

National Testing Agency

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PLANT SCIENCES

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PLANT SCIENCES

Section Id : 210529177
Section Number : 1
Section type : Online
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Number of Questions to be attempted : 120
Section Marks : 480
Mark As Answered Required? : Yes
Sub-Section Number : 1
Sub-Section Id : 210529428
Question Shuffling Allowed : Yes

**Question Number : 1 Question Id : 21052912611 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No
Correct Marks : 4 Wrong Marks : 1**

Phylum Firmicutes include

1. Low G+C, Gram-positive bacteria
2. High G+C, Gram-positive bacteria
3. Low G+C, Gram-negative bacteria
4. High G+C, Gram-negative bacteria

Options :

- 21052949721. 1
- 21052949722. 2
- 21052949723. 3
- 21052949724. 4

Question Number : 2 Question Id : 21052912612 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following properties characterizes Mycoplasmas?

- A. Filtrable through bacterial filters
- B. Resistant to penicillin and tetracycline
- C. Resistant to penicillin, susceptible to tetracycline
- D. Resistant to tetracycline, susceptible to penicillin
- E. Highly pleomorphic

Choose the correct answer from the options given below:

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

Options :

- 21052949725. 1
- 21052949726. 2
- 21052949727. 3
- 21052949728. 4

Question Number : 3 Question Id : 21052912613 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Match List I with List II :

List I	List II
A. Symbiotic association between root and fungus	I. Streptomyces
B. Heterocyst	II. Casuarina
C. <i>Frankia</i>	III. Mycorrhizae
D. Geosmin	IV. Cyanobacteria

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

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

Options :

21052949729. 1
21052949730. 2
21052949731. 3
21052949732. 4

Question Number : 4 Question Id : 21052912614 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A course of three periods of boiling at 100 °C for 30 min. at daily intervals is called

1. Pasteurization
2. Tyndallization
3. Dry heat sterilization
4. Incineration

Options :

21052949733. 1
21052949734. 2
21052949735. 3
21052949736. 4

Question Number : 5 Question Id : 21052912615 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
A. Fractional sterilization	I. Interfere with growth of microorganisms
B. Antimicrobial agents	II. Pyrimidine dimerization
C. UV light	III. Extreme dehydration under vacuum
D. Lyophilization	IV. Tyndallization

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

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

Options :

- 21052949737. 1
- 21052949738. 2
- 21052949739. 3
- 21052949740. 4

Question Number : 6 Question Id : 21052912616 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Transfer of DNA from one bacterial cell to another by cell-to-cell contact is known as

1. Transformation
2. Conjugation
3. Transduction
4. Translocation

Options :

- 21052949741. 1
- 21052949742. 2
- 21052949743. 3
- 21052949744. 4

Question Number : 7 Question Id : 21052912617 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Relationship between two organisms in which one organism is benefitted and the other remains unaffected is called

1. Parasitism
2. Commensalism
3. Symbiosis
4. Syntrophism

Options :

21052949745. 1
21052949746. 2
21052949747. 3
21052949748. 4

Question Number : 8 Question Id : 21052912618 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following is a free living nitrogen fixing bacteria?

1. *Rhizobium*
2. *Bradyrhizobium*
3. *Azotobacter*
4. *Frankia*

Options :

21052949749. 1
21052949750. 2
21052949751. 3
21052949752. 4

Question Number : 9 Question Id : 21052912619 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : Nitrogenase enzyme is sensitive to presence of molecular oxygen

Statement II : Nodules contain leghemoglobin which protects nitrogenase enzyme from oxygen

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

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

Options :

21052949753. 1

21052949754. 2

21052949755. 3

21052949756. 4

Question Number : 10 Question Id : 21052912620 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are five statements, arrange them in correct order :

- A. Release of chemical signals by plant roots to attract bacteria
- B. Formation of infection thread
- C. Transformation of bacteria to bacteroid forms
- D. Curling of root hair
- E. Multiplication of root cortical cells to form nodules

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

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

Options :

21052949757. 1

21052949758. 2

21052949759. 3

21052949760. 4

Question Number : 11 Question Id : 21052912621 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following is NOT a biofertilizer?

1. Mycorrhizae
2. *Rhizobium*
3. *Azotobacter*
4. *Agrobacterium*

Options :

21052949761. 1

21052949762. 2

21052949763. 3

21052949764. 4

Question Number : 12 Question Id : 21052912622 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : Nitrification is a two-step process. In the first step, ammonia is oxidized to nitrite (NO_2^-) and in the second step, NO_2^- is oxidized to nitrate (NO_3^-)

Statement II : A single microbial genus can perform both steps of nitrification

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

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

Options :

21052949765. 1

21052949766. 2

21052949767. 3

21052949768. 4

Question Number : 13 Question Id : 21052912623 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following pairs of codon is correct for chain initiation in protein synthesis?

