

PREVIEW QUESTION BANK

Module Name : Seed Science and Technology-ENG
Exam Date : 14-Jul-2023 Batch : 14:30-16:30

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
Objective Question				
1	2001	Choose the incorrect statement regarding the composition of election commission. 1. Appointment of the chief election commissioner and other election commissioners shall be made by the president. 2. President can also appoint regional commissioners after consultation with the election commission. 3. Conditions of service and tenure of office of the election commissioners and regional commissioners shall not be determined by the president. 4. Article 324 under constitution of India is dealing with the composition of election commission. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
2	2002	Which one of the following amendment acts is referred to as the 'mini constitution'? 1. 42nd 2. 44th 3. 46th 4. 48th A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
3	2003		4.0	1.00

With regard to the jurisdiction and powers of high court, disputes relating to the election of members of parliament and state legislatures, comes under the ambit of which one of the following jurisdictions?

1. Original
2. Writ
3. Appellate
4. Supervisory

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

4 2004

Which of the following is formed when the moisture is deposited in the form of water droplets on cooler surfaces of solid objects?

1. Frost
2. Fog
3. Mist
4. Dew

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

5 2005

Which of the following is the correct reason for the occurrence of best fishing grounds in the mixing zones (the mixing of warm and cold currents)?

1. It has the moderate temperature
2. It has the slowest sea waves
3. It has the high growth of planktons.
4. It has the sunrays perpendicular to the sea level.

A1 : 1

A2 : 2

4.0 1.00

A3 : 3

A4 : 4

Objective Question

6	2006	Eisenhower Cup is associated with which among the following sports? 1. Tennis 2. Chess 3. Football 4. Golf A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

7	2007	Who was the first woman President of the Indian National Congress? 1. Kasturba Gandhi 2. Sarojini Naidu 3. Annie Besant 4. Aruna Ali A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

8	2008	The dockyard was found in which of the following sites in Indus Valley Civilization? 1. Chanhudaro 2. Lothal 3. Kalibangan 4. Banawali A1 : 1	4.0	1.00
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		A2 : 2		
		A3 : 3		
		A4 : 4		
Objective Question				
9	2009	Who built the famous Charminar of Hyderabad? - Krishndev Rai - Muhammad Quli Qutb Shah - Nadir Shah - Aurangzeb A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
10	2010	Who discovered the right triangle? - Pythagoras - Ancient Egyptians - Archimedes - Michelangelo A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
11	2011	Citrus canker is caused by - Virus - Viriod - Bacteria - Fungus	4.0	1.00

		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		
Objective Question				
12	2012	DBM is a specific insect of 1. Brinjal 2. Tomato 3. Cabbage 4. Bottle gourd A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
13	2013	What is the scientific name of mulberry silkworm? 1. Bombyx mori 2. Antherea paphia 3. Antheraea assama 4. Attacus Ricinii A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
14	2014		4.0	1.00

Subject matter of economics are want, effort and

1. Wealth
2. Growth
3. Satisfaction
4. Income

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

15 2015

The National Bureau of Animal Genetic Resources (NBAGR) is located in

1. Karnal
2. Bengaluru
3. Hisar
4. Jind

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

16 2016

The oldest known agroforestry systems is

1. Alley cropping
2. Taungya systems
3. Home Gardening
4. Shifting cultivation

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

17	2017	The effect or requirement of the relative length of day and night on flowering is called 1. Photomechanics 2. Transpiration 3. Photoperiodism 4. Phytoperiodism A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

18	2018	Which of the following statements are true? (A) Small pores in epidermis of leaves is called stomata. (B) Guard cells present in the stomata are helpful in exchange of gases with atmosphere (C) Transpiration takes place through stomata Choose the correct answer from the options given below: 1. (A) and (B) only. 2. (B) and (C) only. 3. (A) and (C) only. 4. (A), (B) and (C). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

19	2019		4.0	1.00
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Water holding capacity is highest in which of the following soils?

