

PREVIEW QUESTION BANK

Module Name : Seed Science and Technology - 02-ENG
Exam Date : 29-Jun-2024 Batch : 14:30-16:30

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
Objective Question				
1	201	Movement of DNA from one bacterium to another through a tubular bridge or pilus: 1. Conjugation 2. Transposition 3. Transfection 4. Transduction A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
2	202	Which of the following is responsible for eliminating toxic oxygen by-products from cells? 1. Mitochondria 2. Golgi complex 3. Peroxisomes 4. Chloroplasts A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
3	203	A form of multiple parasitism in which a parasite preferentially attacks a host that is already parasitized by another species is known as 1. Cleptoparasitism 2. Ectoparasitoid 3. Obligate parasitism 4. Superparasitism A1 : 1	4.0	1.00

		A2 : 2		
		A3 : 3		
		A4 : 4		
Objective Question				
4	204	For mass multiplication of DD-136 nematode, the common host used is 1. Silk moth 2. Fruit sucking moth 3. Codling moth 4. Lesser wax moth A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
5	205	Chlorpyrifos methyl is effective against stored product insects except 1. <i>Rhizopertha dominica</i> 2. <i>Tribolium castaneum</i> 3. <i>Caryedon serratus</i> 4. <i>Oryzaephilus surinamensis</i> A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
6	206	Which of the following insects often cause inhalational allergies in human following large emergence of adult insects 1. Stick insects 2. May flies 3. Ear wigs 4. Preying mantis A1 : 1 A2 : 2	4.0	1.00

A3 : 3

A4 : 4

Objective Question

7	207	Given below are two statements: Statement (I): Climate is a weather condition related to smaller areas at a given place and at a given time, Statement (II): Weather is a condition of atmosphere at a given place and at a given time In light of the above statements, choose the <i>most appropriate</i> answer from the options given below. - Both Statement (I) and Statement (II) are correct. - Both Statement (I) and Statement (II) are incorrect. - Statement (I) is correct but Statement (II) is incorrect. - Statement (I) is incorrect but Statement (II) is correct. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

8	208	The local name of cyclone in Phillippines is - Hurricane - Cyclone - Baquo - Typhoon A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

9	209		4.0	1.00
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Which one of the following are secondary tillage implements?

- (A). Subsoiler
- (B). Cultivator
- (C). Disc harrow
- (D). Wetland plough

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

10 210

_____ is the most suitable, drought resistant and persistent grass?

- 1. *Alylosia sp.*
- 2. *Cenchrus ciliaris*
- 3. *Stylosanthes hamata*
- 4. *Sorghum bicolor*

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

11 211

The rainfed area in India is approximately

- 1. 30 mha
- 2. 40 mha
- 3. 57 mha
- 4. 70 mha

A1 : 1

A2 : 2

4.0 1.00

A3 : 3

A4 : 4

Objective Question

12	212	Which nutrient is often a limiting factor in agricultural production? 1. Nitrogen 2. Carbon 3. Oxygen 4. Hydrogen A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

13	213	What is a potential disadvantage of agroforestry systems? 1. Increased soil erosion 2. Decreased carbon sequestration 3. Reduced biodiversity 4. Enhanced susceptibility to pests A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

14	214	Pungency in mustard oil is due to 1. Amino acid 2. Allyl isothiocyanate 3. Erusic acid 4. Oxalic acid A1 : 1 A2 : 2	4.0	1.00
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		A3 : 3		
		A4 : 4		
Objective Question				
15	215	Sesamum belongs to the family 1. Chenopodiaceae 2. Papilionaceae 3. Leguminosae 4. Pedaliaceae A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
16	216	Dark period is critical in which type of plant? 1. Short day plant 2. Long day plant 3. Day neutral plant 4. All the options A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
17	217	Which of the following is NOT a significant contributor to greenhouse gas emissions from livestock farming? 1. Carbon dioxide 2. Methane 3. Nitrous oxide 4. Ammonia A1 : 1 A2 : 2 A3 : 3	4.0	1.00

