

# National Testing Agency

**Question Paper Name:** CROP SCIENCES I 1st July 2019 Shift2 Set2  
**Subject Name:** CROP SCIENCES I  
**Creation Date:** 2019-07-01 18:50:32  
**Duration:** 180  
**Total Marks:** 800  
**Display Marks:** Yes  
**Share Answer Key With Delivery Engine:** Yes  
**Actual Answer Key:** Yes

## CROP SCIENCES I

**Group Number :** 1  
**Group Id :** 55317227  
**Group Maximum Duration :** 0  
**Group Minimum Duration :** 180  
**Revisit allowed for view? :** No  
**Revisit allowed for edit? :** No  
**Break time:** 0  
**Group Marks:** 800

## Part A : General Knowledge

**Section Id :** 55317239  
**Section Number :** 1  
**Section type :** Online  
**Mandatory or Optional:** Mandatory  
**Number of Questions:** 20  
**Number of Questions to be attempted:** 20  
**Section Marks:** 80  
**Display Number Panel:** Yes  
**Group All Questions:** No

**Sub-Section Number:** 1  
**Sub-Section Id:** 55317261  
**Question Shuffling Allowed :** Yes

**Question Number : 1 Question Id : 5531724515 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**  
**Correct Marks : 4 Wrong Marks : 1**

**There is a parliamentary system of Government in India because the**

- (1) Lok Sabha is elected directly by the people.
- (2) Parliament can amend the Constitution.
- (3) Rajya Sabha cannot be dissolved.
- (4) Council of the ministers are responsible to the Lok Sabha.

**Options :**

55317218001. 1  
55317218002. 2  
55317218003. 3  
55317218004. 4

**Question Number : 2 Question Id : 5531724516 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

**Gilt – edged market refers to**

- (1) Bullion market
- (2) Market of Govt. Securities
- (3) Market of guns
- (4) Market of pure metals

**Options :**

55317218005. 1  
55317218006. 2  
55317218007. 3  
55317218008. 4

**Question Number : 3 Question Id : 5531724517 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

**Which one of the following is known as the ‘Coffee Port’ of the world?**

- (1) Sao Paulo
- (2) Santos
- (3) Rio de Janeiro
- (4) Buenos Aires

**Options :**

55317218009. 1  
55317218010. 2  
55317218011. 3  
55317218012. 4

**Question Number : 4 Question Id : 5531724518 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

**For increasing milk production, which state launched Rs.215 crore project  
‘Milk Mission’ in July, 2018?**

- (1) Meghalaya
- (2) Assam
- (3) Tripura
- (4) Nagaland

**Options :**

55317218013. 1  
55317218014. 2  
55317218015. 3  
55317218016. 4

Question Number : 5 Question Id : 5531724519 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

**Which of the following is the main characteristic of mixed farming?**

- (1) Cultivation of both cash crops and food crops.
- (2) Cultivation of two or more crops in the same field.
- (3) Cultivation of crops and rearing of animals together.
- (4) Cultivation of fruits and vegetables.

Options :

55317218017. 1

55317218018. 2

55317218019. 3

55317218020. 4

Question Number : 6 Question Id : 5531724520 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

**When you travel in certain parts of India, you will notice red soils. What is the main reason for this colour?**

- (1) Abundance of magnesium
- (2) Accumulated humus
- (3) Presence of ferric oxides
- (4) Abundance of phosphates

Options :

55317218021. 1

55317218022. 2

55317218023. 3

55317218024. 4

Question Number : 7 Question Id : 5531724521 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

**Which of the following sets of elements were primarily responsible for the origin of life on the earth?**

- (1) Carbon, Hydrogen, Nitrogen
- (2) Hydrogen, Oxygen, Sodium
- (3) Oxygen, Calcium, Phosphorous
- (4) Carbon, Hydrogen, Potassium

Options :

55317218025. 1

55317218026. 2

55317218027. 3

55317218028. 4

Question Number : 8 Question Id : 5531724522 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

**Which of the following statement is NOT true?**

- (1) Khaira is a disease found in paddy.
- (2) False smut is a disease found in barley.
- (3) Rust disease is found in wheat.
- (4) Early blight is a disease found in potato.

**Options :**

- 55317218029. 1
- 55317218030. 2
- 55317218031. 3
- 55317218032. 4

**Question Number : 9 Question Id : 5531724523 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

**Golden rice variety has been developed to combat the deficiency of**

- (1) Iron
- (2) Vitamin C
- (3) Calcium
- (4) Vitamin A

**Options :**

- 55317218033. 1
- 55317218034. 2
- 55317218035. 3
- 55317218036. 4

**Question Number : 10 Question Id : 5531724524 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

**A person of mixed European and Indian blood in Latin America is called a**

- (1) Mulato
- (2) Mestizo
- (3) Meiji
- (4) Mau Mau

**Options :**

- 55317218037. 1
- 55317218038. 2
- 55317218039. 3
- 55317218040. 4

**Question Number : 11 Question Id : 5531724525 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

**In the context of International Trade 'Early Harvest Package' refers to**

- (1) A precursor to a free trade agreement between two trading partners.
- (2) A clause related to the agreement on agriculture under the WTO.
- (3) A subsidy mechanism given to the developing countries for trade in agriculture.
- (4) A transportation agreement signed between countries for the movement of goods.

**Options :**

- 55317218041. 1
- 55317218042. 2
- 55317218043. 3
- 55317218044. 4

**Question Number : 12 Question Id : 5531724526 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

**The nitrogen present in atmosphere is**

- (1) of no use to plants
- (2) injurious to plants
- (3) directly utilized by the plants
- (4) utilized through micro organism

**Options :**

- 55317218045. 1
- 55317218046. 2
- 55317218047. 3
- 55317218048. 4

**Question Number : 13 Question Id : 5531724527 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

**Agricultural Scientist M.S. Swaminathan received an honorary medallion from India for his contribution towards the development of agricultural practices from which country?**

- (1) Canada
- (2) Australia
- (3) New Zealand
- (4) Mexico

**Options :**

- 55317218049. 1
- 55317218050. 2
- 55317218051. 3
- 55317218052. 4

**Question Number : 14 Question Id : 5531724528 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

ICAR, New Delhi has identified three BT cotton varieties for cultivation in Punjab, Haryana and Rajasthan; which were developed by Punjab Agricultural University (PAU), Ludhiana recently. Which one of the following is NOT among those three?

- (1) PAU BT - 1
- (2) BT -1861
- (3) F - 1861
- (4) RS – 2013

Options :

55317218053. 1  
55317218054. 2  
55317218055. 3  
55317218056. 4

Question Number : 15 Question Id : 5531724529 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

**Most abundant Carbohydrate in the world is**

- (1) Pectin
- (2) Rubisco
- (3) Hemicellulose
- (4) Cellulose

Options :

55317218057. 1  
55317218058. 2  
55317218059. 3  
55317218060. 4

Question Number : 16 Question Id : 5531724530 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

**Which one of the following is known as queen of spices?**

- (1) Clove
- (2) Pepper
- (3) Nutmeg
- (4) Cardamom

Options :

55317218061. 1  
55317218062. 2  
55317218063. 3  
55317218064. 4

Question Number : 17 Question Id : 5531724531 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

**In which city has NABARD launched South East Asia's first centre for 'Climate Change'?**

- (1) Jaipur
- (2) Patna
- (3) Lucknow
- (4) Chennai

**Options :**

55317218065. 1  
55317218066. 2  
55317218067. 3  
55317218068. 4

**Question Number : 18 Question Id : 5531724532 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

**World Bank assisted project SMART was launched in**

- (1) Rajasthan
- (2) Gujarat
- (3) Maharashtra
- (4) Punjab

**Options :**

55317218069. 1  
55317218070. 2  
55317218071. 3  
55317218072. 4

**Question Number : 19 Question Id : 5531724533 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

**National Research Centre for grapes is located at**

- (1) Nashik
- (2) Pune
- (3) Muzaffarpur
- (4) Lucknow

**Options :**

55317218073. 1  
55317218074. 2  
55317218075. 3  
55317218076. 4

**Question Number : 20 Question Id : 5531724534 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**



**The National Milk Day which marks the birth anniversary of father of White Revolution Dr. Verghese Kurien is celebrated on**