1. Silt soil
2. Clayey soil
3. Chalk soil
4. Peat soil

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

20 2020

Certified seed is the progeny of

1. Nucleus seed
2. Foundation seed
3. Breeder's seed
4. Registered seed

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

21 11001

Complete set of genes in a population is known as:

1. Genome
2. Gene pool
3. Genotype
4. Haplotype

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

22	11002	Given below are two statements: Statement (I) : When two dominant alleles affect the phenotype in separate, distinguishable ways is known as codominance. Statement (II) : When the phenotype of F1 is somewhere between the phenotypes of the two parents is known as incomplete dominance. In light of the above statements, choose the most appropriate 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

23	11003	The exception to the 'Law of purity of gametes' or 'Law of Segregation' is/are? (A) Linkage (B) Nondisjunction (C) Meiotic drive (D) X-linked genes Choose the correct answer from the options given below: (A), (B) and (C) only. (B) only. (B), (C), only. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

24	11004	What is the full form of CRISPR? 1. Clustered regulatory interspaced short palindromic repeats 2. Clustered regularly interspersed short palindromic repeats 3. Clustered regulatory interspersed short palindromic repeats 4. Clustered regularly interspaced short palindromic repeats A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

25	11005	Genomic selection (GS) is a powerful tool which: (A) take account of all the major or minor QTLs spread throughout the genome. (B) is especially useful for complex traits. (C) take account of only major QTLs spread throughout the genome. (D) take account of only minor QTLs spread throughout the genome. Choose the correct answer from the options given below: 1. (A), (B) only. 2. (B), (C) only. 3. (C), (D) only. 4. (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

26	11006		4.0	1.00
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More ears per plant trait in maize is called?

- (A) Multiplicity
- (B) Copiousness
- (C) Proficiency
- (D) Prolificacy

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

27 11007

Which of the following involves unguided repair of a targeted DNA break by the natural endogenous DNA repair mechanism of the host (e.g. non-homologous end joining)?

- (A) SDN1
- (B) SDN2
- (C) SDN3
- (D) SDN4

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

28	11008	Directorate of Groundnut Research is located in which city and state of India? 1. Junagadh, Rajasthan 2. Junagadh, Gujarat 3. Rajkot, Gujarat 4. Bikaner, Rajasthan A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

29	11009	The genes governing plant height in wheat which are identified from the genotype Norin 10 are? (A) rht1 (B) rht2 (C) rht1.1 (D) rht2.1 Choose the correct answer from the options given below: 1. (A), (B) and (D) only. 2. (A), (B) and (C) only. 3. (A), (B) only. 4. (B), (C) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

30	11010		4.0	1.00
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Which of the mechanism promotes self-pollination in plants

1. Dichogamy
2. Cleistogamy
3. Heterostyly
4. Chasmogamy

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

31 11011

The female parent of transgenic mustard hybrid DMH 11 is

1. Varuna containing barnase gene
2. Varuna containing barstar gene
3. EH-2 containing barnase gene
4. EH-2 containing barstar gene

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

32 11012

The genotypic constitution of an F_2 plant is AaBBCcDd. What will be the total types of gametes produced if there is an independent assortment for each gene

1. 4
2. 8
3. 16
4. 9

A1 : 1

A2 : 2

A3 : 3

4.0 1.00

		A4 : 4		
Objective Question				
33	11013	Kala namak is a traditional variety of 1. Rice from eastern Uttar pradesh 2. Wheat from Punjab 3. Mustard from Rajasthan 4. Maize from Sikkim A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
34	11014	Given below are two statements: Statement (I) : A-DNA has right-handed helix Statement (II) : A DNA has 10 BP/turn 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 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
35	11015		4.0	1.00

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

List-I	List-II
Crop plant	2n chromosome number
(A) Rice	(I) 42
(B) Bread Wheat	(II) 24
(C) Maize	(III) 14
(D) Bajra	(IV) 20

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

36 11016

Which of the rRNA is not a part of the larger sub-unit of the ribosome in eukaryotes

- 28s
- 5.8s
- 18s
- 5s

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

37 11017

4.0 1.00

During the expression analysis of an mRNA associated with disease resistance, the primer used for first-strand cDNA synthesis is

1. Oligo dT
2. Oligo dA
3. Oligo dG
4. Oligo dU

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

38 11018

What is the total number of monosomic lines possible in *Nicotiana tabacum*

1. 24
2. 48
3. 12
4. 36

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

39 11019

4.0 1.00

Under Indian seed legislation system, intercropping system is allowed for the production of certified seed class in