1. AUG and GUG
2. AUG and UAA
3. UAG and GUG
4. UAA and GUG

Options :

21052949769. 1
21052949770. 2
21052949771. 3
21052949772. 4

Question Number : 14 Question Id : 21052912624 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

High temperature short time (HTST) pasteurization of milk is done at

1. 72°C for 15 seconds
2. 80 °C for 10 seconds
3. 95 °C for 5 seconds
4. 100 °C for 3 seconds

Options :

21052949773. 1
21052949774. 2
21052949775. 3
21052949776. 4

Question Number : 15 Question Id : 21052912625 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Recommended C: N ratio of the initial material for composting is

1. 60:1
2. 30:1
3. 75:1
4. 100:1

Options :

21052949777. 1
21052949778. 2
21052949779. 3
21052949780. 4

Question Number : 16 Question Id : 21052912626 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

Which of the following is/are NOT characteristic(s) of a prokaryotic cell?

- A. Nucleolus
- B. Mitosis
- C. Binary fission
- D. 80S ribosome
- E. Circular DNA

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

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

Options :

- 21052949781. 1
- 21052949782. 2
- 21052949783. 3
- 21052949784. 4

Question Number : 17 Question Id : 21052912627 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

Transduction in bacteria is mediated through

- 1. Plasmid
- 2. Particle gun
- 3. Virus
- 4. Nematodes

Options :

- 21052949785. 1
- 21052949786. 2
- 21052949787. 3
- 21052949788. 4

Question Number : 18 Question Id : 21052912628 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Assimilatory nitrate reduction is carried out by

1. Plants
2. Fungi
3. Bacteria
4. All of the above

Options :

21052949789. 1

21052949790. 2

21052949791. 3

21052949792. 4

Question Number : 19 Question Id : 21052912629 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A bacteriophage that does NOT cause bursting of host bacterial cell is known as

1. Lytic phage
2. Temperate phage
3. Virulent phage
4. Guest phage

Options :

21052949793. 1

21052949794. 2

21052949795. 3

21052949796. 4

Question Number : 20 Question Id : 21052912630 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Commercial coir is obtained from the fibrous husk (mesocarp) of the fruit of the following plant :

1. Sisal
2. Cotton
3. Coconut
4. Kapok

Options :

21052949797. 1

21052949798. 2

21052949799. 3

21052949800. 4

Question Number : 21 Question Id : 21052912631 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

As described in the World Centres of origin of cultivated plants the following crops are considered to be of Indian origin :

1. Rice, Sugarcane, Jute, Mango
2. Rice, Soybean, Jute, Mango
3. Rice, Potato, Brinjal, Sugarcane
4. Sugarcane, Tomato, Potato, Soybean

Options :

21052949801. 1

21052949802. 2

21052949803. 3

21052949804. 4

Question Number : 22 Question Id : 21052912632 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

In the market, if you are looking for the varieties Red delicious, Royal delicious, Golden delicious, Fuji, then most probably you are looking for the varieties of the crop

1. Banana
2. Orange
3. Apple
4. Date palm

Options :

21052949805. 1

21052949806. 2

21052949807. 3

21052949808. 4

Question Number : 23 Question Id : 21052912633 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Flint corn is botanically written as

1. *Zea mays var. indentata*
2. *Zea mays var. indurata*
3. *Zea mays var. ceratina*
4. *Zea mays var. tunicata*

Options :

- 21052949809. 1
- 21052949810. 2
- 21052949811. 3
- 21052949812. 4

Question Number : 24 Question Id : 21052912634 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The first miracle rice IR8 was produced in 1966 at International Rice Research Institute (IRRI), Philippines involving the cross between two parents

1. Dee Geo Woo Gen x Peta
2. Peta x Zizaniapalustris
3. Indica x Japonica
4. TN1 x IR b

Options :

- 21052949813. 1
- 21052949814. 2
- 21052949815. 3
- 21052949816. 4

Question Number : 25 Question Id : 21052912635 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Who among the following is considered as Father of Green Revolution?

1. Norman. E. Borlaug
2. Gurdev S. Khush
3. N. I. Vavilov
4. G. J. Mendel

Options :

- 21052949817. 1
- 21052949818. 2
- 21052949819. 3

21052949820. 4

Question Number : 26 Question Id : 21052912636 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following species is NOT tetraploid?

