

National Testing Agency

Question Paper Name :	Economic Botany and Plant Genetic Resources 23rd Sep 2020 Shift 2 Set 2
Subject Name :	Economic Botany and Plant Genetic Resources
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Economic Botany and Plant Genetic Resources

Group Number :	1
Group Id :	7108705
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	480
Is this Group for Examiner? :	No

Part A General Knowledge

Section Id :	71087013
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 :	Yes
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	71087013
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 710870541 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following crops is a commercial crop in Punjab and Haryana but is a subsistence crop in Orissa?

1. Tea
2. Cotton
3. Rubber
4. Rice

Options :

- 7108702161. 1
- 7108702162. 2
- 7108702163. 3
- 7108702164. 4

Question Number : 2 Question Id : 710870542 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which of the following are the two most important wheat-growing zones of the country?

- A. Ganga-Satluj plains in the north-west
- B. Deltaic regions
- C. Black soil region of the Deccan
- D. Plains of north-east

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

- 1. Only A and B
- 2. Only B and C
- 3. Only C and D
- 4. Only A and C

Options :

- 7108702165. 1
- 7108702166. 2
- 7108702167. 3
- 7108702168. 4

Question Number : 3 Question Id : 710870543 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Indian agriculture is typically characterized as

- 1. Land surplus, labour scarce economy
- 2. Land surplus, labour surplus economy
- 3. Land scarce, labour surplus economy
- 4. Land scarce, labour scarce economy

Options :

- 7108702169. 1

7108702170. 2

7108702171. 3

7108702172. 4

Question Number : 4 Question Id : 710870544 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following countries is the main rival of India in tea export?

1. China
2. Japan
3. Germany
4. Sri Lanka

Options :

7108702173. 1

7108702174. 2

7108702175. 3

7108702176. 4

Question Number : 5 Question Id : 710870545 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement A: MSP is declared by the government every year to provide incentives to the farmers for raising the production of crops.

Statement B: Buffer stock is created to distribute food grains in the deficit areas and among the poorer strata of the society at the lower price than the market price.

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

1. Both Statement A and Statement B are correct
2. Both Statement A and Statement B are incorrect
3. Statement A is correct but Statement B is incorrect
4. Statement A is incorrect but Statement B is correct

Options :

- 7108702177. 1
- 7108702178. 2
- 7108702179. 3
- 7108702180. 4

Question Number : 6 Question Id : 710870546 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following is a global association of nations of the world to help cooperation in international law, security, economic development and social equity?

1. United Nations Organization
2. International Monetary Fund
3. World Bank
4. World Health Organization

Options :

- 7108702181. 1
- 7108702182. 2
- 7108702183. 3
- 7108702184. 4

Question Number : 7 Question Id : 710870547 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Under the Ganga Action Plan Phase II, pollution abatement works are being taken up in how many towns?

- 1. 57
- 2. 65
- 3. 52
- 4. 69

Options :

- 7108702185. 1
- 7108702186. 2
- 7108702187. 3
- 7108702188. 4

Question Number : 8 Question Id : 710870548 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following statements is **incorrect**?

- 1. The highest number of pigs in the world are found in India
- 2. Utter Pradesh provides largest amount of pork
- 3. Assam has the largest number of pork producing pigs
- 4. Pork constitutes about 7.6% of the total meat produced in India

Options :

7108702189. 1

7108702190. 2

7108702191. 3

7108702192. 4

Question Number : 9 Question Id : 710870549 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which type of N-fertilizer is suitable for water-logged soils?

1. Zinc Phosphate
2. Ammonium Sulphate
3. Calcium
4. Potassium Nitrate

Options :

7108702193. 1

7108702194. 2

7108702195. 3

7108702196. 4

Question Number : 10 Question Id : 710870550 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The famous Bailadila range of hills in the Bastar district of Chhattisgarh is famous for its

1. Bauxite deposits
2. Manganese deposits
3. Copper deposits
4. High-grade haematite deposits

Options :

7108702197. 1

7108702198. 2

7108702199. 3

7108702200. 4

Question Number : 11 Question Id : 710870551 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

A farmer wishes to start a 100 sq. m rectangular vegetable garden. Since he has only 30m barbed wire, he fences three sides of the garden letting his house compound wall act as the fourth side fencing. What is the dimension of the garden?

1. 15 m x 6.67m
2. 20 m x 5 m
3. 30 m x 3.33 m
4. 40 m x 2.5 m

Options :

7108702201. 1

7108702202. 2

7108702203. 3

7108702204. 4

Question Number : 12 Question Id : 710870552 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

In which one of the following industries, the consumption of natural rubber is the largest?

1. Auto tyres and tubes
2. Footwear
3. Dipped goods
4. Latex foam

Options :

7108702205. 1
7108702206. 2
7108702207. 3
7108702208. 4

Question Number : 13 Question Id : 710870553 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following countries was the partner country of 34th Surajkund International Crafts Fair held in Haryana?

1. China
2. Nepal
3. Bhutan
4. Uzbekistan

Options :

7108702209. 1
7108702210. 2
7108702211. 3
7108702212. 4

Question Number : 14 Question Id : 710870554 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Nobel laureate Abhijit Vinayak Banerjee was conferred the honorary Doctor of Letters (D. Litt.) by which University?