- (1) November 23
- (2) November 24
- (3) November 25
- (4) November 26

**Options :**

- 55317218077. 1
- 55317218078. 2
- 55317218079. 3
- 55317218080. 4

**Part B : Crop Sciences I**

<b>Section Id :</b>	55317240
<b>Section Number :</b>	2
<b>Section type :</b>	Online
<b>Mandatory or Optional:</b>	Mandatory
<b>Number of Questions:</b>	180
<b>Number of Questions to be attempted:</b>	180
<b>Section Marks:</b>	720
<b>Display Number Panel:</b>	Yes
<b>Group All Questions:</b>	No

<b>Sub-Section Number:</b>	1
<b>Sub-Section Id:</b>	55317262
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 21 Question Id : 5531724535 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

**The theory of sexual reproduction in Maize for the first time was put forth by**

- 1. Nilssen Ehle
- 2. Camerarius
- 3. Vilmorin
- 4. Johannse

**Options :**

- 55317218081. 1
- 55317218082. 2
- 55317218083. 3
- 55317218084. 4

**Question Number : 22 Question Id : 5531724536 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**



Breeding for semi-dwarf wheat varieties was initiated by N. E. Borlaug at

1. IRRI
2. ICARDA
3. ICRISAT
4. CIMMYT

Options :

55317218085. 1  
55317218086. 2  
55317218087. 3  
55317218088. 4

Question Number : 23 Question Id : 5531724537 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The dwarfing gene in rice varieties was discovered in

1. China
2. Taiwan
3. Philippines
4. India

Options :

55317218089. 1  
55317218090. 2  
55317218091. 3  
55317218092. 4

Question Number : 24 Question Id : 5531724538 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Headquarter of Botanical Survey of India is located at

1. Thiruvananthapuram
2. New Delhi
3. Kolkata
4. Chennai

Options :

55317218093. 1  
55317218094. 2  
55317218095. 3  
55317218096. 4

Question Number : 25 Question Id : 5531724539 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Finger millet crop which is high in fiber is

1. Highly crops pollinated
2. Often cross pollinated
3. Highly self-pollinated
4. Wind pollinated

Options :

55317218097. 1

55317218098. 2

55317218099. 3

55317218100. 4

Question Number : 26 Question Id : 5531724540 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Back cross breeding is used for transferring

1. Single gene-controlled traits
2. Polygenic traits
3. Multiple allelic traits
4. Vegetatively propagated plants with polygenic traits

Options :

55317218101. 1

55317218102. 2

55317218103. 3

55317218104. 4

Question Number : 27 Question Id : 5531724541 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In the second back-cross generation ( $BC_2F_1$ ), the proportion of the donor genome is

1. 12.50%
2. 50.00%
3. 87.50%
4. 93.25%

Options :

55317218105. 1

55317218106. 2

55317218107. 3

55317218108. 4

Question Number : 28 Question Id : 5531724542 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which GM crop using transgenic technology is developed in India?

1. Horse gram
2. Niger
3. Black gram
4. Mustard

Options :

55317218109. 1  
55317218110. 2  
55317218111. 3  
55317218112. 4

Question Number : 29 Question Id : 5531724543 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Heterosis in seed propagated plants can be fixed by

1. Vegetative propagation
2. Clonal selection
3. Apomixis
4. Hybridization

Options :

55317218113. 1  
55317218114. 2  
55317218115. 3  
55317218116. 4

Question Number : 30 Question Id : 5531724544 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The number of generations in developing a variety by back-cross breeding can be reduced by

1. Foreground + Background selection
2. Foreground + Parental selection
3. Foreground + Recombinant selection
4. Phenotypic selection

Options :

55317218117. 1  
55317218118. 2  
55317218119. 3  
55317218120. 4

Question Number : 31 Question Id : 5531724545 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In pedigree breeding, using DNA markers, the trait can be fixed even in

1. F<sub>1</sub> generation
2. F<sub>2</sub> generation
3. F<sub>4</sub> generation
4. F<sub>8</sub> generation

Options :

- 55317218121. 1
- 55317218122. 2
- 55317218123. 3
- 55317218124. 4

Question Number : 32 Question Id : 5531724546 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Hybrids in cross-pollinated crops are produced using

1. General combining ability
2. Specific combining ability
3. Additivity of the Trait
4. By genetic modification

Options :

- 55317218125. 1
- 55317218126. 2
- 55317218127. 3
- 55317218128. 4

Question Number : 33 Question Id : 5531724547 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

From a F<sub>2</sub> population of 440 plants the number of RIL's generated in F<sub>8</sub> generation through single seed descent method would be

1. 880
2. 440
3. 220
4. 110

Options :

- 55317218129. 1
- 55317218130. 2
- 55317218131. 3
- 55317218132. 4

Question Number : 34 Question Id : 5531724548 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The relationship between the recurrent parent and the back-crossed introgressed line after the 8<sup>th</sup> back-cross generation is

1. Recombinant Inbred line
2. Mutated line
3. Near-isogenic line
4. Hybrid line

Options :

55317218133. 1  
55317218134. 2  
55317218135. 3  
55317218136. 4

Question Number : 35 Question Id : 5531724549 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

RFLP is a technique by which the following can be known in a GM-crop

1. No. of copies of gene inserted
2. Sequence of the gene
3. The location of the gene
4. The functioning of the gene

Options :

55317218137. 1  
55317218138. 2  
55317218139. 3  
55317218140. 4

Question Number : 36 Question Id : 5531724550 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The number of polygenes controlling a trait of interest can be estimated by

1. Correlating the gene and the trait
2. QTL mapping
3. Single gene mapping
4. Deletion mapping

Options :

55317218141. 1  
55317218142. 2  
55317218143. 3  
55317218144. 4

Question Number : 37 Question Id : 5531724551 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

*Arabidopsis thaliana*, known to be the drosophila of the plant kingdom, has the somatic chromosome no.

1.  $2n = 8$
2.  $2n = 12$
3.  $2n = 10$
4.  $2n = 16$

Options :

55317218145. 1  
55317218146. 2  
55317218147. 3  
55317218148. 4

Question Number : 38 Question Id : 5531724552 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Disease resistant lines of wheat that are phenotypically similar during non-diseased condition are also known as

1. Di-haploid lines
2. Multilines
3. Heterozygous lines
4. RILS

Options :

55317218149. 1  
55317218150. 2  
55317218151. 3  
55317218152. 4

Question Number : 39 Question Id : 5531724553 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Transgressive segregation is seen if the phenotype for the trait in the progeny is

1. Greater than the male parent
2. Greater than the female trait
3. Lower than the male parent
4. Greater than and / or lower than both the parents

Options :

55317218153. 1  
55317218154. 2  
55317218155. 3  
55317218156. 4

Question Number : 40 Question Id : 5531724554 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1



Di-genic gene interaction genes rise to genotypes that have ratios of

1. Four types
2. Less than four types
3. Only two types
4. Only one type

Options :

- 55317218157. 1
- 55317218158. 2
- 55317218159. 3
- 55317218160. 4

Question Number : 41 Question Id : 5531724555 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Movement of Hydrogen atom from one position in a purine or pyrimidine to another position is referred to as

1. Transversion
2. Tautomeric shift
3. Transition
4. Reverse mutation

Options :

- 55317218161. 1
- 55317218162. 2
- 55317218163. 3
- 55317218164. 4

Question Number : 42 Question Id : 5531724556 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Codominant DNA markers help to identify recessive mutations in as early as

1. M<sub>1</sub> generation plants
2. M<sub>2</sub> generation plants
3. M<sub>3</sub> generation
4. In non-mutated plants

Options :

- 55317218165. 1
- 55317218166. 2
- 55317218167. 3
- 55317218168. 4

Question Number : 43 Question Id : 5531724557 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1



The theoretical chromosome number in a diploid sugarcane must be

1. 80
2. 40
3. 20
4. 10

Options :

55317218169. 1  
55317218170. 2  
55317218171. 3  
55317218172. 4

Question Number : 44 Question Id : 5531724558 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The main features of amphidiploidy is