A4 : 4

Objective Question

18	218	Fe deficiency is mostly seen in crops growing on 1. Calcareous or alkaline soils 2. Salt affected soils 3. Acidic soils 4. Neutral soils A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

19	219	EDV (Essentially Derived Varieties) are those which are derived from: 1. crossing two commercially known varieties 2. hybrid introduced from other countries 3. existing variety through genetic engineering or mutation 4. crossing commercially known variety with its wild relative A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

20	220	What is the role of "companion planting" in agriculture? 1. Enhancing soil fertility through crop rotation 2. Growing different crop species together to deter pests 3. Cultivating plants in hydroponic system 4. Increasing soil compaction through cover cropping A1 : 1 A2 : 2 A3 : 3	4.0	1.00
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		A4 : 4		
Objective Question				
21	1101	Which of the following marker system is called as Selective Restriction Fragment Amplification? 1. Restriction fragment length polymorphism 2. Amplified fragment length polymorphism 3. Simple sequence repeats 4. Random amplified polymorphic DNA A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
22	1102	A specialized form of selection based on genome wide distributed markers, in which the information from marker genotype data covering the entire genome forms the basis of selection is termed as _____ (A). Genomic selection (B). Genome wide selection (C). Genome wide association studies (D). Marker-assisted recurrent selection Choose the correct answer from the options given below: 1. (A), (B) and (C) only. 2. (A) and (B) only. 3. (A), (B), (C) and (D). 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
23	1103	The term 'Genetics of Disaster' by Harlan refers to _____ 1. Breeding of narrow genetic base cultivars and their wide cultivation 2. Breeding of broad genetic base cultivars and their wide adaptation 3. Development of transgenics in food crops 4. Development of Bt cotton	4.0	1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

24 1104

4.0 1.00

PJHM-1 is a hybrid variety of _____

1. Wheat
2. Rice
3. Maize
4. Jowar

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

25 1105

4.0 1.00

Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).

Assertion (A) : Gene regulatory networks (GRN) are both bipartite and directional.

Reason (R) : GRN are bipartite because there are two types of nodes: genes and regulators, although some genes are themselves regulators of other genes or proteins. GRN are directional because regulators control genes and usually not the other way around.

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

26 1106

4.0 1.00

The gene "M" has 10 alleles, viz. M_1 to M_{10} . How many genotypes are possible for the gene M with various allelic combinations?

1. 55
2. 100
3. 110
4. 10

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

27 1107

The formula $\frac{SD}{\sqrt{N}}$ is used for the estimation of

1. Variance
2. Standard error
3. Standard variance
4. Error variance

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

28 1108

The biological mechanism by which proteins are transported to the appropriate destinations in the cell or outside of it is termed as _____

- (A). Protein targeting
- (B). Protein mixing
- (C). Protein sorting
- (D). Protein purification

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

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

A1 : 1

4.0 1.00

A2 : 2

A3 : 3

A4 : 4

Objective Question

29 1109

4.0 1.00

Which of the following mapping populations shows heterogeneous genetic background?

- (A). Near Isogenic Lines
- (B). Recombinant Inbred Lines
- (C). F_2
- (D). Doubled Haploids

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

30 1110

4.0 1.00

In a genetic analysis experiment, the rust resistance gene was found to be completely linked with red glume color. The leaf rust resistant stock with red glume was crossed with contrasting leaf rust susceptible white glumed line. The F_1 plant between them was found to be susceptible and red glumed. The genetic nature of both the genes were found to be monogenic. In F_2 population the likely frequency of susceptible red glumed plant will be

1. $1/4$
2. $1/16$
3. $1/2$
4. $9/16$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

31	1111	The mutagenic action of Gamma-rays was discovered by 1. H.J. Muller in Drosophila 2. T.H. Morghan in Drosophila 3. L.J. Stadler in Barley 4. B. McClintock in Maize A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