1. *Triticum dicoccum*
2. *Triticum persicum*
3. *Triticum spelta*
4. *Triticum timopheevi*

Options :

21052949821. 1

21052949822. 2

21052949823. 3

21052949824. 4

Question Number : 27 Question Id : 21052912637 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

One of the methodologies listed below is NOT used for DNA fingerprinting :

1. Restriction Fragment Length Polymorphism (RFLP)
2. Simple Sequence Repeats (SSR)
3. Reverse Transcription–Polymerase Chain Reaction
4. Single Nucleotide Polymorphisms (SNPs)

Options :

21052949825. 1

21052949826. 2

21052949827. 3

21052949828. 4

Question Number : 28 Question Id : 21052912638 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Anatomically the potato tuber is a typical

1. Root
2. Stem
3. Fruit
4. Flower

Options :

21052949829. 1
21052949830. 2
21052949831. 3
21052949832. 4

Question Number : 29 Question Id : 21052912639 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

One of the following statements is NOT true about NI Vavilov :

- A. He organized worldwide exploration studies but was unable to cover Australia
- B. He authored Scientific Report, "Darwinism and Experimental Morphology"
- C. He classified the economic plants into plants of old world origin and new world origin
- D. He authored, "De material Medica"
- E. He was decorated with V I Lenin prize for his work on origin of cultivated plants

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

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

Options :

21052949833. 1
21052949834. 2
21052949835. 3
21052949836. 4

Question Number : 30 Question Id : 21052912640 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

With reference to sugarcane cultivation, the following hold true :

- A. Sugarcane crop does not require considerable amount of water
- B. Sugarcane crop is very sensitive to frost
- C. Sugarcane is propagated vegetatively
- D. Sugarcane matures in 4–5 months
- E. Sugarcane is harvested after flowering

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

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

Options :

- 21052949837. 1
- 21052949838. 2
- 21052949839. 3
- 21052949840. 4

Question Number : 31 Question Id : 21052912641 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

Choose the odd one out.

- A. Sunflower
- B. Kiwifruit
- C. Mango
- D. Brinjal
- E. Soybean

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

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

Options :

- 21052949841. 1
- 21052949842. 2
- 21052949843. 3
- 21052949844. 4

**Question Number : 32 Question Id : 21052912642 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No
Correct Marks : 4 Wrong Marks : 1**

With respect to cultivation of mango, the following statements hold true :

- A. Indian cultivars of mango are mainly polyembryonic
- B. Mangoes are adapted to wide range of soil and climatic conditions
- C. The seed of mango, referred to as stones are used for raising seedlings
- D. The mango tree comes into fruiting after 4–6 years
- E. Mango trees are not sensitive to frost

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

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

Options :

- 21052949845. 1
- 21052949846. 2
- 21052949847. 3
- 21052949848. 4

**Question Number : 33 Question Id : 21052912643 Question Type : MCQ Option Shuffling : No Is
Question Mandatory : No
Correct Marks : 4 Wrong Marks : 1**

Which of the following statements is NOT correct about the 'Mera Gaon Mera Gaurav Scheme'?

- A. The scheme was launched by Prime Minister Sh. Narendra Modi in the year 2017
- B. The scheme envisages scientists to select villages and remain in touch with the farmers of the selected villages
- C. The scheme focuses on providing information to farmers on technical and other related aspects through personal visits or telephonically
- D. Scientists may perform the functions with the help of KVKs and ATMA
- E. Motto of the scheme is "Lab to Land"

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

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

Options :

21052949849. 1

21052949850. 2

21052949851. 3

21052949852. 4

Question Number : 34 Question Id : 21052912644 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The following term is associated with "Green Revolution" :

- A. Rockefeller Foundation
- B. Mexico
- C. Wheat and Rice
- D. Maize and Barley
- E. Chickpea and Sugarcane

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

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

Options :

21052949853. 1

21052949854. 2

21052949855. 3

21052949856. 4

Question Number : 35 Question Id : 21052912645 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Before raw cotton is spun into yarn and woven into cloth, it passes through various processes listed below. The correct order of these is :

- A. Ginning
- B. Drawing
- C. Grading
- D. Combing
- E. Bailing

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

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

Options :

21052949857. 1

21052949858. 2

21052949859. 3

21052949860. 4

Question Number : 36 Question Id : 21052912646 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
(Fruit name)	(Type of fruit)
A. Sharifa	I. Drupe
B. Phalsa	II. Sorosis
C. Mulberry	III. Pome
D. Apple	IV. Aggregation of berries

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

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

Options :