1. University of Delhi
2. University of Kolkata
3. University of Mumbai
4. University of Hyderabad

Options :

- 7108702213. 1
- 7108702214. 2
- 7108702215. 3
- 7108702216. 4

Question Number : 15 Question Id : 710870555 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Where is the headquarters of European Union?

- 1. Geneva, Switzerland
- 2. Washington D.C., USA
- 3. New York, US
- 4. Brussels, Belgium

Options :

- 7108702217. 1
- 7108702218. 2
- 7108702219. 3
- 7108702220. 4

Question Number : 16 Question Id : 710870556 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which of the following would be deficient if one finds high somatic cell count in the cow's milk?

- 1. Butterfat
- 2. Whey protein
- 3. Casein
- 4. Trace minerals

Options :

- 7108702221. 1
- 7108702222. 2
- 7108702223. 3
- 7108702224. 4

Question Number : 17 Question Id : 710870557 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Who was the first administrator-statesman to attempt planning as a means for economic development?

- 1. C. Rajagopalachari
- 2. V. T. Krishnamachari
- 3. M. Viswesvarayya
- 4. Sir C. P. Ramaswami Aiyar

Options :

- 7108702225. 1
- 7108702226. 2
- 7108702227. 3
- 7108702228. 4

Question Number : 18 Question Id : 710870558 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Amazon rainforest span over nine countries. In August 2019, in which country did a deadly fire broke out in the Amazon forest?

- 1. Brazil
- 2. Venezuela
- 3. Colombia
- 4. Argentina

Options :

- 7108702229. 1
- 7108702230. 2
- 7108702231. 3
- 7108702232. 4

Question Number : 19 Question Id : 710870559 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Economic liberalization in India started with

- 1. Sustainable changes in industrial licensing policy
- 2. The convertibility of the Indian Rupee
- 3. Significant reduction of tax rates
- 4. Changes in procedural formalities for FDI

Options :

- 7108702233. 1
- 7108702234. 2
- 7108702235. 3
- 7108702236. 4

Question Number : 20 Question Id : 710870560 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The term 'Delimitation' which was in news recently is associated with which process?

- 1. Fixing the limit of Income tax
- 2. Fixing limits of Affordable housing
- 3. Fixing limits of Territorial constituencies
- 4. Fixing limits of Chairpersons salary

Options :

- 7108702237. 1

7108702238. 2
7108702239. 3
7108702240. 4

Part B Core Crop Sciences-I

Section Id :	71087014
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	50
Number of Questions to be attempted :	50
Section Marks :	200
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	71087014
Question Shuffling Allowed :	Yes

Question Number : 21 Question Id : 710870561 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The translation process occurs in association with which one of the following?

1. Plastids
2. ER
3. Mitochondria
4. Ribosome and RNA

Options :

7108702241. 1
7108702242. 2

7108702243. 3

7108702244. 4

Question Number : 22 Question Id : 710870562 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

E. R. Sears produced 21 monosomics in which one of the following wheat varieties?

1. Einkorn
2. Chinese spring
3. Khorasan
4. Red spring

Options :

7108702245. 1

7108702246. 2

7108702247. 3

7108702248. 4

Question Number : 23 Question Id : 710870563 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Name the small cDNA sequence that represents a unique segment of an active gene

1. SNPs
2. snRNAs
3. ESTs
4. Contigs

Options :

7108702249. 1

7108702250. 2

7108702251. 3

7108702252. 4

Question Number : 24 Question Id : 710870564 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following species of *Cajanus* is used to introgress salt tolerance in the cultivated species of *Cajanus*?

1. *Cajanus scaraboides*
2. *Cajanus lanceolatus*
3. *Cajanus platicarpus*
4. *Cajanus albicans*

Options :

- 7108702253. 1
- 7108702254. 2
- 7108702255. 3
- 7108702256. 4

Question Number : 25 Question Id : 710870565 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Under IPR, what protects the intellectual property created by inventors ?

1. Copy right
2. Patents
3. Trade marks
4. Registered design

Options :

- 7108702257. 1
- 7108702258. 2
- 7108702259. 3
- 7108702260. 4

Question Number : 26 Question Id : 710870566 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The world's most inventory of the global conservation status of biological species is being maintained by

1. WWF
2. IUCN
3. MAB
4. IBWL

Options :

7108702261. 1

7108702262. 2

7108702263. 3

7108702264. 4

Question Number : 27 Question Id : 710870567 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
A: Pod corn	I: <i>Zea mays</i> var. <i>everta</i>
B: Pop corn	II: <i>Zea mays</i> var. <i>ceratina</i>
C: Wax corn	III: <i>Zea mays</i> var. <i>tunicata</i>
D: Flint corn	IV: <i>Zea mays</i> var. <i>indurata</i>

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

1. A : IV, B : III, C : II, D : I
2. A : III, B : II, C : I, D : IV
3. A : III, B : I, C : II, D : IV
4. A : I, B : II, C : III, D : IV

Options :

- 7108702265. 1
- 7108702266. 2
- 7108702267. 3
- 7108702268. 4

Question Number : 28 Question Id : 710870568 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

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

List I	List II
(Species)	(Chromosome number)
A: <i>Linum usitatissimum</i>	I: n = 18
B: <i>Cicer arietinum</i>	II: n = 7
C: <i>Brassica nigra</i>	III: n = 8
D: <i>Lens esculenta</i>	IV: n = 15