32	1112	The mutant line with herbicide tolerance in rice is 1. Improved MTU1010 2. Improved Kala Namak 3. Robin 4. Pokkali A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

33	1113	Given below are two statements: Statement (I): The single cross hybrids have highest yield potential Statement (II): The single cross hybrid seed is harvested from detasseled line in commercial seed production plot In light of the above statements, choose the <i>most appropriate</i> 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
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Objective Question

34	I114	The number of secondary trisomic lines possible in <i>Triticum durum</i> is 1. 14 2. 28 3. 21 4. 42 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

35	I115	The nitrogenous base Cytocine is 1. 4-amino-6-oxypyrimidine 2. 6-amino-2-oxypyrimidine 3. 2-amino-4-oxypyrimidine 4. 4-amino-2-oxypyrimidine A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

36	I116	Given below are two statements: Statement (I): The prophase is longest stage during mitotic cell division Statement (II): The nuclear membrane completely disappears at the prophase In light of the above statements, choose the <i>most appropriate</i> 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	4.0	1.00
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A4 : 4

Objective Question

37 1117

4.0 1.00

The current chairperson of Protection of Plant Varieties and Farmers' Rights Authority is

1. S Nagrajan
2. P L Gautam
3. K V Prabhu
4. T Mohapatra

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

38 1118

4.0 1.00

In a genetic analysis of resistant stock, the F_1 plant with contrasting susceptible parent was found to be resistant. The F_2 population was segregating in a ratio of 13 resistant and 3 susceptible. The test cross will segregate in

1. 3 resistant and 1 susceptible
2. 1 resistant and 1 susceptible
3. 9 resistant and 7 susceptible
4. 3 susceptible and one resistant

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

39 1119

4.0 1.00

The ability of a seed to produce mucilage upon hydration is known as

- (A). Myxospermy
- (B). Mesospermy
- (C). Polyspermy
- (D). Monospermy

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

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

		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		
Objective Question				
40	1120	Rafflesia flowers are exclusively pollinated by 1. Honey bee 2. Fly 3. Wasp 4. Beetle A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
41	1121	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : In hybrid seed production plot of GMS based hybrid, nearly 50% of the female plants are rogued out. Reason (R) : Male sterility phenotype in GMS line is governed by the nuclear recessive gene. In light of the above statements, choose the <i>correct</i> 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				
42	1122		4.0	1.00

Gynoecious cucumber lines are maintained by using

1. Silver nitrate
2. Ethrel
3. IAA
4. ABA

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

43 1123

4.0 1.00

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

List-I	List-II
Seed Processing Equipment	Effective for separation of
(A). Specific gravity separator	(I). Partially filled achenes
(B). Indented Cylinder Separator	(II). Broken caryopsis
(C). Dodder mill	(III). Rough surfaced admixture
(D). Spiral separators	(IV). Splits in soybean

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

44 1124

4.0 1.00

Burr reducer is used to remove

1. Testa
2. Cork
3. Aril
4. Pericarp

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

45 1125

Concept of 'Quality Declared Seed (QDS) system was introduced by

1. OECD
2. ISTA
3. AOSA
4. FAO

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

46 1126

Under OECD certification system, the colour of the pre-basic seed is

1. White
2. White with diagonal violet stripe
3. Red
4. Blue

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

47 1127

4.0 1.00

		Which among the following is not an ROS scavenging enzyme 1. Catalase 2. Glutathione 3. Superoxide dismutase 4. Peroxidase A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
48	1128	The National Centre for Genetic Resources Preservation is located in 1. Japan 2. Australia 3. Norway 4. USA A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
49	1129	Which seed company produced the genetically modified Round Up Ready seeds? 1. Pioneer 2. Monsanto 3. Bayer 4. Corteva A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question				
50	1130	An example of externally seed borne pathogen is 1. <i>Ustilago nuda</i> 2. <i>Ustilago hordei</i> 3. <i>Xanthomonas campestris</i> pv. <i>phaseoli</i> 4. <i>Drechslera graminea</i> A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
51	1131	Turkey "X" is a disorder attributed to seed contamination by 1. <i>Penicillium rubrum</i> 2. <i>Aspergillus niger</i> 3. <i>Aspergillus flavus</i> 4. <i>Aspergillus clavatus</i> A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
52	1132	The natural habitat of <i>Alternaria porri</i> 1. Brassica seeds 2. Soil 3. Paddy seeds 4. Onion seeds A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question				
53	1133	The Chairperson of NBA is 1. Dr Vinod Mathur 2. Dr T Mohapatra 3. C Achalender Reddy 4. Dr PL Gautam A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question				
54	1134	Indian Seed Congress is hosted annually by 1. ISST 2. NSAI 3. ISF 4. IARI A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question				