21052949861. 1

21052949862. 2

21052949863. 3

21052949864. 4

Question Number : 37 Question Id : 21052912647 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
(Common name)	(Botanical name)
A. Rivet wheat	I. <i>Triticum turgidum</i>
B. Emmer wheat	II. <i>Triticum compactum</i>
C. Macaroni wheat	III. <i>Triticum dicoccum</i>
D. Club wheat	IV. <i>Triticum durum</i>

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

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

Options :

21052949865. 1

21052949866. 2

21052949867. 3

21052949868. 4

Question Number : 38 Question Id : 21052912648 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
(Common name)	(Botanical name)
A. Ginger	I. <i>Eugenia caryophyllum</i>
B. Turmeric	II. <i>Cinnamomum verum</i>
C. Cinnamon	III. <i>Curcuma longa</i>
D. Clove	IV. <i>Zingiber officinale</i>

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

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

Options :

21052949869. 1

21052949870. 2

21052949871. 3

21052949872. 4

Question Number : 39 Question Id : 21052912649 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : Pigeonpea (*Cajanus cajan*) is a deep rooted, drought resistant soil improving crop, grown under rainfed conditions on practically all types of soils

Statement II : Cool and bright sunny weather during flowering and ripening is needed for good setting and development of pods

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

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

Options :

21052949873. 1

21052949874. 2

21052949875. 3

21052949876. 4

Question Number : 40 Question Id : 21052912650 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : Cryoprotectants are the compounds used in cryoconservation techniques that reduce the freezing point and supercooling point of water

Statement II : Vitrification, encapsulation vitrification and droplet vitrification techniques make use of cryoprotectants

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

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

Options :

21052949877. 1

21052949878. 2

21052949879. 3

21052949880. 4

Question Number : 41 Question Id : 21052912651 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

Which of the following plant pathogens causes gangrene in human after consumption of pathogen contaminated plant product?

1. *Phytophthora infestans*
2. *Magnaporthe oryzae*
3. *Puccinia graminis*
4. *Claviceps purpurea*

Options :

- 21052949881. 1
- 21052949882. 2
- 21052949883. 3
- 21052949884. 4

Question Number : 42 Question Id : 21052912652 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

Which of the following is considered as host response to pathogens?

1. Symptoms only
2. Hypersensitivity only
3. Symptoms and hypersensitivity
4. Neither symptoms nor hypersensitivity

Options :

- 21052949885. 1
- 21052949886. 2
- 21052949887. 3
- 21052949888. 4

Question Number : 43 Question Id : 21052912653 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

Which of the following pathogen developmental structures is capable of accelerating explosive epidemics in agricultural crops?

1. Asexually produced conidia
2. Sexually produced spores
3. Chlamydo spores
4. Sclerotium

Options :

- 21052949889. 1
- 21052949890. 2
- 21052949891. 3
- 21052949892. 4

Question Number : 44 Question Id : 21052912654 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following groups of pathogen display self-motility?

1. True fungi
2. Viruses
3. Phytoplasma
4. Oomycetes

Options :

- 21052949893. 1
- 21052949894. 2
- 21052949895. 3
- 21052949896. 4

Question Number : 45 Question Id : 21052912655 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Spatial horizontal transmission of fungal plant diseases as is mostly facilitated by

1. Sexually produced spores
2. Asexually produced spores
3. Biotic vectors
4. Abiotic vectors

Options :

- 21052949897. 1
- 21052949898. 2
- 21052949899. 3

21052949900. 4

Question Number : 46 Question Id : 21052912656 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following fungi produce asci in hymenium within an apothecium?

1. Loculoascomycetes
2. Discomycetes
3. Pyrenomycetes
4. Oomycetes

Options :

21052949901. 1

21052949902. 2

21052949903. 3

21052949904. 4

Question Number : 47 Question Id : 21052912657 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following bacterial pathogens is classified under facultative anaerobic negative rods?

1. *Agrobacterium*
2. *Xanthomonas*
3. *Pectobacterium*
4. *Ralstonia*

Options :

21052949905. 1

21052949906. 2

21052949907. 3

21052949908. 4

Question Number : 48 Question Id : 21052912658 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following is fungi transmitted plant virus?