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

1. A : I, B : II, C : III, D : IV
2. A : II, B : III, C : I, D : IV
3. A : IV, B : III, C : I, D : II
4. A : III, B : I, C : IV, D : II

Options :

7108702269. 1
7108702270. 2
7108702271. 3
7108702272. 4

Question Number : 29 Question Id : 710870569 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

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

List I	List II
(Crop)	(Isolation distance for certified seed production)
A: Hybrid rice	I: 400 m
B: Johnson Grass	II: 800 m
C: Sesame	III: 100 m
D: Carrot	IV: 50 m

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

1. A : III, B : I, C : IV, D : II
2. A : III, B : I, C : II, D : IV
3. A : IV, B : II, C : III, D : I
4. A : I, B : II, C : III, D : IV

Options :

7108702273. 1
7108702274. 2
7108702275. 3
7108702276. 4

Question Number : 30 Question Id : 710870570 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Adventive embryony is an example of

1. Vegetative propagation
2. Amphimixis
3. Agamospermy
4. Parthinogamy

Options :

- 7108702277. 1
- 7108702278. 2
- 7108702279. 3
- 7108702280. 4

Question Number : 31 Question Id : 710870571 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Loss in vigour due to inbreeding is more visible in

1. Self-pollinated species
2. Cross-pollinated species
3. Apomictic species
4. Monoecious species.

Options :

- 7108702281. 1
- 7108702282. 2
- 7108702283. 3
- 7108702284. 4

Question Number : 32 Question Id : 710870572 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

If two individuals with a genotype AaBb are crossed, what proportion of the offsprings will be of genotype aabb?

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

Options :

- 7108702285. 1
- 7108702286. 2
- 7108702287. 3
- 7108702288. 4

Question Number : 33 Question Id : 710870573 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Requirements for Marker Assisted Backcross Breeding are

- A. High heritability
- B. Tightly linked marker with target gene
- C. Flanking markers
- D. Multi-location trial

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

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

Options :

7108702289. 1

7108702290. 2

7108702291. 3

7108702292. 4

Question Number : 34 Question Id : 710870574 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Chi-square test has the following applications

A. Test of segregation

B. Selection of genotype

C. Detection of genotype

D. Developing ANOVA table

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

1. B, D and E only

2. A, C and E only

3. B, C and D only

4. A, C and D only

Options :

7108702293. 1

7108702294. 2

7108702295. 3

7108702296. 4

Question Number : 35 Question Id : 710870575 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Requirements for AFLP marker are

- A. Random primers
- B. Restriction enzymes
- C. Adaptors
- D. PCR
- E. Short sequence repeats

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

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

Options :

- 7108702297. 1
- 7108702298. 2
- 7108702299. 3
- 7108702300. 4

Question Number : 36 Question Id : 710870576 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

For breeding high-quality chapati wheat in India we prefer

- A. Soft wheat
- B. Hard wheat
- C. *Triticum aestivum*
- D. *Triticum durum*
- E. *Triticum dicoccum*

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

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

Options :

- 7108702301. 1
- 7108702302. 2
- 7108702303. 3
- 7108702304. 4

Question Number : 37 Question Id : 710870577 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Evidence for DNA as genetic material was obtained in which of the following experiments?

- A. Avery, McLeod and McCarty experiment
- B. Griffith Experiment
- C. Conrat and Singer experiment
- D. Watson and Crick experiment
- E. Hershey and Chase experiment

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

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

Options :

- 7108702305. 1
- 7108702306. 2
- 7108702307. 3
- 7108702308. 4

Question Number : 38 Question Id : 710870578 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

A population consisted of the following genotypes in the given numbers

160-Heterozygotes

20-Homozygous recessive

320-Homozygous dominants

What would be the frequency of dominant allele?

1. 10%
2. 40%
3. 32%
4. 80%

Options :

7108702309. 1

7108702310. 2

7108702311. 3

7108702312. 4

Question Number : 39 Question Id : 710870579 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The non-random association of alleles at different loci in a given population is referred to as

1. Linkage disequilibrium
2. Linkage equilibrium
3. Mendelian population
4. QTL analysis

Options :

7108702313. 1

7108702314. 2

7108702315. 3

7108702316. 4

Question Number : 40 Question Id : 710870580 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Non-Mendelian inheritance includes

1. Maternal effect only
2. Maternal effect and epigenetic inheritance only
3. Epigenetic and extranuclear inheritance only
4. Maternal effect, Epigenetic and extranuclear inheritance only

Options :

7108702317. 1

7108702318. 2

7108702319. 3

7108702320. 4

Question Number : 41 Question Id : 710870581 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Morgan discovered linkage when studying two genes in which of the following in Drosophila?

1. X-chromosome
2. Y-chromosome
3. Autosomes
4. Cytoplasm

Options :

7108702321. 1

7108702322. 2

7108702323. 3

7108702324. 4

Question Number : 42 Question Id : 710870582 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Kary Banks Mullis invented PCR and received Nobel Prize in

1. Physics
2. Chemistry
3. Biology
4. Medicine

Options :

- 7108702325. 1
- 7108702326. 2
- 7108702327. 3
- 7108702328. 4

Question Number : 43 Question Id : 710870583 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Antibiotic resistance genes are mostly used as what kind of markers?