55	1135	Pre-breeding involves: 1. Identification of desirable trait expressions not present in the cultivated germplasm and transferring them from unadapted germplasm into breeding populations. 2. Identification of novel traits in crop wild relatives and their transfer to cultivated genepool resulting in broadening of genetic base. 3. Attempts to transfer genes controlling novel trait variations from crop wild relatives and unadapted germplasm into agronomically superior cultivars overcoming the problems of 'linkage drag'. 4. 1,2 and 3 above A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
56	1136	Evaluation of germplasm for quality traits are often misleading due to: 1. High genotype x environmental interactions in expression of traits. 2. Expression of secondary metabolites profiles depend on ecological factors. 3. The cultivation conditions are often not comparable for assessing quality traits greatly influence by environmental factors. 4. Options 1,2 and 3 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
57	1137	Which of the following DNA markers are codominant in inheritance? 1. RAPD, ISSR 2. SSR, SNP, RFLP 3. SCOT, SRAP 4. AFLP, SCAR A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question				
58	1138	The species concept that explains that a species' integrity is maintained by interbreeding within a species as well as by reproductive barriers between organisms in different species is known as: 1. Phylogenetic species concept 2. Ecological species concept 3. Biological species concept 4. Modern species concept A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
59	1139	Van Valen's (1976) Ecological species concept explains that a species taxon as a lineage of organisms is maintained and segmented by ecological forces. Accordingly, the species integrity is maintained by: 1. Stabilizing selection while disruptive selection can lead to new species 2. Reproductive barriers between organisms 3. Exchange genetic information through interbreeding 4. Pre-zygotic barriers upon hybridization A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
60	1140	Reproductive isolating barriers are responsible for: 1. Preventing breakdown of interspecific hybrids 2. Preventing gene flow between species 3. Ensure increase in diversity of subpopulations 4. Increasing gene flow between species A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question				
61	1141	In a self-fertilizing species, maximum diversity can be captured by: 1. Sampling greater number of subpopulations rather than increasing sample size within subpopulations 2. Sampling larger number of individuals within subpopulations 3. Collecting larger number of seeds from each plant within subpopulations 4. Collecting equal number of seeds from each plant in a subpopulation. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
62	1142	Correct nomenclature for a fertile amphidiploid generated between two species, <i>Abelmoschus esculentus</i> and <i>A. tetraphyllus</i> var <i>tetraphyllus</i> is: 1. <i>Abelmoschus esculentus</i> x <i>tetraphyllus</i> var. <i>tetraphyllus</i> 2. <i>Abelmoschus</i> x <i>esculophyllus</i> 3. <i>A.esculentus</i> x <i>A. tetraphyllus</i> var <i>tetraphyllus</i> amphidiploid 4. <i>Abelmoschus</i> x <i>esculotetraphyllus</i> A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
63	1143	The ability of crop variety to become adapted to new climatic and edaphic conditions is called 1. Adaptation 2. Acclimatization 3. Domestication 4. Natural selection A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				

64	1144	The concept of Pureline was proposed by.....in the year..... on the basis of his studies with beans (<i>Phaseolus vulgaris</i>) variety called..... 1. Vavilov,1905, Prince 2. Vavilov, 1913, Princess 3. Johannsen, 1903, Princess 4. Johannsen,1905, Prince A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