1. Multivalent formation
2. High fertility
3. Phenotypic instability
4. Chromosomal aberrations

Options :

55317218173. 1  
55317218174. 2  
55317218175. 3  
55317218176. 4

Question Number : 45 Question Id : 5531724559 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The most commonly used genetic stocks in chromosome substitution lines are

1. Monosomics
2. Trisomics
3. Nullisomics
4. Disomics

Options :

55317218177. 1  
55317218178. 2  
55317218179. 3  
55317218180. 4

Question Number : 46 Question Id : 5531724560 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Genes located in a particular chromosome can be detected by using

1. Monosomic lines
2. Nullisomic lines
3. Trisomic lines
4. Chromosome substitution lines

Options :

55317218181. 1  
55317218182. 2  
55317218183. 3  
55317218184. 4

Question Number : 47 Question Id : 5531724561 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Estimating genetic diversity involving multivariate analyses based on ordination and graphical representation is

1.  $D^2$ -analysis
2. Cluster analysis
3. Principle component analysis
4. Linkage analysis

Options :

55317218185. 1  
55317218186. 2  
55317218187. 3  
55317218188. 4

Question Number : 48 Question Id : 5531724562 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The percent of sesamin in sesame oils is

1. 40.0 – 45.0%
2. 3.5 – 4.0%
3. 0.5 – 1.0%
4. 15.0 – 20.0%

Options :

55317218189. 1  
55317218190. 2  
55317218191. 3  
55317218192. 4

Question Number : 49 Question Id : 5531724563 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The DNA marker first detected in mice by Vos and his group is

1. SSR
2. SNP
3. RELP
4. AFLP

Options :

55317218193. 1  
55317218194. 2  
55317218195. 3  
55317218196. 4

Question Number : 50 Question Id : 5531724564 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In wheat, the protein imparting softness in grain is contributed by which genome?

1. A
2. C
3. B
4. D

Options :

55317218197. 1  
55317218198. 2  
55317218199. 3  
55317218200. 4

Question Number : 51 Question Id : 5531724565 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In a dihybrid cross, the proportion of double recessive homozygotes in  $F_2$  is

1.  $\frac{1}{2}$
2.  $\frac{1}{4}$
3.  $\frac{1}{8}$
4.  $\frac{1}{16}$

Options :

55317218201. 1  
55317218202. 2  
55317218203. 3  
55317218204. 4

Question Number : 52 Question Id : 5531724566 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In duplicate dominant 2 gene epistatic interaction, phenotypic ratio of the progenies in  $F_2$  would be

1. 13 : 3
2. 15 : 1
3. 9 : 3 : 4
4. 9 : 6 : 1

Options :

55317218205. 1  
55317218206. 2  
55317218207. 3  
55317218208. 4

Question Number : 53 Question Id : 5531724567 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A balanced heterosis arises from

1. Dominant gene action
2. Over-dominant gene action
3. Epistatic gene action
4. Epigenetic gene Expression

Options :

55317218209. 1  
55317218210. 2  
55317218211. 3  
55317218212. 4

Question Number : 54 Question Id : 5531724568 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Type II restriction endo-nucleases identify the palindromic sequences and cut them into

1. Single stranded DNA
2. Double stranded DNA
3. Amino-acid sequences
4. Single stranded RNA

Options :

55317218213. 1  
55317218214. 2  
55317218215. 3  
55317218216. 4

Question Number : 55 Question Id : 5531724569 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The group of crop varieties that are stabilized are homozygous; however which one of the following is heterozygous?

1. Landraces
2. Pure lines
3. Inbreds
4. Composites

Options :

55317218217. 1  
55317218218. 2  
55317218219. 3  
55317218220. 4

Question Number : 56 Question Id : 5531724570 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The osmotic regulator used in the slow growth media during *in-vitro* conservation of plants is

1. Pyrolidine
2. Mannitol
3. Sucrose
4. Dextran

Options :

55317218221. 1  
55317218222. 2  
55317218223. 3  
55317218224. 4

Question Number : 57 Question Id : 5531724571 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following species has the reduced solitary axillary flowers?

1. *Cicer arietinum*
2. *Cajanus cajan*
3. *Vigna radiata*
4. *Lablab purpureus*

Options :

55317218225. 1  
55317218226. 2  
55317218227. 3  
55317218228. 4

Question Number : 58 Question Id : 5531724572 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Indian Institute of Pulses Research is located at

1. Kanpur
2. Nagpur
3. Solapur
4. Hyderabad

Options :

55317218229. 1  
55317218230. 2  
55317218231. 3  
55317218232. 4

Question Number : 59 Question Id : 5531724573 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

PET1 is the male sterile cytoplasm that is commercially exploited in

1. Pigeon pea
2. Sunflower
3. Rice
4. Ragi / Finger millet

Options :

55317218233. 1  
55317218234. 2  
55317218235. 3  
55317218236. 4

Question Number : 60 Question Id : 5531724574 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Genetic gain during selection is very high, when there is

1. Non-additive gene action
2. Highest heritability
3. Monogenic trait
4. Existence of rare alleles

Options :

55317218237. 1  
55317218238. 2  
55317218239. 3  
55317218240. 4

Question Number : 61 Question Id : 5531724575 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Commonly found hybrid sorghum type in India is

1. Guinea-durra
2. Guinea-kafir
3. Durra-bicolor
4. Kafir-durra

Options :

55317218241. 1  
55317218242. 2  
55317218243. 3  
55317218244. 4

Question Number : 62 Question Id : 5531724576 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

What is the ideal statistical tool to examine the variation that exists within a dataset?

1. Population mean
2. Sample mean
3. Standard deviation
4. Linear regression

Options :

55317218245. 1  
55317218246. 2  
55317218247. 3  
55317218248. 4

Question Number : 63 Question Id : 5531724577 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

While predicting the relationship between the mean of different combination of generations, the relationship of A-scaling test is represented as

1.  $2\bar{B}_2 - \bar{F}_1 - \bar{P}_2 = 0$
2.  $\bar{B}_2 - \bar{F}_1 - \bar{P}_2 = 0$
3.  $2\bar{F}_1 - \bar{B}_2 - \bar{P}_2 = 0$
4.  $\bar{P}_2 - \bar{P}_1 - 2\bar{F}_1 = 0$

Options :

55317218249. 1  
55317218250. 2  
55317218251. 3  
55317218252. 4

Question Number : 64 Question Id : 5531724578 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1



The mating scheme where the mating occurs between individuals which are less related by ancestry is

1. Genetic disassortative mating
2. Phenotypic disassortative mating
3. Phenotypic assortative mating
4. Genetic assortative mating

Options :

- 55317218253. 1
- 55317218254. 2
- 55317218255. 3
- 55317218256. 4

Question Number : 65 Question Id : 5531724579 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which analysis considers total variance and transforms the original variables into smaller set of linear combinations?

1. PCA
2. AMMI
3. Factor analysis
4. Correlation and path analysis

Options :

- 55317218257. 1
- 55317218258. 2
- 55317218259. 3
- 55317218260. 4

Question Number : 66 Question Id : 5531724580 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Assuming Hardy Weinberg equilibrium what will be the genotypic frequency of heterozygotes, if the frequency of the two alleles at the gene being studied are 0.6 and 0.4?

1. 0.80
2. 0.64
3. 0.48
4. 0.16

Options :

- 55317218261. 1
- 55317218262. 2
- 55317218263. 3
- 55317218264. 4

Question Number : 67 Question Id : 5531724581 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

According to Eberhart and Russel model of stability assessment, the stable variety will have regression co-efficient of

1.  $b = 1.0$
2.  $b = 0.5$
3.  $b > 1.0$
4.  $b < 1.0$

Options :

55317218265. 1  
55317218266. 2  
55317218267. 3  
55317218268. 4

Question Number : 68 Question Id : 5531724582 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In offspring-parent regression analysis, the variable which is considered as independent variable is

1. Phenotype of parent(s)
2. Offspring of the parent 1
3. Offspring of the parent 2
4. Offspring of the cross between  $P_1 \times P_2$

Options :

55317218269. 1  
55317218270. 2  
55317218271. 3  
55317218272. 4

Question Number : 69 Question Id : 5531724583 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which analysis measures the average performance of parental lines in a cross combination to find the proportion of variation that is genetically additive in nature?