1. Rymovirus
2. Nepovirus
3. Trichovirus
4. Bymovirus

Options :

21052949909. 1
21052949910. 2
21052949911. 3
21052949912. 4

Question Number : 49 Question Id : 21052912659 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Stackburn disease in paddy is caused by

1. *Alternaria padwickii*
2. *Rhizoctonia solani*
3. *Fusarium solani*
4. *Sarocladium oryzae*

Options :

21052949913. 1
21052949914. 2
21052949915. 3
21052949916. 4

Question Number : 50 Question Id : 21052912660 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : Rust diseases are caused only by fungi belonging to Basidiomycetes

Statement II : Fungi-like organism belonging to Straminiphilia also causes rust disease

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

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

Options :

21052949917. 1

21052949918. 2

21052949919. 3

21052949920. 4

Question Number : 51 Question Id : 21052912661 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : All cellular plant pathogens are culturable

Statement II : None of the non-cellular plant pathogens are culturable

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

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

Options :

21052949921. 1

21052949922. 2

21052949923. 3

21052949924. 4

Question Number : 52 Question Id : 21052912662 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : Moko wilt of banana caused by *Ralstonia solanacearum* is not reported in India so far

Statement II : Wheat blast caused by species of *Magnaporthe* is confined only in South America

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

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

Options :

21052949925. 1

21052949926. 2

21052949927. 3

21052949928. 4

Question Number : 53 Question Id : 21052912663 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : Late blight disease strikes potato crop during late stage only

Statement II : Early blight is caused by fungal pathogens

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

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

Options :

21052949929. 1

21052949930. 2

21052949931. 3

21052949932. 4

Question Number : 54 Question Id : 21052912664 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : Mode of obtaining food by fungi is heterotrophy due to lack of chloroplast

Statement II : Fungi store food in the form of sucrose

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

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

Options :

21052949933. 1

21052949934. 2

21052949935. 3

21052949936. 4

Question Number : 55 Question Id : 21052912665 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
A. Sporodochia	I. <i>Diplodia</i>
B. Pycnidia	II. <i>Colletotrichum</i>
C. Synnemata	III. <i>Fusarium</i>
D. Acervuli	IV. <i>Graphium</i>

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

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

Options :

21052949937. 1

21052949938. 2

21052949939. 3

21052949940. 4

Question Number : 56 Question Id : 21052912666 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
A. Begomovirus	I. White fly
B. Bymovirus	II. Fungi
C. Rymovirus	III. Mites
D. Tospovirus	IV. Thrips

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

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

Options :

21052949941. 1

21052949942. 2

21052949943. 3

21052949944. 4

Question Number : 57 Question Id : 21052912667 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
A. Powdery scab of potato	I. Chytridiomycota
B. Downy mildew of grapes	II. Ascomycota
C. Wart disease of potato	III. Plasmodiophoromycota
D. Powdery mildew of grape	IV. Oomycota

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

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

Options :

21052949945. 1

21052949946. 2

21052949947. 3

21052949948. 4

Question Number : 58 Question Id : 21052912668 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
A. <i>Phytophthora parasitica</i>	I. Soybean
B. <i>Phytophthora ramorum</i>	II. Avocado
C. <i>Phytophthora megasperma</i>	III. Tobacco
D. <i>Phytophthora cinnamomi</i>	IV. Oak

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

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

Options :

21052949949. 1

21052949950. 2

21052949951. 3

21052949952. 4

Question Number : 59 Question Id : 21052912669 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
A. <i>Xanthomonas axonopodis</i>	I. Xylem
B. <i>Ralstonia solanacearum</i>	II. Sheath
C. <i>Rhizoctonia solani</i>	III. Phloem
D. <i>Liberobacter species</i>	IV. Mesophyll

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

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

Options :

21052949953. 1

21052949954. 2

21052949955. 3

21052949956. 4

Question Number : 60 Question Id : 21052912670 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
A. Etiolation	I. Disturbed photosynthesis
B. Chlorosis	II. Disturbed water transport
C. Wilting	III. Disturbed hormonal regulation
D. Hyperplasia	IV. Abnormal cell division

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

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

Options :

21052949957. 1

21052949958. 2

21052949959. 3

21052949960. 4

Question Number : 61 Question Id : 21052912671 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
A. Late blight	I. South America
B. Panama wilt	II. Uganda
C. Wheat blast	III. Cuba
D. Wheat rust	IV. Ireland

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

1. A (I), B (II), C (III), D (IV)

2. A (IV), B (III), C (I), D (II)

3. A (II), B (III), C (IV), D (I)

4. A (III), B (II), C (I), D (IV)

Options :

21052949961. 1

21052949962. 2

21052949963. 3

21052949964. 4

Question Number : 62 Question Id : 21052912672 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Biotrophs are important groups of plant pathogens.

- A. They need live host to complete their life cycle
- B. They can be cultured on artificial media
- C. They do not harm their host
- D. They cause sign instead of symptoms
- E. Magnaporthe is a biotroph

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

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

Options :

- 21052949965. 1
- 21052949966. 2
- 21052949967. 3
- 21052949968. 4

Question Number : 63 Question Id : 21052912673 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Xylem or phloem limited bacteria need insect vector for their transmission.