65	1145	Allopolyploid that has two copies of each genome present in it and, as a consequence, behaves as a diploid during meiosis 1. Diploids 2. Polyploids 3. Amphidiploids 4. Autopolyploids A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

66	1146	Which of the following is not a two gene dwarf variety of wheat? 1. Sonora-63 2. Sonora-64 3. Kalyan Sona 4. Moti A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

67	1147		4.0	1.00
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Match the following crop species with their respective haploid chromosome number. Match **List-I** with **List-II**

List-I	List-II
(A). Hordeum	(I). 8
(B). Chickpea	(II). 7
(C). Sunflower	(III). 12
(D). Rice	(IV). 17

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

68 1148

Statement I- Primary gene pool consists of cultivated species and landraces.

Statement II- The secondary gene pool consists of the progenitor species that are crossable with reduced fertility of the resulting hybrids and progenies

Statement III-The tertiary gene pool consists of all the species that are crossable with cultivated species.

- All the statements are correct
- I and II are correct III is incorrect
- I is incorrect, II and III are correct
- All the statements are incorrect

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

69 1149

4.0 1.00

Crop varieties developed to express a specified desirable monogenic, oligogenic, or polygenic traits combination are often referred to as

1. Super organic
2. Genetically modified crops
3. Designer crops
4. Transgenics

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

70	1150	Diversity array technology (DART) is a high throughput, low-cost genotyping system. It is essentially similar to..... procedure 1. AFLP 2. RFLP 3. SNP 4. SSR A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

71	1000151	Which of the solitary bee aids in seed production of <i>Medicago sativa</i> (A). <i>Megachile rotundata</i> (B). <i>Apis mellifera</i> (C). <i>Coccinella septempunctata</i> (D). <i>Asclera ruficollis</i> Choose the correct answer from the options given below: 1. (A) only. 2. (A) and (B) only. 3. (A), (B) and (C) only. 4. (A), (B), (C) and (D). A1 : 1	4.0	1.00
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		A2 : 2		
		A3 : 3		
		A4 : 4		
Objective Question				
72	1000152	Commercial exploitation of two lines system of hybrid seed production is feasible in 1. Brinjal 2. Radish 3. Carrot 4. Onion A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
73	1000153	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : During groundnut seed production, soil application of 'Ca' is recommended at the time of peak flowering. Reason (R) : Excessive 'K' in soil results in pops and low vigoured seeds. In light of the above statements, choose the <i>correct</i> 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				
74	1000154		4.0	1.00

Match the following physiological disorders observed in the respective crops. Match **List-I** with **List-II**

List-I	List-II
Crop	Physiological disorder/condition
(A). Pea	(I). High nitrogen application leads to bleaching
(B). Turnip	(II). Boron deficiency leads to brown heart
(C). Cole crops	(III). Boron deficiency leads to hallow stem
(D). Groundnut	(IV). Calcium deficiency leads to blind pods

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

75	1000155	Defoliant used during seed production	4.0	1.00
		1. Metham-sodium 2. Indole-3-butyric acid 3. 1-Naphthaleneacetic acid 4. Ethephon		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

76	1000156		4.0	1.00
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Chemical used for tomato seed extraction

1. Sodium Carbonate
2. Hydrogen peroxide
3. Fumaric Acid
4. Carbonic Acid

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

77 1000157

4.0 1.00

Match the following nutritive tissues of the seed with respective crop species. Match **List-I** with **List-II**

List-I	List-II
Crop	Nutritive tissue of the seed
(A). Brazil Nut	(I). Hypocotyl
(B). Water lily	(II). Perisperm
(C). Lettuce	(III). Endosperm
(D). Marigold	(IV). Cotyledon

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

78 1000158

4.0 1.00

Sequence of Megasporogenesis in orchid

- (A). Dyad
(B). MMC
(C). Triad
(D). Tetrad

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

79	1000159	Seed germination type where cotyledons unfold and become photosynthetic	4.0	1.00
		1. Phanerocotylar 2. Cryptocotylar 3. Epicotylar 4. Hypocotylar		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