1. Specific combining ability
2. Heritability
3. General combining ability
4. Genetic advance

Options :

55317218273. 1  
55317218274. 2  
55317218275. 3  
55317218276. 4

Question Number : 70 Question Id : 5531724584 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Accumulation of salts at leaf tip or leaf margins of some plants in winter is due to the process known as

1. Transpiration
2. Pulsation
3. Guttation
4. Absorption

Options :

55317218277. 1  
55317218278. 2  
55317218279. 3  
55317218280. 4

Question Number : 71 Question Id : 5531724585 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In plant breeding, selection of genotypes in favour of two extremes are called

1. Cyclic selection
2. Disruptive selection
3. Directional selection
4. Stabilizing selection

Options :

55317218281. 1  
55317218282. 2  
55317218283. 3  
55317218284. 4

Question Number : 72 Question Id : 5531724586 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following leaf trait increases leaf reflectance and reduces net radiation resulting in lower leaf temperature under high irradiance?

1. Leaf cuticle
2. Leaf transpiration
3. Leaf pigmentation
4. Leaf pubescence

Options :

55317218285. 1  
55317218286. 2  
55317218287. 3  
55317218288. 4

Question Number : 73 Question Id : 5531724587 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In cereal inflorescence, the most water use efficient part of a spike is

1. Glumes
2. Lemma
3. Palea
4. Awn

Options :

55317218289. 1  
55317218290. 2  
55317218291. 3  
55317218292. 4

Question Number : 74 Question Id : 5531724588 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

While breeding for drought tolerance, the trait cellular membrane stability in crop plants, is classified as

1. Dehydration tolerance trait
2. Dehydration avoidance trait
3. Drought escape trait
4. Heat avoidance trait

Options :

55317218293. 1  
55317218294. 2  
55317218295. 3  
55317218296. 4

Question Number : 75 Question Id : 5531724589 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Sophisticated method for precision phenotyping of drought tolerance by finding plant water status and difference in stomatal conductance is measured by

1. Near Infrared spectroscopy
2. Canopy spectral reflectance
3. Infrared thermography
4. Magnetic resonance imaging

Options :

55317218297. 1  
55317218298. 2  
55317218299. 3  
55317218300. 4

Question Number : 76 Question Id : 5531724590 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In wheat grains, the gluten strength is denoted by

1. Texture of grain
2. Protein content
3. Sedimentation value
4. Polshenke value

Options :

- 55317218301. 1
- 55317218302. 2
- 55317218303. 3
- 55317218304. 4

Question Number : 77 Question Id : 5531724591 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The associated quality trait of narrow leaves in Pearl millet-Napier hybrids is

1. Low carotenoids
2. Low fodder yield
3. Low protein
4. Low oxalate

Options :

- 55317218305. 1
- 55317218306. 2
- 55317218307. 3
- 55317218308. 4

Question Number : 78 Question Id : 5531724592 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The best wheat flour for good bread making will have a Polshenke value of

1. < 16 min
2. 80 – 120 min
3. < 80 min
4. > 150 min

Options :

- 55317218309. 1
- 55317218310. 2
- 55317218311. 3
- 55317218312. 4

Question Number : 79 Question Id : 5531724593 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1



In tomato, high  $\beta$ -carotene was transferred to cultivated species from which of the following species?

1. *Lycopersicum glaberratum*
2. *Lycopersicum hirsutum*
3. *Lycopersicum pimpinellifolium*
4. *Lycopersicum peruvianum*

Options :

55317218313. 1  
55317218314. 2  
55317218315. 3  
55317218316. 4

Question Number : 80 Question Id : 5531724594 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

While developing core collection from a germplasm collection, the stratified sampling strategy which includes equal number of entries from all groups irrespective of number of accessions in each group is called as

1. Constant strategy
2. Proportional strategy
3. Logarithmic strategy
4. Random strategy

Options :

55317218317. 1  
55317218318. 2  
55317218319. 3  
55317218320. 4

Question Number : 81 Question Id : 5531724595 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

One of the hotspots for screening for rust disease of groundnut is located at

1. Durgapura (Rajasthan)
2. Pantnagar (U.K.)
3. Aliyar (Tamil Nadu)
4. Gurdaspur (Punjab)

Options :

55317218321. 1  
55317218322. 2  
55317218323. 3  
55317218324. 4

Question Number : 82 Question Id : 5531724596 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

**Correct Marks : 4 Wrong Marks : 1**

When the true-to-type single plants / ears / pods are selected from the field of nucleus seed of a variety and grown as progeny row and the seeds from true to-the type progeny rows are composited to constitute

1. Breeder seed stage I
2. Nucleus seed stage II
3. Nucleus seed stage I
4. Breeder seed stage II

**Options :**

55317218325. 1

55317218326. 2

55317218327. 3

55317218328. 4

**Question Number : 83 Question Id : 5531724597 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

What is minimum germination percentage required in certified seeds of cotton varieties and hybrids?

1. 85
2. 65
3. 75
4. 50

**Options :**

55317218329. 1

55317218330. 2

55317218331. 3

55317218332. 4

**Question Number : 84 Question Id : 5531724598 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**  
**Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

When an individual / organization owning an intellectual property does not disclose the property to anyone and keeps it as closely guarded, then it is called

1. Patent
2. Copyright
3. Trade secret
4. ITK

**Options :**

55317218333. 1

55317218334. 2

55317218335. 3

55317218336. 4



Question Number : 85 Question Id : 5531724599 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The Traditional Knowledge (TK) can be protected under

1. Patent Rights
2. Copy Rights
3. Sui Generis Rights
4. Geographical Indication

Options :

55317218337. 1

55317218338. 2

55317218339. 3

55317218340. 4

Question Number : 86 Question Id : 5531724600 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following indicates the negative impact of Plant Breeder's Right?

1. Faster development of Seed Industry
2. Breeder's get benefit to their variety
3. Increase in homogeneity of genetic materials
4. Enrichment of genetic materials

Options :

55317218341. 1

55317218342. 2

55317218343. 3

55317218344. 4

Question Number : 87 Question Id : 5531724601 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Name the crop wild relative of sesame which is a donor for cytoplasmic male sterility.

1. *S. alatum*
2. *S. prostratum*
3. *S. indicum*
4. *S. malabaricum*

Options :

55317218345. 1

55317218346. 2

55317218347. 3

55317218348. 4

Question Number : 88 Question Id : 5531724602 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which analysis helps in selection of suitable parents for hybridization and for the choice of appropriate breeding procedures?

1. Diallel analysis
2. Path analysis
3. Correlation coefficient analysis
4. Variance

Options :

55317218349. 1

55317218350. 2

55317218351. 3

55317218352. 4

Question Number : 89 Question Id : 5531724603 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

A tabular arrangement for classifying data into different groups is called

1. Standard deviation
2. Frequency distribution
3. Class mean
4. Arithmetic mean

Options :

55317218353. 1

55317218354. 2

55317218355. 3

55317218356. 4

Question Number : 90 Question Id : 5531724604 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If two variables oppose each other, then the correlation will be

1. Positive correlation
2. No correlation
3. Perfect correlation
4. Negative correlation

Options :

55317218357. 1

55317218358. 2

55317218359. 3

55317218360. 4

Question Number : 91 Question Id : 5531724605 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Where would you find the option for a repeated measure of MANOVA in SPSS?