- A. They need insects because they have lost their ability to translocate
- B. They do possess cell wall
- C. They are pleiotropic in nature
- D. They can be cultured in media
- E. They cause a symptom termed as 'yellows'

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

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

Options :

- 21052949969. 1

21052949970. 2

21052949971. 3

21052949972. 4

Question Number : 64 Question Id : 21052912674 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Downy mildew of grape was responsible for discovery of chemical method of disease management.

- A. Downy mildew of disease of grape reported first in India
- B. The disease paved way for discovery of metalaxyl
- C. The chemical metalaxyl was copper based
- D. Root stock resistant to root aphid had introduced downy mildew
- E. The chemical metalaxyl was accidentally discovered

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

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

Options :

21052949973. 1

21052949974. 2

21052949975. 3

21052949976. 4

Question Number : 65 Question Id : 21052912675 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Among the various rust diseases of wheat, which one is most prevalent in all wheat-growing zones in India?

- 1. Brown rust
- 2. Yellow rust
- 3. Black rust
- 4. White rust

Options :

21052949977. 1

21052949978. 2

21052949979. 3

21052949980. 4

Question Number : 66 Question Id : 21052912676 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Chlorophyll is present in

1. The grana of chloroplast
2. The surface of chloroplast
3. The dispersed form throughout the chloroplast
4. The stroma of chloroplast

Options :

21052949981. 1

21052949982. 2

21052949983. 3

21052949984. 4

Question Number : 67 Question Id : 21052912677 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Stomata open at night in

1. C3 plants
2. CAM plants
3. C4 plants
4. C2 plants

Options :

21052949985. 1

21052949986. 2

21052949987. 3

21052949988. 4

Question Number : 68 Question Id : 21052912678 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The ultimate gain of light reaction in photosynthesis is

1. ATP & NADPH
2. NADPH
3. only ATP
4. only GTP

Options :

- 21052949989. 1
- 21052949990. 2
- 21052949991. 3
- 21052949992. 4

Question Number : 69 Question Id : 21052912679 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

A plant hormone produced during abiotic and biotic stress conditions, and also known as a stress indicator, is

- 1. auxin
- 2. cytokinin
- 3. ABA
- 4. GA

Options :

- 21052949993. 1
- 21052949994. 2
- 21052949995. 3
- 21052949996. 4

Question Number : 70 Question Id : 21052912680 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

Respiration in plants

- 1. leads to synthesis of sugars
- 2. occurs in microbodies
- 3. occurs in mitochondria
- 4. results in energy loss

Options :

- 21052949997. 1
- 21052949998. 2
- 21052949999. 3
- 21052950000. 4

Question Number : 71 Question Id : 21052912681 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

Which one of the following is NOT an appropriate test for investigating viability of seed?

1. Germination in paper towel
2. Tetrazolium test
3. Grow Out Test
4. Germination in seed incubator

Options :

- 21052950001. 1
- 21052950002. 2
- 21052950003. 3
- 21052950004. 4

Question Number : 72 Question Id : 21052912682 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following is NOT covered by IPR?

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

Options :

- 21052950005. 1
- 21052950006. 2
- 21052950007. 3
- 21052950008. 4

Question Number : 73 Question Id : 21052912683 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The Chairman of the identification committee for release of a crop variety under central variety release committee (CVRC) is

1. Deputy Director General (Crop Sciences), ICAR
2. Director General, ICAR
3. Project Director of the Crop
4. Project Coordinator of the Crop

Options :

- 21052950009. 1
- 21052950010. 2
- 21052950011. 3
- 21052950012. 4

Question Number : 74 Question Id : 21052912684 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Who was the first Chairperson of PPV&FR Authority, the Headquarter of which is located at New Delhi?

1. S. Nagarajan
2. K. V. Prabhu
3. R. R. Hanchinal
4. P. L. Gautam

Options :

21052950013. 1

21052950014. 2

21052950015. 3

21052950016. 4

Question Number : 75 Question Id : 21052912685 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The validity of registration of extant notified variety other than trees and vines is

1. less than 15 years
2. 15 years from the date of notification
3. 18 years from the date of notification
4. more than 18 years

Options :

21052950017. 1

21052950018. 2

21052950019. 3

21052950020. 4

Question Number : 76 Question Id : 21052912686 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The first hybrid maize released in India is

1. Deccan5
2. Yamuna1
3. Histarch
4. Ganga1

Options :

- 21052950021. 1
- 21052950022. 2
- 21052950023. 3
- 21052950024. 4

Question Number : 77 Question Id : 21052912687 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

If incompatibility reaction of pollen is governed by the genotype of the plant on which the pollen is produced, then the self-incompatibility is designated as

- 1. gametophytic
- 2. sporophytic
- 3. pseudo
- 4. obligate

Options :

- 21052950025. 1
- 21052950026. 2
- 21052950027. 3
- 21052950028. 4

Question Number : 78 Question Id : 21052912688 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following organelles in plant cell has typically uniparental inheritance?