1. Selectable
2. Scorable
3. Countable
4. Molecular

Options :

- 7108702329. 1
- 7108702330. 2
- 7108702331. 3
- 7108702332. 4

Question Number : 44 Question Id : 710870584 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Expanded form of RAPD is

1. Randomly Amplified Polymorphic DNA
2. Random Amplification of Polymorphic DNA
3. Randomly Amplification of Polymorphic DNA
4. Random Amplified Polymorphic DNA

Options :

- 7108702333. 1
- 7108702334. 2
- 7108702335. 3
- 7108702336. 4

Question Number : 45 Question Id : 710870585 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Hybrid between plasmid and phage lambda chromosome are known as

1. Plasmid vector
2. Cosmid vector
3. Fosmid vector
4. Binary vector

Options :

- 7108702337. 1
- 7108702338. 2
- 7108702339. 3
- 7108702340. 4

Question Number : 46 Question Id : 710870586 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

DUS testing is necessary for

- A. Certification of a variety
- B. Release and notification of a variety
- C. Protection of a variety

Select the **most appropriate** answer from the options given below:

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

Options :

- 7108702341. 1
- 7108702342. 2
- 7108702343. 3
- 7108702344. 4

Question Number : 47 Question Id : 710870587 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

CSTL is located at

- 1. New Delhi
- 2. Lucknow
- 3. Patna
- 4. Varanasi

Options :

- 7108702345. 1
- 7108702346. 2
- 7108702347. 3

7108702348. 4

Question Number : 48 Question Id : 710870588 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Two line system of hybrid seed production is possible in

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

Options :

7108702349. 1
7108702350. 2
7108702351. 3
7108702352. 4

Question Number : 49 Question Id : 710870589 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Seed multiplication ratio of paddy is

1. 1:60
2. 1:80
3. 1:40
4. 1:100

Options :

7108702353. 1
7108702354. 2
7108702355. 3
7108702356. 4

Question Number : 50 Question Id : 710870590 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which of the following are certified classes of seeds under the Seeds Act?

- A. Breeder Seed
- B. Foundation Seed
- C. Certified Seed
- D. Nucleus Seed
- E. Quality declared seed

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

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

Options :

- 7108702357. 1
- 7108702358. 2
- 7108702359. 3
- 7108702360. 4

Question Number : 51 Question Id : 710870591 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Cross pollinated crop

- A. Sunflower
- B. Cabbage
- C. Chow-Chow
- D. Groundnut
- E. Moth Bean

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

1. A, B, C only
2. B, C, D only
3. E, A, B only
4. D, E, A only

Options :

- 7108702361. 1
- 7108702362. 2
- 7108702363. 3
- 7108702364. 4

Question Number : 52 Question Id : 710870592 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Grow-out test for seed certification is compulsory in hybrids of

- A. Tomato
- B. Brinjal
- C. Castor
- D. Maize
- E. Pearl millet

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

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

Options :

- 7108702365. 1
- 7108702366. 2
- 7108702367. 3
- 7108702368. 4

Question Number : 53 Question Id : 710870593 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Provision of 'Seed Register' is provided in

1. Seed Bill
2. PPV & FR Act
3. Seed Control Order
4. Seeds Act

Options :

- 7108702369. 1
- 7108702370. 2
- 7108702371. 3

7108702372. 4

Question Number : 54 Question Id : 710870594 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following rules are followed by ISTA for determining seed viability of a seed lot?

1. Four replications of 100 seeds each
2. Three replications of 50 seeds each
3. Four replications of 50 seeds each
4. Three replications of 100 seeds each

Options :

7108702373. 1

7108702374. 2

7108702375. 3

7108702376. 4

Question Number : 55 Question Id : 710870595 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

To break the dormancy and to enhance germination in orthodox seeds, the chemical stimuli used is

1. Sulphuric acid
2. Potassium nitrate
3. TTC
4. Formazane

Options :

7108702377. 1

7108702378. 2

7108702379. 3

7108702380. 4

Question Number : 56 Question Id : 710870596 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The Germination Value (GV) of tree seeds is calculated using the formula

1. $GV = PV \times MDG$
2. $GV = T \times PV$
3. $GV = PV \times B$
4. $GV = MDG \times T$

Options :

- 7108702381. 1
- 7108702382. 2
- 7108702383. 3
- 7108702384. 4

Question Number : 57 Question Id : 710870597 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Loose smut is the seed borne disease in

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

Options :

- 7108702385. 1
- 7108702386. 2
- 7108702387. 3
- 7108702388. 4

Question Number : 58 Question Id : 710870598 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Leaf spot is the seed borne disease in

1. Sesame
2. Groundnut
3. Castor
4. Linseed

Options :

7108702389. 1
7108702390. 2
7108702391. 3
7108702392. 4

Question Number : 59 Question Id : 710870599 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Given below are two statements:

Statement I: Under the PPV&FR Act, a variety with Bt-gene can be registered

Statement II: Under the PPV&FR Act, a variety with RIP-gene (Ribosomal Inhibitory Protein) can be registered

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

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

Options :

7108702393. 1

7108702394. 2

7108702395. 3

7108702396. 4

Question Number : 60 Question Id : 710870600 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

According to India's Patent Law, a patent has a time limit of

1. 15 years
2. 20 years
3. 7 years
4. 9 years

Options :

7108702397. 1

7108702398. 2

7108702399. 3

7108702400. 4

Question Number : 61 Question Id : 710870601 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Name the global initiative which is aimed at to establish a multilateral system of access and benefit sharing of Plant Genetic Resources through SMTA