1. Regression
2. Multiple response
3. General Linear Modal
4. Classify

Options :

- 55317218361. 1
- 55317218362. 2
- 55317218363. 3
- 55317218364. 4

Question Number : 92 Question Id : 5531724606 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

While analyzing the variance for a complete block trial the additive model which explains how the plot value arise is

1. Total SS = Replication SS + Variety SS + Residual SS
2. Total SS = Variety SS + Residual SS
3. Total SS = Replication SS + df + Residual SS
4. Total SS = Variety SS + Replication SS + 2df

Options :

- 55317218365. 1
- 55317218366. 2
- 55317218367. 3
- 55317218368. 4

Question Number : 93 Question Id : 5531724607 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Eigen values and eigen vectors are used in multivariate analysis to find the relationship among

1. Unrelated genotypes
2. Closely related genotypes
3. Multiple related phenotypic traits
4. Base collection

Options :

- 55317218369. 1
- 55317218370. 2
- 55317218371. 3
- 55317218372. 4

Question Number : 94 Question Id : 5531724608 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

While analyzing the genetic diversity using molecular markers, the coefficient that has a straight forward biological interpretation which is completed as the proportion of positive bands shared by both samples divided by the average of the proportion of bands present in sample 'i' and sample 'j'

1. Correlation coefficient
2. Jaccard's similarity coefficient
3. Simple matching coefficient
4. Nei and Li's similarity coefficient

Options :

55317218373. 1

55317218374. 2

55317218375. 3

55317218376. 4

Question Number : 95 Question Id : 5531724609 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The collection of one or more outcomes from an experiment is called

1. Probability
2. Event
3. Random variable
4. Random experiment

Options :

55317218377. 1

55317218378. 2

55317218379. 3

55317218380. 4

Question Number : 96 Question Id : 5531724610 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Protogynous flowering is observed in

1. Pearl millet
2. Sunflower
3. Maize
4. Wheat

Options :

55317218381. 1

55317218382. 2

55317218383. 3

55317218384. 4

Question Number : 97 Question Id : 5531724611 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Cleistogamy is a condition where flower

1. opens before anthesis.
2. opens after anthesis.
3. opens at the time of anthesis.
4. does not open at all.

Options :

55317218385. 1  
55317218386. 2  
55317218387. 3  
55317218388. 4

Question Number : 98 Question Id : 5531724612 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Raindrop is a pollinating agent in

1. Black pepper
2. Betelvine
3. Cocoa
4. Nut meg

Options :

55317218389. 1  
55317218390. 2  
55317218391. 3  
55317218392. 4

Question Number : 99 Question Id : 5531724613 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The phenomenon of "Syngamy" was discovered by

1. Edward Strasburger
2. William A. Jensen
3. Sergei Navashin
4. G. B. Amici

Options :

55317218393. 1  
55317218394. 2  
55317218395. 3  
55317218396. 4

Question Number : 100 Question Id : 5531724614 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Dispersal of seeds by ants is called

1. Zoochory
2. Cheiropterochory
3. Myrmecochochory
4. Ornithochory

Options :

55317218397. 1  
55317218398. 2  
55317218399. 3  
55317218400. 4

Question Number : 101 Question Id : 5531724615 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Development of embryo from megaspore mother cell due to failure  
in reduction of chromosomes is called

1. Diplospory
2. Apospory
3. Apogamy
4. Parthenogenesis

Options :

55317218401. 1  
55317218402. 2  
55317218403. 3  
55317218404. 4

Question Number : 102 Question Id : 5531724616 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Anthesis in sorghum is

1. Basipetal
2. Acropetal
3. Centripetal
4. Amphipetal

Options :

55317218405. 1  
55317218406. 2  
55317218407. 3  
55317218408. 4

Question Number : 103 Question Id : 5531724617 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1



Sarcotesta in papaya is rich in

1. Proteins
2. Carbohydrates
3. Lipids
4. Pigments

Options :

55317218409. 1  
55317218410. 2  
55317218411. 3  
55317218412. 4

Question Number : 104 Question Id : 5531724618 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Warm stratification is used to break seed dormancy in

1. Mustard
2. Sesame
3. Groundnut
4. Oil palm

Options :

55317218413. 1  
55317218414. 2  
55317218415. 3  
55317218416. 4

Question Number : 105 Question Id : 5531724619 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In dicots, the emergence of seedling from soil surface is facilitated  
by

1. Mesocotyl
2. Epicotyl
3. Hypocotyl
4. Scutellum

Options :

55317218417. 1  
55317218418. 2  
55317218419. 3  
55317218420. 4

Question Number : 106 Question Id : 5531724620 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1



The early seedling vigour in case of cereals is highly correlated to

1. Alpha-amylase
2. Pectinase
3. Mannanase
4. Cellulose

Options :

- 55317218421. 1
- 55317218422. 2
- 55317218423. 3
- 55317218424. 4

Question Number : 107 Question Id : 5531724621 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Stage of the embryo preferred for production of synthetic seeds is

1. Heart
2. Torpedo
3. Globular
4. Callus

Options :

- 55317218425. 1
- 55317218426. 2
- 55317218427. 3
- 55317218428. 4

Question Number : 108 Question Id : 5531724622 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Coconut water is botanically considered as

1. Endosperm
2. Perisperm
3. Chalazosperm
4. Nucellus

Options :

- 55317218429. 1
- 55317218430. 2
- 55317218431. 3
- 55317218432. 4

Question Number : 109 Question Id : 5531724623 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The role of pollen in fertilization was discovered by

1. G. B. Amici
2. William A. Jensen
3. J Kölreuter
4. Navaschin

Options :

55317218433. 1  
55317218434. 2  
55317218435. 3  
55317218436. 4

Question Number : 110 Question Id : 5531724624 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Androemonecious flowers are found in

1. Sorghum
2. Rice
3. Wheat
4. Mustard

Options :

55317218437. 1  
55317218438. 2  
55317218439. 3  
55317218440. 4

Question Number : 111 Question Id : 5531724625 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Apospory is generally seen in

1. Cashew
2. Cocoa
3. Litchi
4. Mango

Options :

55317218441. 1  
55317218442. 2  
55317218443. 3  
55317218444. 4

Question Number : 112 Question Id : 5531724626 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Plant pigment involved in seed germination is

1. Chlorophyll
2. Anthocyanin
3. Phytochrome
4. Xanthophyll

Options :

55317218445. 1  
55317218446. 2  
55317218447. 3  
55317218448. 4

Question Number : 113 Question Id : 5531724627 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Seed lessness in water melon is due to its

1. Triploid nature
2. Tetraploid nature
3. Diploid nature
4. Haploid nature

Options :

55317218449. 1  
55317218450. 2  
55317218451. 3  
55317218452. 4

Question Number : 114 Question Id : 5531724628 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The encapsulated material of the curated synthetic seed is

1. Sodium alginate
2. Calcium alginate
3. Zinc alginate
4. Magnesium alginate

Options :

55317218453. 1  
55317218454. 2  
55317218455. 3  
55317218456. 4

Question Number : 115 Question Id : 5531724629 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Lettuce seed exhibits

1. Photo dormancy
2. Innate dormancy
3. Induced dormancy
4. Physiological dormancy

Options :

55317218457. 1  
55317218458. 2  
55317218459. 3  
55317218460. 4

Question Number : 116 Question Id : 5531724630 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Isolation distance (m) required for certified seed production of tomato is

1. 50
2. 25
3. 75
4. 100

Options :

55317218461. 1  
55317218462. 2  
55317218463. 3  
55317218464. 4

Question Number : 117 Question Id : 5531724631 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Seed multiplication ratio in groundnut is

1. 1 : 4
2. 1 : 6
3. 1 : 8
4. 1 : 10

Options :

55317218465. 1  
55317218466. 2  
55317218467. 3  
55317218468. 4

Question Number : 118 Question Id : 5531724632 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The planting ratio of female and male parent for hybrid seed production in sorghum is

1. 4 : 2
2. 6 : 2
3. 5 : 2
4. 3 : 2

Options :

55317218469. 1  
55317218470. 2  
55317218471. 3  
55317218472. 4

Question Number : 119 Question Id : 5531724633 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

*Argemone Mexicana* L. is an objectionable weed for one of the following crops

1. Niger
2. Mustard
3. Sesame
4. Linseed

Options :

55317218473. 1  
55317218474. 2  
55317218475. 3  
55317218476. 4

Question Number : 120 Question Id : 5531724634 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Block system is adopted for the hybrid seed production of

1. Castor
2. Maize
3. Sorghum
4. Cotton

Options :

55317218477. 1  
55317218478. 2  
55317218479. 3  
55317218480. 4

Question Number : 121 Question Id : 5531724635 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In crop plants, the most commonly used male sterility system for hybrid seed production is

1. CMS
2. GMS
3. CGMS
4. TGMS

Options :