- 1. Nucleus
- 2. Ribosome
- 3. Chloroplast
- 4. Endoplasmic reticulum

Options :

- 21052950029. 1
- 21052950030. 2
- 21052950031. 3
- 21052950032. 4

Question Number : 79 Question Id : 21052912689 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

In plant cell, which of the following organelle produces 70–90% of cellular RNA?

1. Plastid
2. Nucleolus
3. Mitochondria
4. Endoplasmic reticulum

Options :

21052950033. 1
21052950034. 2
21052950035. 3
21052950036. 4

Question Number : 80 Question Id : 21052912690 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Let us assume that there are four inbred parents, viz., A, B, C and D. Identify the three-way hybrid from the following cross-combinations:

1. $A \times B$, $B \times C$, and $C \times D$
2. $(A \times B) \times C$
3. $[A \times B] \times [C \times D] \times [B \times C]$
4. $[A \times B] \times [C \times D]$

Options :

21052950037. 1
21052950038. 2
21052950039. 3
21052950040. 4

Question Number : 81 Question Id : 21052912691 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

If the mating of two organisms produce a 1:1 phenotypic ratio in the progeny, then the correct parental cross-combination is

1. $Aa \times Aa$
2. $Aa \times aa$
3. $AA \times AA$
4. $AA \times aa$

Options :

21052950041. 1
21052950042. 2

21052950043. 3

21052950044. 4

Question Number : 82 Question Id : 21052912692 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Inbreeding depression will be severe in which of the following species?

1. Onion
2. Sunflower
3. Carrot
4. Maize

Options :

21052950045. 1

21052950046. 2

21052950047. 3

21052950048. 4

Question Number : 83 Question Id : 21052912693 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

About '*lac operon*', which of the following statements is NOT correct?

1. It is operative in prokaryotes only
2. It transcribes three adjacent structural genes together
3. The transcript is translated individually for each gene
4. The polypeptides of all the structural genes mix to form one functional protein

Options :

21052950049. 1

21052950050. 2

21052950051. 3

21052950052. 4

Question Number : 84 Question Id : 21052912694 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Sex-limited and sex-influenced inheritance occur when the sex of the organism affects the phenotype through a gene located on

1. Sex chromosome
2. Autosome
3. Chloroplast genome
4. Mitochondrial genome

Options :

- 21052950053. 1
- 21052950054. 2
- 21052950055. 3
- 21052950056. 4

Question Number : 85 Question Id : 21052912695 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Transfer RNA is transcribed by

1. RNA Polymerase I
2. RNA Polymerase II
3. RNA Polymerase III
4. RNA Polymerase IV

Options :

- 21052950057. 1
- 21052950058. 2
- 21052950059. 3
- 21052950060. 4

Question Number : 86 Question Id : 21052912696 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which of the following activities is usually NOT performed during RNA processing in a eukaryotic cell?

1. Addition of 5' cap
2. Elimination of exons
3. Addition of poly-A tail
4. Elimination of introns

Options :

- 21052950061. 1
- 21052950062. 2

21052950063. 3

21052950064. 4

Question Number : 87 Question Id : 21052912697 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

If the chromosome number of a crop is $2n=24$, the number of chromosomes in its endosperm will be

1. 12

2. 24

3. 36

4. 48

Options :

21052950065. 1

21052950066. 2

21052950067. 3

21052950068. 4

Question Number : 88 Question Id : 21052912698 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

While studying the inheritance of seed coat color (yellow vs. green), the segregation for seed coat color will be visible first in:

1. F_1 seeds

2. F_2 seeds

3. F_3 seeds

4. F_4 seeds

Options :

21052950069. 1

21052950070. 2

21052950071. 3

21052950072. 4

Question Number : 89 Question Id : 21052912699 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Thymine is carrying methyl group at carbon number

1. C2
2. C3
3. C4
4. C5

Options :

- 21052950073. 1
- 21052950074. 2
- 21052950075. 3
- 21052950076. 4

Question Number : 90 Question Id : 21052912700 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A-B-D are three genes present in a chromosome, in that order. The map distance between A – B = 5 cm, and B – D = 10 cm. If the observed double cross-over percentage is 0.4, the coefficient of coincidence will be

1. 0.8
2. 0.6
3. 0.5
4. 0.9

Options :

- 21052950077. 1
- 21052950078. 2
- 21052950079. 3
- 21052950080. 4

Question Number : 91 Question Id : 21052912701 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

What are the genotypes breeder will use in his trial for estimation of standard heterosis?