- (A) Groundnut
- (B) Green gram
- (C) Cucumber
- (D) Brinjal

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. (D) and (A) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

40	11020	Concept of 'Quality Declared Seed (QDS)' system was introduced by	4.0	1.00
		1. OECD 2. ISTA 3. AOSA 4. FAO		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

41	11021		4.0	1.00

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, 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 **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

42	11022	Foundation seed of female parent and certified seed of hybrid cannot be produced in the same season and location even by providing suitable isolation distance in	4.0	1.00
		1. CGMS based hybrid 2. GMS based hybrid 3. TGMS based hybrid 4. CHAs (Chemical Hybridizing Agents) based hybrid		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

43	11023		4.0	1.00

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

1. Mesospermy
2. Myxospermy
3. Polyspermy
4. Monospermy

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

44 11024

Seed dispersal mode that facilitates in overcoming the physical dormancy of the seed

1. Amphizoochory
2. Mesozoochory
3. Endozoochory
4. Exozoochory

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

45 11025

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 groundnut pods
(B) Indented Cylinder Separator	(II) Broken seeds
(C) Dodder mill	(III) Cuscuta seeds
(D) Spiral separators	(IV) Splits in soybean
	(V) Dead seeds from viable seeds

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

46 11026

Processing equipment used to separate weevil-damaged pea seeds

- Dodder mill
- Needle separator
- Buckhorn machine
- Air screen separator

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

47 11027

4.0 1.00

The seed container that is recommended for long term storage condition is

1. 700 gauge polyethene bags
2. Paper pouches
3. Trilayered aluminium foil pouches
4. Markin bags

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

48 I1028

Which among the following biological resources is outside the ambit of the National Biodiversity Authority

1. Animal Genetic Resources
2. Microbial Genetic Resources
3. Human Genetic Resources
4. Rare and endangered species

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

49 I1029

Which among the following is derived from a latin word that means 'To lay open'?

1. *Sui generis*
2. Germplasm
3. Patent
4. Priming

A1 : 1

A2 : 2

A3 : 3

4.0 1.00

		A4 : 4		
Objective Question				
50	11030	In the Indian seed industry sector, which crop accounts for the highest hybrid seed market share 1. Maize 2. Cotton 3. Paddy 4. Vegetables A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
51	11031	Which among the following storage pest is an external feeder 1. <i>Sitophilus granarius</i> 2. <i>Stegobium paniceum</i> 3. <i>Tribolium castaneum</i> 4. <i>Sitotroga cerealella</i> A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
52	11032	Annex 1 list of crops is a component of 1. Biological Diversity Act 2. ITPGRFA 3. Seed Act 4. Cartagena protocol A1 : 1 A2 : 2	4.0	1.00

A3 : 3

A4 : 4

Objective Question

53	11033	Which among the following is NOT an indicator of seed ageing 1. Germination index 2. Electrical conductivity 3. First count of germination test 4. Number of fresh ungerminated seeds in the germination test A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

54	11034	The most destructive reactive oxygen species in seed 1. Superoxide anion free radical 2. Hydrogen peroxide 3. Hydroxyl free radical 4. Chlorine radical A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

55	11035		4.0	1.00
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In relation to import of transgenic material into the country for research /experimental purposes, which of the following statement is incorrect?

1. ICAR-National Bureau of Plant Genetic Resources, New Delhi is empowered to provide import permits for obtaining transgenic material for research in the country
2. DBT and the Ministry of Environment and Forest (MoEF) have separate set of prescribed procedures for providing permission for import of transgenic material into India for research/experimental purposes
3. Only the Department of Quarantine, Govt of India is authorized to issue the import permits for obtaining transgenic material for research
4. Review Committee on Genetic Manipulation (RCGM), constituted by DBT examines the desirability of import of transgenic line, from the biosafety point of view under the Environment (Protection) Act, 1986.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

56 11036

For export of plant germplasm specific guidelines do not exist for which category of plant material?

