A), (C). 2. (D), (B), (C), (A). 3. (D), (B), (A), (C). 4. (C), (B), (D), (A). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
97	397		4.0	1.00

		The viability of seeds is tested through a chemical called 2,3,5-triphenyl tetrazolium chloride (TZ). The steps of the TZ tests are listed below. Find out the group with the most appropriate order of the steps- (A). Dissection of the seeds to expose the embryo. (B). Placing the seeds in a 1.0% or 0.1% solution of 2,3,5-triphenyl tetrazolium chloride. (C). Soak the seeds in water overnight. (D). Examination of the treated seeds for coloration of the embryo. Choose the **correct** answer from the options given below: 1. (C), (B), (A), (D). 2. (D), (B), (C), (A). 3. (B), (A), (D), (C). 4. (C), (A), (B), (D). A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
98	398	Given below are two statements: Statement (I): Baby corn represents small and immature maize plants. Statement (II): The size, texture, and taste are the main differences between baby corn and normal full-size corn. In light of the above statements, choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are correct. 2. Both Statement (I) and Statement (II) are incorrect. 3. Statement (I) is correct but Statement (II) is incorrect. 4. Statement (I) is incorrect but Statement (II) is correct. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
99	399		4.0	1.00

		Given below are two statements, one is labeled as Assertion (A), and the other one is labeled as Reason (R). Assertion (A): To recognize and protect the rights of the farmers and the breeders and to stimulate investment in research and development for the development of new plant varieties, Govt. of India enacted the PPV&FR Act in 2001. Reason (R): The protection of the rights of farmers and plant breeders will facilitate the growth of the seed industry in the country which will ensure the availability of high-quality seeds and planting material to the farmers. In light of the above statements, choose the *correct* answer from the options given below. 1. Both (A) and (R) are true and (R) is the correct explanation of (A). 2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A). 3. (A) is true but (R) is false. 4. (A) is false but (R) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
100	400	Given below are two statements: Statement (I): Like any other crop varieties, the essentially derived varieties (EDVs) can also be registered and protected with the PPV& FR Authority, Govt. of India Statement (II): The rights of a breeder as granted by the PPV&FR Act (2001) shall also be applicable to the breeder of an EDV. In light of the above statements, choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are true. 2. Both Statement (I) and Statement (II) are false. 3. Statement (I) is true but Statement (II) is false. 4. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
101	401	Which of the following is NOT a type of millet? 1. Sorghum 2. Foxtail millet 3. Finger millet 4. Barley A1 : 1	4.0	1.00

A2 : 2

A3 : 3

A4 : 4

Objective Question

102 402

Given below are two statements:

Statement (I):Krishi Vigyan Kendras (KVKs) are known for their participatory approach to agricultural extension services.

Statement (II):KVKs involve farmers in the planning, implementation, and evaluation of extension activities to ensure that they are tailored to the local needs and constraints.

In light of the above statements,choose the *most appropriate* answer from the options given below.

1. Both Statement (I) and Statement (II) are true.
2. Both Statement (I) and Statement (II) are false.
3. Statement (I) is true but Statement (II) is false.
4. Statement (I) is false but Statement (II) is true.

4.0 1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

103 403

Match **List-I** with **List-II**

List-I	**List-II**
International Regulation	**Year of enforcement**
(A). CBD	(I). 2003
(B). ITPGRFA	(II).2004
(C). Cartagena Protocol	(III). 2014
(D). Nagoya Protocol	(IV).1993

Choose the **correct** answer from the options given below:

1. A - (IV), (B) - (III), (C) - (I), (D) - (II)
2. A -(I), (B) - (II), (C) - (III), (D) - (IV)
3. A -(IV), (B) - (II), (C) - (I), (D) - (III)
4. A -(III), (B) - (II), (C) - (I), (D) - (IV)

4.0 1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

104 404

Match **List-I** with **List-II**

List-I	**List-II**
Revolution event	**Associated with**
(A). Green Revolution	(I). Milk
(B).White Revolution	(II).Fish
(C). Blue Revolution	(III). Wheat
(D). Yellow Revolution	(IV).Oilseeds

Choose the **correct** answer from the options given below:

1. A -(II), (B) - (IV), (C) - (I), (D) - (III)
2. A -(IV), (B) - (II), (C) - (I), (D) - (III)
3. A -(III), (B) - (I), (C) - (II), (D) - (IV)
4. A -(III), (B) - (II), (C) - (I), (D) - (IV)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

105 405

Which of the following Geographical Indication is not matched correctly?

1. Basmati rice- North India
2. Fazli mango – West Bengal
3. Mysore betel leaf- Karnataka
4. Malabar pepper- Tamil Nadu

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

106 406

4.0 1.00

Match **List-I** with **List-II**

List-I	**List-II**
Legislation	**Enactment Year**
(A).The National Food Security Act	(I). 2001
(B).The PPV&FRA	(II). 2013
(C). The Biological Diversity Act	(III). 1966
(D). The National Seeds Act	(IV). 2002

Choose the **correct** answer from the options given below:

1. A -(II), (B) - (I), (C) - (IV), (D) - (III)
2. A -(III), (B) - (I), (C) - (II), (D) - (IV)
3. A -(II), (B) - (IV), (C) - (I), (D) - (III)
4. A -(II), (B) - (IV), (C) - (III), (D) - (I)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

107 | 407 | 4.0 | 1.00

Which of the following is a major factor that can disrupt the Hardy-Weinberg equilibrium?