55317218481. 1  
55317218482. 2  
55317218483. 3  
55317218484. 4

Question Number : 122 Question Id : 5531724636 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Recommended isolation distance (m) for seed production of Ragi is

1. 3
2. 30
3. 50
4. 25

Options :

55317218485. 1  
55317218486. 2  
55317218487. 3  
55317218488. 4

Question Number : 123 Question Id : 5531724637 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Headquarter of ISTA is located at

1. Germany
2. Netherlands
3. Switzerland
4. New Zealand

Options :

55317218489. 1  
55317218490. 2  
55317218491. 3  
55317218492. 4

Question Number : 124 Question Id : 5531724638 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1



Peroxidase test is used to test the genuineness of varieties of

1. Green gram
2. Groundnut
3. Soybean
4. Maize

Options :

55317218493. 1  
55317218494. 2  
55317218495. 3  
55317218496. 4

Question Number : 125 Question Id : 5531724639 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Gamet type seed divider works on the principle of

1. Gravitational Force
2. Centrifugal Force
3. Electromagnetic Force
4. Centripetal Force

Options :

55317218497. 1  
55317218498. 2  
55317218499. 3  
55317218500. 4

Question Number : 126 Question Id : 5531724640 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following is seed borne disease?

1. Tobacco mosaic virus
2. Potato leaf curl virus
3. Bean common mosaic virus
4. Soybean mosaic virus

Options :

55317218501. 1  
55317218502. 2  
55317218503. 3  
55317218504. 4

Question Number : 127 Question Id : 5531724641 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

As per IMSC standards, minimum working sample size for GoT is 400 plants because

1. It is easy to replicate them in two slots of 200 plants each.
2. It is just arbitrarily fixed.
3. Minimum germination percentage for all certified seed classed is less than 99%.
4. It is easy to manage 400 plants.

Options :

- 55317218505. 1
- 55317218506. 2
- 55317218507. 3
- 55317218508. 4

Question Number : 128 Question Id : 5531724642 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The best processing equipment for upgrading the quality of sunflower seeds is gravity separator because of

1. Similar rate of seed and seed coat development.
2. Difference in rate of seed and seed coat development.
3. Similar rate of seed and fruit coat development.
4. Difference in rate of seed and fruit coat development.

Options :

- 55317218509. 1
- 55317218510. 2
- 55317218511. 3
- 55317218512. 4

Question Number : 129 Question Id : 5531724643 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Father of seed testing is

1. Friedrich Nobbe
2. John Nobbe
3. George Nobbe
4. Greggar Nobbe

Options :

- 55317218513. 1
- 55317218514. 2
- 55317218515. 3
- 55317218516. 4

Question Number : 130 Question Id : 5531724644 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The routine tests conducted in Seed Testing Laboratory are

1. Germination, Purity and Seed Health Test
2. Germination, Purity and Genetic Purity
3. Germination, Purity and Moisture
4. Moisture, Genetic Purity and Purity

Options :

- 55317218517. 1
- 55317218518. 2
- 55317218519. 3
- 55317218520. 4

Question Number : 131 Question Id : 5531724645 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Part of the submitted sample that is stored in seed testing laboratory after issuing the test result is called

1. Composite sample
2. Authorised sample
3. Guard sample
4. Service sample

Options :

- 55317218521. 1
- 55317218522. 2
- 55317218523. 3
- 55317218524. 4

Question Number : 132 Question Id : 5531724646 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The enzyme involved in T<sub>z</sub> test reaction is

1. Esterase
2. Catalase
3. Dehydrogenase
4. Superoxide dismutase

Options :

- 55317218525. 1
- 55317218526. 2
- 55317218527. 3
- 55317218528. 4

Question Number : 133 Question Id : 5531724647 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

As per Indian minimum seed certification standards, time isolation is permitted in seed production of

1. Wheat
2. Paddy
3. Sorghum
4. Maize

Options :

- 55317218529. 1
- 55317218530. 2
- 55317218531. 3
- 55317218532. 4

Question Number : 134 Question Id : 5531724648 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The maximum area (ha) under seed production that is considered as one unit for field inspection is

1. 10
2. 15
3. 20
4. 5

Options :

- 55317218533. 1
- 55317218534. 2
- 55317218535. 3
- 55317218536. 4

Question Number : 135 Question Id : 5531724649 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Minimum Germination Percentage for certified seed class of synthetics is

1. 99%
2. 98%
3. 95%
4. 90%

Options :

- 55317218537. 1
- 55317218538. 2
- 55317218539. 3
- 55317218540. 4

Question Number : 136 Question Id : 5531724650 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The objective of generation system of seed multiplication is

1. Faster multiplication
2. Easier multiplication
3. Better management of pests and diseases
4. To ensure varietal identity and purity

Options :

55317218541. 1  
55317218542. 2  
55317218543. 3  
55317218544. 4

Question Number : 137 Question Id : 5531724651 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In case of hybrid rice, maintainer line is produced by

1.  $A \times B$
2. Selfing B line
3.  $B \times A$
4.  $B \times R$

Options :

55317218545. 1  
55317218546. 2  
55317218547. 3  
55317218548. 4

Question Number : 138 Question Id : 5531724652 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The Phage-Plaque method is adopted for detection of seed borne

1. Insect
2. Fungi
3. Virus
4. Nematode

Options :

55317218549. 1  
55317218550. 2  
55317218551. 3  
55317218552. 4

Question Number : 139 Question Id : 5531724653 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Causal organism for karnal bunt of wheat is

1. *Ustilago tritici*
2. *Nevossia indica*
3. *Nevossia horrida*
4. *Puccinia recognita*

Options :

55317218553. 1  
55317218554. 2  
55317218555. 3  
55317218556. 4

Question Number : 140 Question Id : 5531724654 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The designated disease of sunflower is caused by

1. *Claviceps microcephala*
2. *Sclerospora graminicola*
3. *Sphecelia sorghi*
4. *Plasmopora halstedii*

Options :

55317218557. 1  
55317218558. 2  
55317218559. 3  
55317218560. 4

Question Number : 141 Question Id : 5531724655 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Permissible limit of ODV (per kg) in certified seed of paddy is

1. 5
2. 10
3. 20
4. 40

Options :

55317218561. 1  
55317218562. 2  
55317218563. 3  
55317218564. 4

Question Number : 142 Question Id : 5531724656 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1



Embryo count method is used to test the seeds for knowing

1. Seed viability
2. Fungal infection
3. Viral infection
4. Nematode infection

Options :

- 55317218565. 1
- 55317218566. 2
- 55317218567. 3
- 55317218568. 4

Question Number : 143 Question Id : 5531724657 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Mode of disease transmission from seed to plant in case of *Ustilago tritici* is

1. Intra embryo seed infection followed by systemic infection.
2. Intra embryo seed infection followed by local infection.
3. Extra embryo seed infection followed by systemic infection.
4. Seed contamination followed by systemic infection.

Options :

- 55317218569. 1
- 55317218570. 2
- 55317218571. 3
- 55317218572. 4

Question Number : 144 Question Id : 5531724658 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Mode of disease transmission from plant to seed in case *Ustilago tritici* is

1. Ovule infection
2. Embryo infection
3. Endosperm infection
4. Bract infection

Options :

- 55317218573. 1
- 55317218574. 2
- 55317218575. 3
- 55317218576. 4

Question Number : 145 Question Id : 5531724659 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Serious storage pest of pulse seed is

1. *Rhizopertha dominica*
2. *Callasobruchus maculatus*
3. *Sitotroga cerealella*
4. *Sitophilus oryzae*

Options :

- 55317218577. 1
- 55317218578. 2
- 55317218579. 3
- 55317218580. 4

Question Number : 146 Question Id : 5531724660 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The maximum limit of visible insect damage allowed for certified seed of legumes is

1. 1.00%
2. 0.50%
3. 0.75%
4. 1.50%

Options :

- 55317218581. 1
- 55317218582. 2
- 55317218583. 3
- 55317218584. 4

Question Number : 147 Question Id : 5531724661 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

During certification, downgrading of the seed class is NOT allowed in case of

1. Varieties
2. Synthetics
3. Composites
4. Parental lines of hybrids

Options :