1. Export of germplasm not covered under any collaborative research project with research institutes/counter parts, public-private transfer, private entities (Indian Citizen/Non-Indian), as per Section 3 (2); and Export of germplasm under collaborative research projects/work plans, under Section 5 of the BDA, 2002
2. Export of Annex 1 crops under ITPGRFA and FAO designated accessions of CG Centres located in India
3. Indian researcher/Government institution to carry/send germplasm for non-commercial research/or research for emergency purposes other than collaborative research
4. Send germplasm to a foreign entity or institution not covered under above three for commercial research purposes other than collaborative research

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

57	11037	GRIN, EURISCO, NARO and PGR Portal, respectively are plant genetic resources database and online resources of which countries or organizations? 1. IRRI, UK, Malaysia, ICRISAT 2. CIMMYT, Sweden, China, India 3. USA, Europe, Japan, India 4. Philippines, France, Malaysia, India A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

58	11038	The Probit Scales is used in PGR data analyses for what purposes in PGR informatics? 1. For machine learning and modelling in data analyses 2. To generate exploratory statistical graphics 3. For analyses of PGR data and relating to eco geographies 4. To impute missing data values in PGR database A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

59	11039	Molecular taxonomy generally refers to which of the following? 1. Use of diversity in biomolecules such as secondary metabolites for naming of organisms 2. Use of isozyme diversity for naming of organisms 3. Use of DNA analysis for naming of organisms without study of their morphology 4. Use of diversity in amino acid sequences for classifying organisms A1 : 1 A2 : 2 A3 : 3	4.0	1.00
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A4 : 4

Objective Question

60 11040

In taxonomy paired statements used for identification of unknown species are known as?

1. Taxonomic key
2. Dichotomous key
3. Polyclave keys
4. Alpha Taxonomic key

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

61 11041

Below mentioned are statements about biosecurity. Which of these are correct?

1. Includes measures to prevent conduct of experiments to induce functional changes in pathogen
2. It includes all measures towards bio-exclusion and bio-containment of pathogen and prevent the spread of pathogen to humans, animals, plants and the environment
3. It refers only to prevention of introduction of transboundary pathogen
4. It aims only at regulating research related to construction of new pathogen

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

62 11042

4.0 1.00

As per the wholistic approach to Biosecurity adopted by FAO in 2018, the process excludes which of the following?

1. All relevant government activities including those of research institutes and universities and civil society associations
2. All relevant authorities and legislation, public opinion and consumers as well as private industries
3. All primary producers of food and animal feed
4. All religious activities involving general public

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

63	11043	Given below are two statements: Statement (I) : Domestication leads to morphological changes but not the substantial genetic background Statement (II) : Domestication of crop plants is slow and evolutionary process without the intervention of human 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 false. 2. Statement (I) is true and Statement (II) is false. 3. Statement (II) is true but Statement (I) is false. 4. Both Statement (I) and Statement (II) are true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

64	11044		4.0	1.00
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Consider the following statements:

Piper nigrum

- (A) Plant has catkin spike inflorescence.
- (B) Fruit is drupe and large part of seed is endosperm
- (C) White pepper is a processed product
- (D) Belongs to family Myrtaceae

Which of these statements are correct?

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

65 11045

Edible pulp in banana develops from _____ and juicy edible part of pomegranate is _____.

- 1. Outer integument of seed and ovary wall
- 2. Ovary wall and outer integument of seed
- 3. Complete ovary and whole integument of seed
- 4. Neither of above

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

66 11046

4.0 1.00

True resin is obtained from _____ oleo-resin is obtained from _____ and
amber resin is obtained from _____.

1. *Shorea robusta*, *Pinus longifolia* and *Pinites succinifera*
2. *Shorea robusta*, *Delbergia longifolia* and *Pinus succinifera*
3. *Pinus longifolia*, *Pinites succinifera* and *Parthenium argentatum*
4. *Acacia arabica*, *Sterculia urens* and *Pinus succinifera*

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

67 11047

4.0 1.00

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

List-I	List-II
(Book/Theory proposed/ Characteristic, etc.)	(Author/Thinker/ Name of Theory, etc.)
(A) Para Grass	(I) <i>Pennisetum purpureum</i>
(B) Napier Grass	(II) <i>Bracharia mutica</i>
(C) Guinea Grass	(III) <i>Dicanthium annulatum</i>
(D) Marvel Grass	(IV) <i>Panicum maximum</i>