80	1000160	Subcellular organelle involved in lipid mobilization during seed germination	4.0	1.00
		1. Lysosomes 2. Endoplasmic reticulum 3. Glyoxysome 4. Golgi apparatus		
		A1 : 1		
		A2 : 2		

		A3 : 3		
		A4 : 4		

Objective Question

81	1000161	Plant growth hormone that promotes root initiation and lateral root development 1. Strigolactone 2. Ethylene 3. Salicylic acid 4. Auxin A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

82	1000162	Paclobutrazol inhibits seed germination by altering the synthesis of 1. GA 2. ABA 3. Cytokinin 4. Auxin A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

83	1000163	Given below are two statements: Statement (I): Spiral separator is best suited for removing the vetch weed seeds from wheat seed lot. Statement (II): Gravity separator is best suited to separate the seeds damaged by <i>Lygus</i> bug in carrot seed lot. In light of the above statements, choose the <i>most appropriate</i> 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	4.0	1.00
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A2 : 2

A3 : 3

A4 : 4

Objective Question

84	1000164	Order of processing equipment used for processing chili seeds to be packed in vaporproof packs (A). Air-screen cleaner (B). Cylinder separator (C). Gravity separator (D). Treater (E). Dehumidified Dryer Choose the correct answer from the options given below: 1. (E) → (B) → (A) → (C) → (D) 2. (E) → (A) → (B) → (C) → (D) 3. (A) → (E) → (B) → (C) → (D) 4. (A) → (B) → (C) → (D) → (E)	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

85	1000165	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : During sun drying of seeds in open air, the seeds are covered with thick tarpaulin or will be transferred back to seed godown in the evening. Reason (R) : A decrease in air temperature leads to an increase in relative humidity. In light of the above statements, choose the <i>most appropriate</i> 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.	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

86	1000166	Spiral separator, separates the seeds based on differences in seed's ability to 1. Slide 2. Roll 3. Bounce 4. Crawl A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

87	1000167	Blanking the lower end of the top screen in an air-screen separator will help in 1. Free flow of seeds 2. Fine grading 3. Better scalping 4. Better grading A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

88	1000168	Processing machine that changes the physical size of the seed (A). Buckhorn machine (B). Pelleting machine (C). Burr reducer (D). Brusher machine Choose the correct answer from the options given below: 1. (B) only. 2. (A) and (B) only. 3. (A), (B) and (C) only. 4. (A), (B), (C) and (D). A1 : 1	4.0	1.00
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A2 : 2

A3 : 3

A4 : 4

Objective Question

89	1000169	Given below are two statements: Statement (I): If self-pollinated seed crops are heavily lodged in one-third or more of the area during field inspection and there is a chance for the crop to stand up before maturity, it should be recommended for rejection. Statement (II): If the seed crop in cross-pollinated crops and hybrid seed fields is heavily lodged in one-third or more of the area during field inspection, it should be recommended for rejection, regardless of whether the crop will recover and stand up before maturity. In light of the above statements, choose the <i>most appropriate</i> answer from the options given below. - Both Statement (I) and Statement (II) are true. - Both Statement (I) and Statement (II) are false. - Statement (I) is true but Statement (II) is false. - Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

90	1000170	Maximum permissible insect damage allowed for certified seed class of maize is 0.25 per cent 0.50 per cent 0.75 per cent 1.00 per cent A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

91	1000171		4.0	1.00
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Match the following minimum germination percentage for certified seeds with their respective crops. Match **List-I** with **List-II**

List-I	List-II
Minimum germination% for CS class	Crop
(A). 90	(I). Sweet corn hybrids
(B). 85	(II). Wheat
(C). 80	(III). Maize inbred line
(D). 75	(IV). Sorghum