1. Bioversity International
2. Commission on Genetic Resources for Food and Agriculture
3. Global Plan of Action
4. International Treaty for PGRFA

Options :

7108702401. 1

7108702402. 2

7108702403. 3

7108702404. 4

Question Number : 62 Question Id : 710870602 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The most successful technique to conserve pollen grains of plant species is

1. Organic solvent method
2. Desiccation freeze drying
3. Cryopreservation
4. Low temperature storage (-20⁰ C)

Options :

7108702405. 1

7108702406. 2

7108702407. 3

7108702408. 4

Question Number : 63 Question Id : 710870603 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

While breeding for abiotic resistance in legumes, drought tolerance and heat tolerance traits can be obtained from which one of the following *Vigna species*?

1. *Vigna radiate*
2. *Vigna aconitifolia*
3. *Vigna riukiensis*
4. *Vigna tenucauli*

Options :

7108702409. 1

7108702410. 2

7108702411. 3

7108702412. 4

Question Number : 64 Question Id : 710870604 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following crops is a rich source of calcium, iron and niacin?

1. Finger millet
2. Chickpea
3. Lima bean
4. Redgram

Options :

- 7108702413. 1
- 7108702414. 2
- 7108702415. 3
- 7108702416. 4

Question Number : 65 Question Id : 710870605 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Among the edible legume plants, which one of the following legumes possesses glandular hairs and secretes oxalic and malic acids?

1. *Vicia faba*
2. *Cajanus cajan*
3. *Vigna mungo*
4. *Cicer arietinum*

Options :

- 7108702417. 1
- 7108702418. 2
- 7108702419. 3
- 7108702420. 4

Question Number : 66 Question Id : 710870606 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which part of *Elaeis guineensis* fruit contains the maximum amount of oil?

1. Mesocarp
2. Endocarp
3. Endosperm
4. Exocarp

Options :

7108702421. 1

7108702422. 2

7108702423. 3

7108702424. 4

Question Number : 67 Question Id : 710870607 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Under the **ITPGRFA**, the specified number of food and fodder crops which can be exchanged when executing **SMTA** is

1. 95 food crops and 35 fodder crops
2. 24 food crops and 15 fodder crops
3. 132 food crops and 29 fodder crops
4. 35 food crops and 29 fodder crops

Options :

7108702425. 1

7108702426. 2

7108702427. 3

7108702428. 4

Question Number : 68 Question Id : 710870608 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Among the following types of rice, which form of rice possesses more of dextrin in its endosperm?

1. Wild rice
2. Glutinous rice
3. Parboiled rice
4. Hand pound rice

Options :

- 7108702429. 1
- 7108702430. 2
- 7108702431. 3
- 7108702432. 4

Question Number : 69 Question Id : 710870609 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Name the tool which is used to assess the plant genetic diversity which reduces the large set of variables into a smaller set of 'artificial / uncorrelated' variables.

1. Cluster analysis
2. PCA
3. Mahalanobis D^2 analysis
4. Cladogram

Options :

- 7108702433. 1
- 7108702434. 2
- 7108702435. 3
- 7108702436. 4

Question Number : 70 Question Id : 710870610 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

In which of the following crops species, allogamy is effected by the process called 'tripping'?

1. *Medicago sativa*
2. *Clitoria ternatea*
3. *Desmanthus tortuosum*
4. *Macroptelium atropurpureum*

Options :

7108702437. 1

7108702438. 2

7108702439. 3

7108702440. 4

Part C Economic Botany and Plant Genetic Resources

Section Id :	71087015
Section Number :	3
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	50
Number of Questions to be attempted :	50
Section Marks :	200
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	71087015
Question Shuffling Allowed :	Yes

Question Number : 71 Question Id : 710870611 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

'A Dictionary of Cultivated Plants' which dealt with distribution, ecology and genetic diversity was written by :

1. J.D Hooker
2. G. Watt
3. N.I.Vavilov
4. None of these

Options :

- 7108702441. 1
- 7108702442. 2
- 7108702443. 3
- 7108702444. 4

Question Number : 72 Question Id : 710870612 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The epidemic pest is one which

1. Occurs most frequently
2. Occurs in few locations
3. Occurs in same area year after year
4. Occurs in an area in severe form

Options :

- 7108702445. 1
- 7108702446. 2
- 7108702447. 3
- 7108702448. 4

Question Number : 73 Question Id : 710870613 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Grassy stunt disease was first noticed in India in which one of the following states?

1. Madhya Pradesh
2. Uttar Pradesh
3. Maharashtra
4. Gujarat

Options :

- 7108702449. 1
- 7108702450. 2
- 7108702451. 3
- 7108702452. 4

Question Number : 74 Question Id : 710870614 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following methods of quarantine process is followed for detection of hidden infestation?

1. Visual examination
2. X-Ray radiography
3. Hot water treatment
4. ELISA test

Options :

- 7108702453. 1
- 7108702454. 2
- 7108702455. 3
- 7108702456. 4

Question Number : 75 Question Id : 710870615 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The term ethnobotany was coined in 1895 by which one of the following scientists?