1. Genetic drift
2. Sexual reproduction
3. Large population size
4. Random mating

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

108 | 408 | 4.0 | 1.00

Given below are two statements:
Statement (I):The NBPGR collaborates with several international organizations to conserve and utilize plant genetic resources.

Statement (II):The NBPGR is the only organization in India involved in the conservation of plant genetic resources.

In light of the above statements,choose the *most appropriate* answer from the options given below.

1. Both Statement (I) and Statement (II) are true.
2. Both Statement (I) and Statement (II) are false.
3. Statement (I) is true but Statement (II) is false.
4. Statement (I) is false but Statement (II) is true.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

109	409	What is the aim of the 'Vibrant Village Program' launched by the Indian government in April 2023? 1. To develop Northern states of India 2. To promote urbanization in rural areas 3. To provide employment opportunities in urban areas 4. To provide financial assistance to small businesses in rural areas A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

110	410	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) :Genetic recombination can result in the separation of linked genes. Reason (R) :Genetic recombination can break the linkage between two genes that are located close together on a chromosome. In light of the above statements, choose the *correct* answer from the options given below. 1. Both (A) and (R) are true and (R) is the correct explanation of (A). 2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A). 3. (A) is true but (R) is false. 4. (A) is false but (R) is true. A1 : 1 A2 : 2	4.0	1.00

		A3 : 3 A4 : 4		
Objective Question				
111	411	Which one of the following is NOT incorrect with respect to transpiration in plants 1. Transpiration is an important process for regulating the temperature of a plant by cooling the leaves through the loss of water vapor. 2. Transpiration rates are influenced by environmental factors such as humidity, temperature, and wind speed. 3. Plants can reduce transpiration rates by closing their stomata in response to drought or other stressful conditions. 4. Transpiration occurs only during the day when the stomata of a plant are open to allow gas exchange. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
112	412	What is the process for obtaining regulatory approval to use CRISPR-Cas9 technology in agriculture in India? 1. Submitting an application to the Ministry of Agriculture 2. Obtaining approval from the Ministry of Environment, Forest and Climate Change 3. Seeking approval from the Genetic Engineering Appraisal Committee 4. As of now, no approval is required for the use of CRISPR-Cas9 technology in agriculture in India A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
113	413		4.0	1.00

Arrange the following commercial crops in ascending order with respect to their ploidy level

(A). Wheat

(B). Cotton

(C). Tomato

(D). Banana

Choose the ***correct*** answer from the options given below:

1. (D), (C) (A) and (B)
2. (C), (D), (A) and (B)
3. (C) , (D), (B) and (A)
4. (D), (C), (B) and (A)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

114	414	Which of the following amino acid is the first one to include in almost all the protein synthesis process? 1. Glycine 2. Methionine 3. Thymine 4. Proline A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

115	415	Given below are two statements: Statement (I): The Calvin cycle, also known as the light-independent reactions of photosynthesis, occurs in the stroma of the chloroplast. Statement (II): The products of photosynthesis are carbon dioxide and water only. In light of the above statements,choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are true. 2. Both Statement (I) and Statement (II) are false. 3. Statement (I) is true but Statement (II) is false. 4. Statement (I) is false but Statement (II) is true.	4.0	1.00

		A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
116	416	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) :The enzyme helicase is required for DNA replication. Reason (R) :Helicase unwinds the double-stranded DNA molecule by breaking the hydrogen bonds between the base pairs. In light of the above statements, choose the *correct* answer from the options given below. 1. Both (A) and (R) are true and (R) is the correct explanation of (A). 2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A). 3. (A) is true but (R) is false. 4. (A) is false but (R) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
117	417	Which of the following molecular marker techniques is used for identifying genetic variation based on differences in DNA fragment sizes? 1. RFLP 2. RAPD 3. AFLP 4. SSR A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
118	418		4.0	1.00

The inflorescence of mustard plant is called

1. Ear
2. Raceme
3. Spike
4. Spadix

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

119	419	Which of the following is a disadvantage of ex-situ conservation? 1. It is expensive 2. It is ineffective in protecting species 3. It can lead to loss of genetic diversity 4. It leads to overpopulation of species A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

120	420	Match **List-I** with **List-II** **List-I Particular/Activity** / **List-II Class of Seed** (A).Seed for commercial production of crop / (I). Hybrid seed (B).Initial progeny of the nucleus seed / (II).Foundation seed (C). Direct produce of breeder seed / (III). Certified seed (D). Seed produced by controlled crossing in selected parental lines / (IV).Breeder seed Choose the **correct** answer from the options given below: 1. A -(II), (B) - (I), (C) - (IV), (D) - (III) 2. A -(III), (B) - (IV), (C) - (II), (D) - (I) 3. A -(IV), (B) - (I), (C) - (III), (D) - (II) 4. A -(II), (B) - (I), (C) - (III), (D) - (IV) A1 : 1	4.0	1.00

		A2 : 2 A3 : 3 A4 : 4		