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

92	1000172	ISTA recommended dormancy breaking treatment in wheat (A). Preheat treatment (B). GA₃ treatment (C). Prechill treatment (D). KNO₃ treatment Choose the correct answer from the options given below: (A) only. (B) and (C) only. (A), (B) and (C) only. (A), (B), (C) and (D). A1 : 1 A2 : 2 A3 : 3	4.0	1.00
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A4 : 4

Objective Question

93	1000173	Given below are two statements: Statement (I): During the final field inspection of pearl millet foundation seed production plots, the percentage of plants infected with ergotted earheads should not exceed 0.02 percent. Statement (II): Seeds harvested from a pearl millet foundation seed production plot with 0.01 percent ergotted earheads will not be certified unless they undergo floatation treatment with brine. In light of the above statements, choose the <i>most appropriate</i> answer from the options given below. - Both Statement (I) and Statement (II) are true. - Both Statement (I) and Statement (II) are false. - Statement (I) is true but Statement (II) is false. - Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

94	1000174	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : A fourth field inspection is mandatory only for cotton hybrids produced by hand emasculation and pollination. Reason (R) : The presence of selfed seeds in cotton hybrid seed lots produced through hand emasculation and pollination is caused by accidental human errors. In light of the above statements, choose the <i>correct</i> answer from the options given below. - Both (A) and (R) are true and (R) is the correct explanation of (A). - Both (A) and (R) are true but (R) is NOT the correct explanation of (A). (A) is true but (R) is false. (A) is false but (R) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

95	1000175		4.0	1.00
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Pick-wise GOT is followed in

1. Cotton
2. Castor
3. Green gram
4. Chili

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

96	1000176	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) :Above 14% seed moisture content, lipid peroxidation increases Reason (R) : At higher moisture content oxidative enzymes like lipoxygenases are inactivated In light of the above statements, choose the <i>correct</i> 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
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Objective Question

97	1000177	Which is/are the lipid soluble antioxidant/s in the given list (A).Ascorbic Acid (B).Glutathione (C).Alpha tocopherol (D).Beta carotene Choose the <i>correct</i> answer from the options given below: 1. (A) and (B) only. 2. (C) and (D) only. 3. (A), (B), (C) and (D). 4. (B) and (C) only.	4.0	1.00
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		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		
Objective Question				
98	1000178	A higher GSSG to GSH ratio in seed is indicative of 1. Lower seed quality 2. Lower rate of seed deterioration 3. High antioxidant activity 4. High carbohydrate content A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
99	1000179	Which of the following phenomena is not associated with the dry state of the seed? 1. Glassy state 2. Free radical mediated lipid autoxidation 3. Maillard reaction 4. DNA Repair A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
100	1000180	In orthodox seeds, acquisition of desiccation tolerance has been reported to involve 1. Glucose 2. LEA 3. GA₃ 4. Free radicals A1 : 1	4.0	1.00

A2 : 2

A3 : 3

A4 : 4

Objective Question

101	1000181	In the seed viability equation $V = K_i - P/\sigma$, the component that will remain unaffected when the seed lot is shifted to a different storage environment is 1. σ 2. K_i 3. Both σ and K_i 4. V A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

102	1000182	The disease of wheat in which grains are partially or completely replaced by blackish cockles is caused by 1. <i>Anguina tritici</i> 2. <i>Clavibacter tritici</i> 3. <i>Puccinia graminis tritici</i> 4. <i>Tilletia tritici</i> A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

103	1000183	Head rice is observed at which stage of rice crop production 1. Flowering 2. Milling 3. Harvest maturity 4. Seedling emergence A1 : 1	4.0	1.00
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A2 : 2

A3 : 3

A4 : 4

Objective Question

104 1000184

4.0 1.00

Match the following common names of the insect pests with their scientific names. Match **List-I** with **List-II**

List-I	List-II
Storage Pests	Scientific Name
(A).Red flour beetle	(I). <i>Sitophilus oryzae</i>
(B).Saw toothed grain beetle	(II). <i>Tribolium castaneum</i>
(C).Rice Weevil	(III). <i>Rhizopertha dominica</i>
(D).Lesser Grain Borer	(IV). <i>Oryzaephilus surinamensis</i>