1. Harlan
2. Harshberger
3. Vavilov
4. Faulks

Options :

- 7108702457. 1
- 7108702458. 2
- 7108702459. 3
- 7108702460. 4

Question Number : 76 Question Id : 710870616 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The full form of FIGS is :

1. Fungal Infection in Germplasm Storage
2. Focused Identification of Germplasm Strategy
3. Foreign Investigation of Germplasm Storage
4. None of these

Options :

- 7108702461. 1
- 7108702462. 2
- 7108702463. 3
- 7108702464. 4

Question Number : 77 Question Id : 710870617 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Collecting germplasm after a natural calamity is termed as

1. Urgent collecting
2. Rescue collecting
3. Routine collecting
4. Special drive

Options :

- 7108702465. 1
- 7108702466. 2
- 7108702467. 3
- 7108702468. 4

Question Number : 78 Question Id : 710870618 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The Indian Gene Centre hosts how many hotspots of biodiversity?

1. Two
2. Four
3. Five
4. Six

Options :

- 7108702469. 1
- 7108702470. 2
- 7108702471. 3
- 7108702472. 4

Question Number : 79 Question Id : 710870619 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following is a co-dominant molecular marker?

1. RAPD
2. SSR
3. AFLP
4. ISSR

Options :

7108702473. 1
7108702474. 2
7108702475. 3
7108702476. 4

Question Number : 80 Question Id : 710870620 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

As per Marshall & Brown theory, more number of sites should be sampled in

- A. Self pollinated crops
- B. Cross pollinated crops
- C. Vegetative propagated material

Choose the most appropriate answer from the options given below:

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

Options :

7108702477. 1
7108702478. 2
7108702479. 3

7108702480. 4

Question Number : 81 Question Id : 710870621 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

For species delineation, which one of the following studies is required?

1. Systematic study
2. Biosystematic study
3. Molecular study
4. None of these

Options :

7108702481. 1

7108702482. 2

7108702483. 3

7108702484. 4

Question Number : 82 Question Id : 710870622 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

For recording agro-morphological data, the standards enumerated under which of the following are used?

- A. Passport data
- B. Descriptor and Descriptor States
- C. Non-structured questionnaire

Choose the **most appropriate** answer from the options given below

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

Options :

- 7108702485. 1
- 7108702486. 2
- 7108702487. 3
- 7108702488. 4

Question Number : 83 Question Id : 710870623 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following organizations provides rules for naming organisms?

- 1. ICZN
- 2. ICBN
- 3. ICN
- 4. IBM

Options :

- 7108702489. 1

7108702490. 2

7108702491. 3

7108702492. 4

Question Number : 84 Question Id : 710870624 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The commelinaceae family is commonly known as

1. Spiderwort family
2. Aster family
3. Grass family
4. Lily family

Options :

7108702493. 1

7108702494. 2

7108702495. 3

7108702496. 4

Question Number : 85 Question Id : 710870625 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Binomials with identical genus name and specific epithet are called

1. Homonym
2. Tautonym
3. Basionym
4. Synonym

Options :

7108702497. 1

7108702498. 2

7108702499. 3

7108702500. 4

Question Number : 86 Question Id : 710870626 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The principles of numerical taxonomy were developed by

1. Bentham & Hooker
2. Engler & Prantl
3. Sneath & Sokal
4. Takhtajan & Cronquist

Options :

- 7108702501. 1
- 7108702502. 2
- 7108702503. 3
- 7108702504. 4

Question Number : 87 Question Id : 710870627 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

The newly collected specimen which is used as a substitute, when the original material is missing in a herbarium, is designated as

1. Lactotype
2. Holotype
3. Neotype
4. Isotype

Options :

- 7108702505. 1
- 7108702506. 2
- 7108702507. 3
- 7108702508. 4

Question Number : 88 Question Id : 710870628 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The activity of PGR management which determines the expression of highly heritable characters known as

1. Regeneration
2. Evaluation
3. Characterization
4. Registration

Options :

- 7108702509. 1
- 7108702510. 2
- 7108702511. 3
- 7108702512. 4

Question Number : 89 Question Id : 710870629 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Which one of the following is NOT observed in biodiversity hotspots?

1. Species richness
2. Endemism
3. Accelerated species loss
4. Lesser inter-specific competition

Options :

- 7108702513. 1
- 7108702514. 2
- 7108702515. 3
- 7108702516. 4

Question Number : 90 Question Id : 710870630 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following crops has the maximum number of named landraces in India?

1. Maize
2. Rice
3. Mango
4. Sorghum

Options :

- 7108702517. 1
- 7108702518. 2
- 7108702519. 3
- 7108702520. 4

Question Number : 91 Question Id : 710870631 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Biodiversity of a geographical region represents

1. Genetic diversity present in the dominant species of the region
2. Species endemism of the region
3. The diversity in the organisms living in the region
4. None of these

Options :

- 7108702521. 1
- 7108702522. 2
- 7108702523. 3
- 7108702524. 4

Question Number : 92 Question Id : 710870632 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

System of classification used by the Linnaeus was

1. Natural system
2. Artificial system
3. Phylogenetic system
4. None of these

Options :

7108702525. 1
7108702526. 2
7108702527. 3
7108702528. 4

Question Number : 93 Question Id : 710870633 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

The term alpha diversity refers to

1. Genetic diversity
2. Community and ecosystem diversity
3. Species diversity
4. Diversity among plants

Options :

7108702529. 1
7108702530. 2
7108702531. 3
7108702532. 4

Question Number : 94 Question Id : 710870634 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

α (Alpha) taxonomy deals with

1. Classical taxonomy
2. Chemotaxonomy
3. Phylogeny
4. Experimental taxonomy

Options :

- 7108702533. 1
- 7108702534. 2
- 7108702535. 3
- 7108702536. 4

Question Number : 95 Question Id : 710870635 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Polyadelphous condition is found in which family?