- 55317218585. 1
- 55317218586. 2
- 55317218587. 3
- 55317218588. 4

Question Number : 148 Question Id : 5531724662 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The PPV & FR Act was passed by the parliament of India in the year

1. 2000
2. 2001
3. 2002
4. 2003

Options :

- 55317218589. 1
- 55317218590. 2
- 55317218591. 3
- 55317218592. 4

Question Number : 149 Question Id : 5531724663 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Inter cropping during certified seed production is allowed in case of

1. All crops
2. Pulses only
3. Cereals only
4. Forages only

Options :

- 55317218593. 1
- 55317218594. 2
- 55317218595. 3
- 55317218596. 4

Question Number : 150 Question Id : 5531724664 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In India, seed was recognized as an essential commodity during the year

1. 1983
2. 1988
3. 1967
4. 1966

Options :

- 55317218597. 1
- 55317218598. 2
- 55317218599. 3
- 55317218600. 4

Question Number : 151 Question Id : 5531724665 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Provision for self-certification of seed lots has been proposed in

1. Seed Bill 2000
2. Seed Bill 2001
3. Seed Bill 2003
4. Seed Bill 2004

Options :

55317218601. 1  
55317218602. 2  
55317218603. 3  
55317218604. 4

Question Number : 152 Question Id : 5531724666 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Two seed lots of hybrid DCH-32 are subjected to grow out test and the results of which are as follows

Lot-A: True to the type plants - 92%, Off types - 1%, Selfed seeds 7%

Lot-B: True to the type plants - 92%, Off types - 4%, Selfed seeds 4%

Based on these results, seed certification officer will

1. Accept both seed lot A and B
2. Reject both seed lot A and B
3. Accept seed lot A only
4. Accept seed lot B only

Options :

55317218605. 1  
55317218606. 2  
55317218607. 3  
55317218608. 4

Question Number : 153 Question Id : 5531724667 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Brine solution seed treatment is given for seed disinfestation against

1. Fungi
2. Bacteria
3. Virus
4. Nematode

Options :

55317218609. 1  
55317218610. 2  
55317218611. 3  
55317218612. 4

Question Number : 154 Question Id : 5531724668 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

NaOCl is used to test the mechanical injury during combine  
harvesting of

1. Soybean
2. Ground nut
3. Lentil
4. Green gram

Options :

55317218613. 1

55317218614. 2

55317218615. 3

55317218616. 4

Question Number : 155 Question Id : 5531724669 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Desiccation tolerant seed is

1. Jamun
2. Cocoa
3. Rubber
4. Maize

Options :

55317218617. 1

55317218618. 2

55317218619. 3

55317218620. 4

Question Number : 156 Question Id : 5531724670 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Objectionable weed in Lucerne is

1. Dodder
2. Johnson grass
3. Quack grass
4. Chicory

Options :

55317218621. 1

55317218622. 2

55317218623. 3

55317218624. 4

Question Number : 157 Question Id : 5531724671 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Pearson square method is adopted in seed for

1. Blending
2. Testing
3. Dividing
4. Sampling

Options :

- 55317218625. 1
- 55317218626. 2
- 55317218627. 3
- 55317218628. 4

Question Number : 158 Question Id : 5531724672 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In India, all seed offered for sale on the seed market should compulsorily be

1. Certified
2. Labelled
3. Notified and released by the State Variety Release Committee
4. Notified and released by the Central Variety Release Committee

Options :

- 55317218629. 1
- 55317218630. 2
- 55317218631. 3
- 55317218632. 4

Question Number : 159 Question Id : 5531724673 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Pollen Shedder is the common contaminant in hybrid seed production plots of

1. Brinjal
2. Cotton
3. Sunflower
4. Cucurbits

Options :

- 55317218633. 1
- 55317218634. 2
- 55317218635. 3
- 55317218636. 4

Question Number : 160 Question Id : 5531724674 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1



Seeds used for seed multiplication should be purchased from

1. Seed Certification Agency
2. NBPGR, New Delhi
3. NSRTC, Varanasi
4. Authentic Seed Production Organization

Options :

55317218637. 1  
55317218638. 2  
55317218639. 3  
55317218640. 4

Question Number : 161 Question Id : 5531724675 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Tripping is necessary for seed setting in

1. Celery
2. Lettuce
3. Lucerne
4. Spinach

Options :

55317218641. 1  
55317218642. 2  
55317218643. 3  
55317218644. 4

Question Number : 162 Question Id : 5531724676 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Jerking is done to achieve synchronization during hybrid seed  
production in

1. Maize
2. Sunflower
3. Pearl millet
4. Sorghum

Options :

55317218645. 1  
55317218646. 2  
55317218647. 3  
55317218648. 4

Question Number : 163 Question Id : 5531724677 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Hollow heart defect in peas is due to the deficiency of

1. Magnesium
2. Zinc
3. Calcium
4. Boron

Options :

55317218649. 1  
55317218650. 2  
55317218651. 3  
55317218652. 4

Question Number : 164 Question Id : 5531724678 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

During physical purity testing, seed less than half its own specified size is considered as

1. Other crop seeds
2. Inert matter
3. Pure seed
4. Weed seed

Options :

55317218653. 1  
55317218654. 2  
55317218655. 3  
55317218656. 4

Question Number : 165 Question Id : 5531724679 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The minimum genetic purity standard for foundation seed class is

1. 99%
2. 98%
3. 100%
4. 95%

Options :

55317218657. 1  
55317218658. 2  
55317218659. 3  
55317218660. 4

Question Number : 166 Question Id : 5531724680 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In Sorghum, KOH bleach test is used to confirm

1. Seed viability
2. Mechanical damage
3. Varietal purity
4. Seed vigour

Options :

- 55317218661. 1
- 55317218662. 2
- 55317218663. 3
- 55317218664. 4

Question Number : 167 Question Id : 5531724681 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Processing equipment used to upgrade round shaped seeds is

1. Spiral separator
2. Magnetic separator
3. Indent cylinder separator
4. Colour sorter

Options :

- 55317218665. 1
- 55317218666. 2
- 55317218667. 3
- 55317218668. 4

Question Number : 168 Question Id : 5531724682 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Seeds produced by crossing two hybrids are called

1. Single cross hybrid
2. Double cross hybrid
3. Three-way cross hybrid
4. Open pollinated variety

Options :

- 55317218669. 1
- 55317218670. 2
- 55317218671. 3
- 55317218672. 4

Question Number : 169 Question Id : 5531724683 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The Indian Seed Act, 1966 contains

1. 20 sections
2. 25 sections
3. 15 sections
4. 30 sections

Options :

- 55317218673. 1
- 55317218674. 2
- 55317218675. 3
- 55317218676. 4

Question Number : 170 Question Id : 5531724684 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The prominent feature that differentiates angiosperm and gymnosperm seeds is

1. Seed coat
2. Embryo
3. Endosperm
4. Cotyledon

Options :

- 55317218677. 1
- 55317218678. 2
- 55317218679. 3
- 55317218680. 4

Question Number : 171 Question Id : 5531724685 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The ancestral form of seed dormancy is

1. Morphological dormancy
2. Physiological dormancy
3. Physical dormancy
4. Morpho-physiological dormancy

Options :

- 55317218681. 1
- 55317218682. 2
- 55317218683. 3
- 55317218684. 4

Question Number : 172 Question Id : 5531724686 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Based on the results of electrical conductivity test of the respective seed slots, which seed lot will be having better storability?