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

105 1000185

4.0 1.00

Fusarin and moniliformin are examples of

- Antibiotics
- Phytohormones
- PR proteins
- Mycotoxins

A1 : 1

A2 : 2

		A3 : 3		
		A4 : 4		
Objective Question				
106	1000186	Import of commercial seed consignments into India is carried out by 1. ICAR-NBPGR, New Delhi 2. DPPQS, Faridabad 3. NSC, New Delhi 4. Seed Division, MoA&FW A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
107	1000187	PIC and MAT are related to 1. BDA 2. ITPGRFA 3. Seed Act 4. Cartagena Protocol A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
108	1000188	In TTZ Test, a paddy seed with unstained scutellum is recorded as 1. Germinable seed 2. Low vigour seed 3. Non germinable seed 4. Dead seed A1 : 1 A2 : 2	4.0	1.00

		A3 : 3		
		A4 : 4		

Objective Question

109	1000189	Mycelial staining using Trypan blue is carried out for the detection of 1. Karnal bunt of wheat 2. Loose smut of wheat 3. Bunt of rice 4. Alternaria blight of wheat A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

110	1000190	Soaking seeds in warm water for 12-14 hours will facilitate the detection of 1. <i>Ditylenchus dipsaci</i> 2. <i>Neovossia indica</i> 3. <i>Fusarium monoliforme</i> 4. <i>Sclerotinia sclerotiorum</i> A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

111	1000191	The recommended fumigation frequency in seed godown is 1. Maximum 2 fumigations at 30 days interval 2. Maximum 3 fumigations at 60 days interval 3. Maximum 4 fumigations at 30 days interval 4. Maximum 3 fumigations at 30 days interval A1 : 1 A2 : 2	4.0	1.00
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		A3 : 3		
		A4 : 4		

Objective Question

112	1000192	Cryotherapy is used for the elimination of viruses in 1. Banana shoot tips 2. Rice seedlings 3. Barley seedlings 4. Cucumber seedlings A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

113	1000193	The first international regulatory framework for safe handling and use of LMOs 1. CBD 2. Nagoya Protocol 3. Cartagena Protocol 4. DIP Act A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

114	1000194	A farmer has purchased 5Kg bag of seed labelled 98% pure seed and 85% germination. Calculate the effective quantity of seed in the bag that will contribute to desirable plant stand. 1. 3.85 Kg 2. 4.5 kg 3. 4.25 Kg 4. 4.17 Kg A1 : 1 A2 : 2	4.0	1.00
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A3 : 3

A4 : 4

Objective Question

115	1000195	The sole international agency concerned with intellectual property protection of new plant varieties 1. UPOV 2. WTO 3. WIPO 4. USDA A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

116	1000196	Under PPV& FR Act, 2001, "a wild relative about which the farmers possess the common traditional knowledge" is categorized as 1. Extant variety 2. Farmers' variety 3. EDVs 4. Heirloom variety A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

117	1000197	ITPGRFA currently facilitates access to 1. All plant genetic resources 2. All genetic resources of Annex 1 crops 3. All accessions notified under MLS of Treaty 4. Plant and Animal genetic resources A1 : 1 A2 : 2	4.0	1.00
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A3 : 3

A4 : 4

Objective Question

118	1000198	The Ps that are considered crucial for successful seed marketing include (A).Price (B).Product (C).Policy (D).Precedence Choose the correct answer from the options given below: 1. (A), (B) and (C) only. 2. (A) and (B) only. 3. (A), (B), (C) and (D). 4. (B) and (C) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

119	1000199	In the seed industry, competition from another firm can cause the demand curve of an existing variety to shift 1. Left 2. Right 3. Downwards 4. Upwards A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

120	1000200		4.0	1.00
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Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).

Assertion (A) : Increase in price of wheat variety 'X' results in significant fall in seed demand

Reason (R) : The demand for wheat seed is inelastic

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