1. Fabaceae
2. Rutaceae
3. Asteraceae
4. Liliaceae

Options :

- 7108702537. 1
- 7108702538. 2
- 7108702539. 3
- 7108702540. 4

Question Number : 96 Question Id : 710870636 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Organizing taxonomic information in logical classification is called

1. Systematics
2. Phenetic
3. Phylogenetic
4. None of these

Options :

- 7108702541. 1
- 7108702542. 2
- 7108702543. 3
- 7108702544. 4

Question Number : 97 Question Id : 710870637 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Indefinite stamens are characteristic of which family?

1. Poaceae
2. Malvaceae
3. Lamiaceae
4. Brassicaceae

Options :

- 7108702545. 1
- 7108702546. 2
- 7108702547. 3
- 7108702548. 4

Question Number : 98 Question Id : 710870638 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Species having a narrow range of distribution and occurring in a localized habitat are categorized as

1. Endangered species
2. Land race
3. Rare species
4. Endemic species

Options :

- 7108702549. 1
- 7108702550. 2
- 7108702551. 3
- 7108702552. 4

Question Number : 99 Question Id : 710870639 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

DIVA-GIS software is used in PGR management for

1. Assessing the diversity on-farm
2. Mapping of biodiversity
3. Declaring a region as biosphere reserve
4. Assessing the genetic erosion

Options :

- 7108702553. 1
- 7108702554. 2
- 7108702555. 3
- 7108702556. 4

Question Number : 100 Question Id : 710870640 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Specimens of Indian crop plants, wild relatives and economic species representing variability are preserved by which of the following organizations?

- A. Botanical Survey of India
- B. Forest Research Institute
- C. ICAR-National Herbarium of Cultivated Plants

Select most appropriate answer from options given below:

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

Options :

- 7108702557. 1
- 7108702558. 2
- 7108702559. 3
- 7108702560. 4

Question Number : 101 Question Id : 710870641 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Continued cultivation and management of crops by farmers in a particular agro-ecosystem is termed as

- 1. *In-situ* conservation
- 2. On-farm conservation
- 3. *Ex-situ* conservation
- 4. Farming

Options :

- 7108702561. 1

7108702562. 2

7108702563. 3

7108702564. 4

Question Number : 102 Question Id : 710870642 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following fibre crops is considered as the oldest fibre crop of India?

1. Cotton
2. Sunn hemp
3. Jute
4. Flax

Options :

7108702565. 1

7108702566. 2

7108702567. 3

7108702568. 4

Question Number : 103 Question Id : 710870643 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

A minor oilseed crop also rich in omega-3, grown in the Himalayan region is

1. Linseed
2. Perilla
3. Niger
4. None of these

Options :

7108702569. 1

7108702570. 2

7108702571. 3

7108702572. 4

Question Number : 104 Question Id : 710870644 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which one of the following crops originated in India?

1. Maize
2. Proso-millet
3. Mango
4. Sorghum

Options :

7108702573. 1
7108702574. 2
7108702575. 3
7108702576. 4

Question Number : 105 Question Id : 710870645 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Lantana camara, an exotic weed was introduced in India from which one of the following countries/regions?

1. Australia
2. Central America
3. South America
4. South Africa

Options :

7108702577. 1
7108702578. 2
7108702579. 3
7108702580. 4

Question Number : 106 Question Id : 710870646 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Potato of Nilgiri hills infested with the golden nematode, was introduced from which one of the following countries?

1. UK
2. USA
3. Russia
4. None of these

Options :

- 7108702581. 1
- 7108702582. 2
- 7108702583. 3
- 7108702584. 4

Question Number : 107 Question Id : 710870647 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Aegilops tauschii distributed in Indian Himalaya is a wild relative of

1. Wheat & barley
2. Rice
3. Oats
4. Maize

Options :

- 7108702585. 1
- 7108702586. 2
- 7108702587. 3
- 7108702588. 4

Question Number : 108 Question Id : 710870648 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Job's tear, a minor cereal crop, is grown in which region of India?

1. Western Ghats
2. Western Himalaya
3. Northeastern Hill region
4. A & N Islands

Options :

- 7108702589. 1
- 7108702590. 2
- 7108702591. 3
- 7108702592. 4

Question Number : 109 Question Id : 710870649 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

In an *in-vitro* Active Genebank, the *in-vitro* cultures are conserved by which one of the following methods?

1. Cultures are cryobanked
2. Cultures are shifted to field condition
3. Cultures are micropropagated and shifted to the field
4. Cultures are maintained as a Tissue Culture Repository, using mainly slow growth conditions

Options :

- 7108702593. 1
- 7108702594. 2
- 7108702595. 3
- 7108702596. 4

Question Number : 110 Question Id : 710870650 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Non-orthodox seeds, encompassing intermediate and recalcitrant, do not exhibit which one of the following essential characteristics?