Lot A :  $3.5 \mu \text{ mhos cm}^{-1}$  per 50 seeds

Lot B :  $4.5 \mu \text{ mhos cm}^{-1}$  per 50 seeds

Lot C :  $5.5 \mu \text{ mhos cm}^{-1}$  per 50 seeds

1. Lot A only
2. Lot B only
3. Lot C only
4. Lot B and C

Options :

55317218685. 1

55317218686. 2

55317218687. 3

55317218688. 4

Question Number : 173 Question Id : 5531724687 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

DUS test centre for medicinal and aromatic plants is located at

1. CIMAP, Lucknow
2. DMPR, Anand
3. UAS, Bangalore
4. TNAU, Coimbatore

Options :

55317218689. 1

55317218690. 2

55317218691. 3

55317218692. 4

Question Number : 174 Question Id : 5531724688 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Validity of the germination test for the 2nd and subsequent certification is

1. 9 months
2. 12 months
3. 6 months
4. 18 months

Options :

55317218693. 1

55317218694. 2

55317218695. 3

55317218696. 4

Question Number : 175 Question Id : 5531724689 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

For efficient long storage of seeds, the best packaging material is

1. Cloth bag
2. Gunny bag
3. HDPE 700 gauge
4. HDPE 100 gauge

Options :

55317218697. 1

55317218698. 2

55317218699. 3

55317218700. 4

Question Number : 176 Question Id : 5531724690 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Low value and high value seeds are marketed by

1. National Seeds Corporation
2. State Seed Corporation
3. Private Seed Companies
4. State Seed Cooperative federation

Options :

55317218701. 1

55317218702. 2

55317218703. 3

55317218704. 4

Question Number : 177 Question Id : 5531724691 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The journal of Seed Science and Technology is published by

1. ISTA
2. ISST
3. ISSS
4. AOSA

Options :

55317218705. 1

55317218706. 2

55317218707. 3

55317218708. 4

Question Number : 178 Question Id : 5531724692 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1



VCU test is useful for

1. Variety protection
2. Variety identification
3. Genetic purity
4. Variety release

Options :

55317218709. 1  
55317218710. 2  
55317218711. 3  
55317218712. 4

Question Number : 179 Question Id : 5531724693 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Present PPV and FR authority chairman is

1. Dr. R. R. Hanchinal
2. Dr. R. C. Agarwal
3. Dr. K. V. Prabhu
4. Dr. P. L. Gautam

Options :

55317218713. 1  
55317218714. 2  
55317218715. 3  
55317218716. 4

Question Number : 180 Question Id : 5531724694 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Pustovoit model (Renovation method) is used for genetic purity testing of

1. Cotton
2. Rice
3. Sunflower
4. Maize

Options :

55317218717. 1  
55317218718. 2  
55317218719. 3  
55317218720. 4

Question Number : 181 Question Id : 5531724695 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Crop 'ideotype' refers to

1. Ideal plant type
2. Ideal fruit / grain type
3. Ideal root type
4. Ideal resistance type

Options :

- 55317218721. 1
- 55317218722. 2
- 55317218723. 3
- 55317218724. 4

Question Number : 182 Question Id : 5531724696 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Sets of gene that are essential and express all the time are called  
as

1. Essential gene
2. Structural gene
3. Housekeeping gene
4. Pseudogene

Options :

- 55317218725. 1
- 55317218726. 2
- 55317218727. 3
- 55317218728. 4

Question Number : 183 Question Id : 5531724697 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The shortest phase in the cell cycle is

1. S phase
2. G<sub>1</sub> phase
3. G<sub>2</sub> phase
4. M phase

Options :

- 55317218729. 1
- 55317218730. 2
- 55317218731. 3
- 55317218732. 4

Question Number : 184 Question Id : 5531724698 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The third component of cell theory i.e., 'all cells arise from pre-existing cells' was given by

1. Robert Hook
2. Schleiden
3. Schwann
4. Rudolf Virchow

**Options :**

55317218733. 1  
55317218734. 2  
55317218735. 3  
55317218736. 4

**Question Number : 185 Question Id : 5531724699 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

The genetic material in human polio virus is

1. DNA
2. RNA
3. Protein
4. Prion

**Options :**

55317218737. 1  
55317218738. 2  
55317218739. 3  
55317218740. 4

**Question Number : 186 Question Id : 5531724700 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

"Prion" is composed of

1. RNA
2. DNA
3. Protein
4. Ribozyme

**Options :**

55317218741. 1  
55317218742. 2  
55317218743. 3  
55317218744. 4

**Question Number : 187 Question Id : 5531724701 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

The term 'Gene' was given by

1. W. Bateson
2. W. Johannsen
3. W. Johanson
4. W. Johnson

Options :

55317218745. 1  
55317218746. 2  
55317218747. 3  
55317218748. 4

Question Number : 188 Question Id : 5531724702 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The volatile chemical compound which is considered to be responsible for aroma in 'Basmati' rice is

1. 2-AP
2. 2-AC
3. 1-AC
4. 1-AP

Options :

55317218749. 1  
55317218750. 2  
55317218751. 3  
55317218752. 4

Question Number : 189 Question Id : 5531724703 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

'Double zero' quality mustard oil is free from

1. Erucic acid and oleic acid
2. Erucic acid and glucosinolate
3. Erucic acid and linoleic acid
4. Erucic acid and linolenic acid

Options :

55317218753. 1  
55317218754. 2  
55317218755. 3  
55317218756. 4

Question Number : 190 Question Id : 5531724704 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Most serious demerit of SSR marker is that

1. It is highly polymorphic.
2. It is co-dominant.
3. It does amplify an entire chromosome.
4. It needs prior sequence information.

Options :

- 55317218757. 1
- 55317218758. 2
- 55317218759. 3
- 55317218760. 4

Question Number : 191 Question Id : 5531724705 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Identify the third scientist who was given the Nobel Award along with J D Watson and FHC Crick who gave the double helix model of DNA.

1. Karl Korenberg
2. Linus Pauling
3. Rosalind Franklin
4. Maurice Wilkins

Options :

- 55317218761. 1
- 55317218762. 2
- 55317218763. 3
- 55317218764. 4

Question Number : 192 Question Id : 5531724706 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In prokaryotes, transcription and translation go simultaneously. It may be because of the fact that the prokaryotic genome is

1. Very small
2. Devoid of introns
3. Devoid of exons
4. Devoid of stop codon

Options :

- 55317218765. 1
- 55317218766. 2
- 55317218767. 3
- 55317218768. 4

Question Number : 193 Question Id : 5531724707 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

'One-gene-one-enzyme' hypothesis will be correct provided the polypeptides of an enzyme are only of

1. One type
2. Two types
3. Three types
4. Multiple types

Options :

55317218769. 1  
55317218770. 2  
55317218771. 3  
55317218772. 4

Question Number : 194 Question Id : 5531724708 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In plant tissue culture media, sugar is added as a source of

1. Carbon
2. Oxygen
3. Hydrogen
4. Nitrogen

Options :

55317218773. 1  
55317218774. 2  
55317218775. 3  
55317218776. 4

Question Number : 195 Question Id : 5531724709 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

'Roundup Ready' transgenic soybeans are resistant to

1. Insecticide
2. Herbicide
3. Fungicide
4. Virus

Options :

55317218777. 1  
55317218778. 2  
55317218779. 3  
55317218780. 4

Question Number : 196 Question Id : 5531724710 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1



In a trihybrid test cross, if the observed and expected number of double crosses are same, what would be the value of interference (I) ?

1. 0
2. 1
3. 2
4.  $\infty$

Options :

55317218781. 1  
55317218782. 2  
55317218783. 3  
55317218784. 4

Question Number : 197 Question Id : 5531724711 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Father of hybrid rice is

1. G. S. Khush
2. T. Sasaki
3. M. Virmani
4. L. P. Yuan

Options :

55317218785. 1  
55317218786. 2  
55317218787. 3  
55317218788. 4

Question Number : 198 Question Id : 5531724712 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Among the following crops, inbreeding depression would be highest in

1. Rice
2. Blackgram
3. Maize
4. Rice bean

Options :

55317218789. 1  
55317218790. 2  
55317218791. 3  
55317218792. 4

Question Number : 199 Question Id : 5531724713 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Overlapping genes are common in

1. Bacteria
2. Eukaryotes
3.  $\phi$ X174
4. Prion

Options :

55317218793. 1  
55317218794. 2  
55317218795. 3  
55317218796. 4

Question Number : 200 Question Id : 5531724714 Question Type : MCQ Option Shuffling : No Display Question Number : Yes  
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

'Gene-for-gene' hypothesis was established in which of the following crops?

1. Sesamum
2. Niger
3. Linseed
4. Sunflower

Options :

55317218797. 1  
55317218798. 2  
55317218799. 3  
55317218800. 4