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

68 11048

4.0 1.00

The information management is crucial in plant genetic resources management and following data is must for germplasm use :

- (A) Passport data, Characterization and conservation data
- (B) Prebreeding data and evaluation data
- (C) Exchange of germplasm data
- (D) Taxonomic data

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

- 1. Only (A) is correct
- 2. Only (B) is correct
- 3. Only (A) & (B) are correct
- 4. All are correct

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

69	11049	Herbaria throughout the World are registered with:	4.0	1.00
1. Royal Botanical Garden 2. New York Botanical Garden 3. British Museum of Natural History 4. Index Herbariorum				
A1 : 1				
A2 : 2				
A3 : 3				
A4 : 4				

Objective Question

70	11050		4.0	1.00

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

List-I	List-II
(A) Long bean	(I) <i>Psophocarpus tetragonolobus</i>
(B) Tree bean	(II) <i>Vigna sesquipedalis</i>
(C) Winged bean	(III) <i>Canavalia gladiata</i>
(D) Sword bean	(IV) <i>Parkia roxburghii</i>

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

71 1000151

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 **correct** 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

4.0 1.00

		A4 : 4		
Objective Question				
72	1000152	Total number of isolations required for the production of breeder, foundation and certified seeds of double cross hybrid 1. Three 2. Five 3. Seven 4. Nine A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
73	1000153	Commercial exploitation of two lines system of hybrid seed production is feasible in (A) Maize (B) Paddy (C) Safflower (D) Sunflower 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 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
74	1000154		4.0	1.00

Defoliant used during seed production

1. Metham-sodium
2. Indole-3-butyric acid
3. 1-Naphthaleneacetic acid
4. Ethephon

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

75	1000155	Given below are two statements: Statement (I) : Barren tip is the condition seen in maize cob. Statement (II) : Silk elongation is initiated first from ovules at the tip of the maize cob. 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 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

76	1000156		4.0	1.00
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Match **List-I** with **List-II**

List-I	List-II
Crop	Terminology
(A) Watermelon	(I) Maceration
(B) Turnip	(II) Brown heart
(C) Cauliflower	(III) Whiptail
(D) Onion	(IV) S-Cytoplasm
	(V) Racing

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

77 1000157

4.0 1.00

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
	(V) Chalazosperm

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

78 1000158

Sequence of developmental stages of embryo in dicots

- Globular stage
- Quadrant stage
- Heart shaped stage
- Torpedo stage

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

- (B), (D), (A), (C).
- (A), (D), (C), (B).
- (A), (C), (B), (D).
- (B), (A), (C), (D).

A1 : 1

4.0 1.00

		A2 : 2		
		A3 : 3		
		A4 : 4		
Objective Question				
79	1000159	Enzyme that facilitates in cell wall weakening during seed germination 1. Pectin acetylase 2. Pectin methylesterase 3. Pectin acetylesterase 4. Pectin deacetylase A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
80	1000160	Seed germination type where cotyledons unfold and become photosynthetic 1. Phanerocotylar 2. Cryptocotylar 3. Epicotylar 4. Hypocotylar A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
81	1000161	Subcellular organelle involved in lipid mobilization during seed germination 1. Ribosome 2. Endoplasmic reticulum 3. Glyoxysome 4. Nucleus	4.0	1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

82 1000162

4.0 1.00

Match List-I with List-II

List-I	List-II
Propagule	Crop
(A) Stolon	(I) Strawberry
(B) Corm	(II) Gladiolus
(C) Rhizome	(III) Turmeric
(D) Bulb	(IV) Tuberose
	(V) Chrysanthemum

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

83 1000163

4.0 1.00

Plant growth hormone that promotes root initiation and lateral root development

- Strigolactone
- Ethylene
- Salicylic acid
- Auxin

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

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

85	1000165	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 most appropriate 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.	4.0	1.00
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		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		
Objective Question				
86	1000166	Disc separator, separates the seeds based on differences in seed - Texture - Length - Density - Size A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
87	1000167	Blanking the lower end of the top screen in an air-screen separator will help in - Free flow of seeds - Fine grading - Better scalping - Better grading A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
88	1000168		4.0	1.00

Given below are two statements:

Statement (I) : A typical belt-and-bucket elevator uses a centrifugal force to throw the seeds into the elevator's discharge spout.