1. Large seed size with high moisture at shedding
2. Short life span of generally less than one year
3. Tolerance to desiccation up to 5-7% moisture and to storage at -20°C temperature
4. Tolerance to ultra low freezing when optimally desiccated

Options :

- 7108702597. 1
- 7108702598. 2
- 7108702599. 3
- 7108702600. 4

Question Number : 111 Question Id : 710870651 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Vitrification based cryo techniques prove successful due to which one of the following principles/phenomena?

1. Formation of large ice crystals
2. Formation of glasses
3. Step-wise slow freezing
4. Conversion of ice crystals into glasses

Options :

- 7108702601. 1
- 7108702602. 2
- 7108702603. 3
- 7108702604. 4

Question Number : 112 Question Id : 710870652 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

Cryotherapy of plant explants refers to which one of the following methodologies to ensure virus elimination?

1. Large explant is frozen to -196°C , thawed and cut into smaller pieces/parts to examine lack of viruses
2. Isolated meristems are frozen to -196°C without the use of any pre-treatments / chemicals leading to the killing of viruses
3. Isolated meristems are frozen to -196°C using optimized pre-treatment chemicals, thawed and cultured *in vitro*
4. Large explants are frozen to -196°C using optimized pre-treatment/chemicals, thawed and pieces cut to examine virus-free portions

Options :

7108702605. 1

7108702606. 2

7108702607. 3

7108702608. 4

Question Number : 113 Question Id : 710870653 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
A. CPCRI	I. Oil palm
B. CISH	II. All horticultural crops
C. IIOPR	III. Coconut
D. IIHR	IV. Mango and guava

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

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

Options :

7108702609. 1
7108702610. 2
7108702611. 3
7108702612. 4

Question Number : 114 Question Id : 710870654 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I: 'Citrus Gene Sanctuary' established in Garo Hills of Meghalaya is one of the three Citrus Gene sanctuaries of India

Statement II: 'Citrus Gene Sanctuary' of Garo Hills, Meghalaya is a part of the buffer zone of National Biosphere Reserve, and was established in 1981

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

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

Options :

7108702613. 1

7108702614. 2

7108702615. 3

7108702616. 4

Question Number : 115 Question Id : 710870655 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I: National Biodiversity Authority is a national institution based on the Convention on Biological Diversity

Statement II: Convention on Biological Diversity was developed mainly to conserve biodiversity and its sustainable use

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

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

Options :

7108702617. 1

7108702618. 2

7108702619. 3

7108702620. 4

Question Number : 116 Question Id : 710870656 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I: India is a party to seven of the International multi-lateral agreements and programmes related to plant bioresources/plant genetic resources

Statement II: India has agreed to abide by the provisions of International agreements like CBD, TRIPS, WTO, ITPGFRA, Nagoya Protocol, Cartagena Protocol and Biosafety

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

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

Options :

7108702621. 1

7108702622. 2

7108702623. 3

7108702624. 4

Question Number : 117 Question Id : 710870657 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which of the following statements are correct regarding the application of DNA Fingerprinting?

- A. DNA Fingerprinting in plants finds usage for seed purity testing of crop varieties
- B. DNA Fingerprinting can authenticate the declared parentage of varieties
- C. DNA Fingerprinting is solely used for species identification
- D. DNA Fingerprinting can check hybridity testing of commercial hybrids
- E. DNA Fingerprinting is equivalent to molecular profiling or genetic fingerprinting

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

- 1. A & B only are correct
- 2. B, D and E only are correct
- 3. C, D and E only are correct
- 4. A, B, D and E only are correct

Options :

7108702625. 1

7108702626. 2

7108702627. 3

7108702628. 4

Question Number : 118 Question Id : 710870658 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Identify the correct statements regarding LAMP assay.

- A. The full form of assay- LAMP is Loop-mediated Isothermal Amplification
- B. LAMP assay is effective in GM detection of different crops
- C. LAMP assay is very cumbersome but still widely used
- D. LAMP assay is the only currently available method for GM detection

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

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

Options :

- 7108702629. 1
- 7108702630. 2
- 7108702631. 3
- 7108702632. 4

Question Number : 119 Question Id : 710870659 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Which of the following are correct about *in vitro* conservation?

- A. Reduction of *in vitro* growth of culture in a Tissue Culture Repository can be achieved by reducing temperature alone
- B. Long term conservation strategy for *in vitro* culture is by cryopreservation
- C. Reduction of *in vitro* growth of culture in a Tissue Culture Repository can be effectively achieved by use of minimal growth media, reduced temperature and reduced oxygen
- D. *In vitro* conservation is the only method for conservation of vegetatively propagated plant species under controlled conditions
- E. Long term conservation of *in vitro* cultures is by storage at -20°C and -196°C

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

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

Options :

- 7108702633. 1
- 7108702634. 2
- 7108702635. 3
- 7108702636. 4

Question Number : 120 Question Id : 710870660 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1

Identify correct statements regarding invasive plant species.

- A. Invasive plants species are species that spread from one part of a state to another; they proliferate but cause no harm
- B. Invasive species are characterized by their vast proliferation within an ecological community and causing disruption
- C. Generally, invasive species are not native of a particular ecological community and invade it
- D. When an invasive species find a new habitat suitable for its growth, it proliferates immensely causing disruption to native species
- E. Invasive species may get eliminated by competition with better adapted native species

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

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

Options :

- 7108702637. 1
- 7108702638. 2
- 7108702639. 3
- 7108702640. 4