Statement (II) : A typical Chain driven or continuous-bucket elevator uses a centripetal force to throw the seeds into the elevator's discharge spout.

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

89 1000169

In case of uncleaned paddy seeds, the ideal slope angle from the elevator discharge spout to the bin

1. 30^0
2. 40^0
3. 50^0
4. 60^0

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

90 1000170

4.0 1.00

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

Assertion (A) : In continuous-flow dryer system, tempering bins are provided.

Reason (R) : Continuous drying leads to “checking” or breaking due to cell/tissue stress from drying seed surface areas while seed interior is still relatively high in moisture.

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

91 1000171

4.0 1.00

Given below are two statements:

Statement (I) : During field inspection, any off-types which were not found to cause contamination at the time of recording field counts, but may cause contamination later must be included in estimation of off-type %.

Statement (II) : During field inspection, if the percentages of contaminants found in a count are more than the maximum permissible limit, but less than twice the permissible limit, then second count should be taken.

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

92	1000172	Maximum permissible insect damage allowed for certified seed class of rice 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

93	1000173	Under Indian Seed legislation, validity period of stop sale order is 20 days 30 days 40 days 50 days A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

94	1000174		4.0	1.00
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Match **List-I** with **List-II**

List-I	List-II
Minimum seed germination % for Certified Seed Class	Crop
(A) 80	(I) Paddy
(B) 65	(II) Cotton
(C) 70	(III) Soybean
(D) 20	(IV) Guinea grass
	(V) Dhaincha

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

95 1000175

ISTA recommended dormancy breaking treatment in wheat

- Preheat treatment
- Presoaking treatment
- KNO₃ treatment
- H₂SO₄ treatment

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

96	1000176	Arrange the crops in the increasing order of seed desiccation sensitivity (least sensitive to highly sensitive) (A) Mango (B) Spinach (C) Papaya (D) Custard Apple Choose the correct answer from the options given below: (C), (B), (A), (D). (B), (D), (C), (A). (B), (C), (D), (A). (C), (A), (B), (D). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
97	1000177	In 1898, most European countries put embargo on import of American apples to keep out the following highly destructive pest - Powdery Mildew pathogen - Downy Mildew pathogen - San Jose' scale - Late Blight pathogen A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
98	1000178		4.0	1.00

The legal instrument that deals with safe handling and use of LMOs are

1. Nagoya Protocol
2. Cartagena protocol
3. CBD
4. Plant Quarantine Order

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

99	1000179	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

100	1000180	Phytosanitary certification of agricultural commodities being exported is undertaken as per 1. Destructive Insect Pest Act, 1914 2. New Policy on Seed Development, 1988 3. Plant Quarantine Order, 2003 4. International Plant Protection Convention, 1951 A1 : 1 A2 : 2 A3 : 3	4.0	1.00
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A4 : 4

Objective Question

101	1000181	The plant parasitic fungi that can infect only the juvenile organs of plants that are devoid of secondary thickening is 1. <i>Pythium spp</i> 2. <i>Trichoderma</i> 3. <i>Phytophthora infestans</i> 4. <i>Xanthomonas campestris</i> A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

102	1000182	Which among the following is NOT a reactive oxygen species 1. Superoxide Anion Radical 2. Hydroxyl Radical 3. Glutathione 4. Hydrogen Peroxide A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

103	1000183		4.0	1.00
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Match **List-I** with **List-II**

List-I	List-II
Components contributing to seed storage behaviour	Corresponding attributes
(A) Raffinose	(I) $T_g = 52^\circ$
(B) Water	(II) Prevents sucrose crystallization
(C) Sucrose	(III) $T_g = -135^\circ$
(D) Oleosins	(IV) Oil rich seeds

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

104 1000184

Which among the following parameters is indicative of higher rate of seed deterioration

- Lower electrical conductivity value
- Higher OD value in Superoxide Dismutase Assay
- Higher Alpha tocopherol content
- Higher Malondialdehyde content

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

105 1000185

4.0 1.00

At the international level, Plant Breeders' Rights is governed by

1. GATT
2. UPOV Convention
3. CBD
4. OECD

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

106 1000186

The criteria for establishing distinctness of a new plant variety that has to be registered under PPVFRA is

1. It should be sufficiently distinguishable from any other variety whose existence is a matter of common knowledge in any country, at the time of filing of the application
2. It should be clearly distinguishable by at least one essential characteristic from any other variety whose existence is a matter of common knowledge in any country, at the time of filing of the application
3. It should be clearly distinguishable by at least one essential characteristic from any other variety whose existence is a matter of common knowledge in India, at the time of filing of the application.
4. It should be different from every denomination which designates a variety of the same or a closely related species registered under this Act.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

107 1000187

4.0 1.00

The component of water potential that primarily drives the initial water uptake in a dry seed placed in moist soil is

1. Pressure/turgor potential
2. Osmotic/solute potential
3. Matric potential
4. The sum of pressure potential and osmotic potential

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

108 1000188

Honey dew production is a characteristic feature of which of the following seed borne pathogen of bajra

1. *Claviceps fusiformis*
2. *Ustilago hordei*
3. *Claviceps paspali*
4. *Sclerospora graminicola*

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

109 1000189

4.0 1.00

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

Assertion (A) : The Glutathione Half-cell redox potential value of a seed lot can be used as an effective biochemical predictor for seed longevity

Reason (R) : Half cell redox potential values can be easily estimated for seed lots using non-destructive methods

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

110 1000190

Which among the following storage fungi can grow in seed lots at relatively lower seed moisture levels and thereby, can cause incipient seed deterioration

1. *Aspergillus flavus*
2. *Aspergillus glaucus*
3. *Penicillium*
4. *Aspergillus candidus*

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

111 1000191

4.0 1.00

The percentage germination of samples periodically taken from a seed lot, plotted against time will give

1. Sorption isotherm
2. Seed survival curve
3. Viability nomograph
4. Probit viability curve

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

112	1000192	Which among the following species is an exception to Harrington's thumb rule	4.0	1.00
		1. <i>Coix lacryma-jobi</i> 2. <i>Abrus precatorius</i> 3. <i>Cajanus cajan</i> 4. <i>Theobroma cacao</i>		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

113	1000193	The process of identifying and separating a total market into parts so that different seed marketing strategies can be used is termed as	4.0	1.00
		1. Market differentiation 2. Market segmentation 3. Marketing Mix 4. Target setting		
		A1 : 1		
		A2 : 2		
		A3 : 3		

A4 : 4

Objective Question

114 1000194

4.0 1.00

The pricing strategy appropriate for film coated vegetable seed is

1. Low price strategy
2. Market price strategy
3. Cost-plus pricing strategy
4. High price strategy

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

115 1000195

4.0 1.00

The seed distribution channel system in which a public-sector seed supply organization relies on a private retailer in order to achieve higher sales is called

1. Direct channel system
2. Single channel system
3. Multi-level channel system
4. Dual Channel system

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

116 1000196

4.0 1.00

Arrange the crops in the increasing order of time taken by seeds to attain EMC, at 15% RH

- (A) Maize
- (B) Groundnut
- (C) Mustard
- (D) Chickpea

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

117 1000197

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

Assertion (A) : The orthodox seeds have a higher storage potential.

Reason (R) : At the end of seed development, an orthodox seed enters into a dry quiescent state.

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

118 1000198

4.0 1.00

The Joint Secretary (Seeds) in the Department of Agriculture & Cooperation is the National Designated Authority/Nodal person for which of the following legal or policy instruments

- (A) Convention on Biological Diversity
- (B) ITPGRFA
- (C) OECD Scheme
- (D) Nagoya protocol

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

- 1. (A), (B) and (D) 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

Objective Question

119	1000199	The process of treatment of somatic embryo with cryoprotective substances followed by dehydration with highly concentrated solution, rapid freezing and thawing, unloading and recovery is called 1. Pre growth desiccation 2. Vitrification 3. Somatogenesis 4. Flash Drying 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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Brown to blackish coloured seed storage insect pest, with head deflexed downwards and almost hidden from dorsal view

1. *Trogoderma granarium*
2. *Sitophilus oryzae*
3. *Callosobruchus chinensis*
4. *Rhyzopertha dominica*

A1 : 1

A2 : 2

A3 : 3

A4 : 4