1. Parental genotypes and hybrids
2. Parental genotype and commercial released hybrid
3. Developed F₁ hybrid only
4. F₁ hybrid developed and commercial hybrid check

Options :

- 21052950081. 1
- 21052950082. 2

21052950083. 3

21052950084. 4

Question Number : 92 Question Id : 21052912702 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

'Stock 6' is a haploid inducer line of

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

Options :

21052950085. 1

21052950086. 2

21052950087. 3

21052950088. 4

Question Number : 93 Question Id : 21052912703 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Yield of inbred A is 40 q/ha, inbred B is 20 q/ha, the check hybrid is 45 q/ha and the hybrid yield is 50 q/ha. Find out heterobeltiosis (%).

1. 25%
2. 11.1%
3. 66.6%
4. 50%

Options :

21052950089. 1

21052950090. 2

21052950091. 3

21052950092. 4

Question Number : 94 Question Id : 21052912704 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The essential hormone for cell division during germination of seeds is

1. Abscisic acid
2. Gibberelic acid
3. Cytokinin
4. Ethylene

Options :

- 21052950093. 1
- 21052950094. 2
- 21052950095. 3
- 21052950096. 4

Question Number : 95 Question Id : 21052912705 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Among the following statements, which one is unique about meiosis?

1. It involves spindle apparatus
2. It is genetically controlled
3. It involves cytokinesis
4. Daughter cell contains half of the chromosome numbers of the mother cells

Options :

- 21052950097. 1
- 21052950098. 2
- 21052950099. 3
- 21052950100. 4

Question Number : 96 Question Id : 21052912706 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The chromosome of hexaploid wheat is 42. The basic chromosome number is?

1. 21
2. 7
3. 42
4. 84

Options :

- 21052950101. 1
- 21052950102. 2
- 21052950103. 3
- 21052950104. 4

Question Number : 97 Question Id : 21052912707 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Sex-linked characters are controlled by gene located primarily on

1. X- chromosome
2. Y-chromosome
3. autosomes
4. mitochondrial genome

Options :

21052950105. 1

21052950106. 2

21052950107. 3

21052950108. 4

Question Number : 98 Question Id : 21052912708 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Select the correct statements from the list given below:

- A. Isolation distance is necessary to maintain genetic purity of seeds
- B. Isolation distance is needed to maintain physical purity of the seeds
- C. More isolation distance is required in rice than maize seed production
- D. More isolation distance is required in pigeonpea than soybean
- E. GM crops are grown in isolation to avoid pollen movement to other related species

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

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

Options :

21052950109. 1

21052950110. 2

21052950111. 3

21052950112. 4

Question Number : 99 Question Id : 21052912709 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

Chronological steps in hybrid development and seed production is given below

- A. Pure line development
- B. Development of hybrid
- C. Evaluation of pure line
- D. Hybrid release and notification
- E. Seed production and distribution

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

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

Options :

- 21052950113. 1
- 21052950114. 2
- 21052950115. 3
- 21052950116. 4

Question Number : 100 Question Id : 21052912710 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

One gene-one enzyme hypothesis is not universal because

- A. Many enzymes are composed of polypeptides encoded by different genes
- B. Many genes encodes non-enzymatic protein
- C. rRNA, tRNA, etc., are product of genes but not enzyme
- D. One gene may codes for more than one enzyme through alternate splicing
- E. Gene mutation creates metabolic pathway block

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

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

Options :

21052950117. 1

21052950118. 2

21052950119. 3

21052950120. 4

Question Number : 101 Question Id : 21052912711 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Meiosis lead to creation of significant genetic variation while mitosis does not, because

- A. Rearrangement of chromosomes happens through independent assortment during meiosis-I
- B. Exchange of chromosomal segments happens in higher frequency in meiosis
- C. Meiosis occurs in somatic cells
- D. Pairing of homologous chromosomes occurs in meiosis
- E. Somatic cells are not large enough to allow genetic variation

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

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

Options :

- 21052950121. 1
- 21052950122. 2
- 21052950123. 3
- 21052950124. 4

Question Number : 102 Question Id : 21052912712 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

Arrange various types of seeds in order of genetic purity and production.

- A. Breeders seed
- B. T L seeds
- C. Nucleus seeds
- D. Certified seeds
- E. Foundation seeds

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

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

Options :

- 21052950125. 1
- 21052950126. 2
- 21052950127. 3
- 21052950128. 4

Question Number : 103 Question Id : 21052912713 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
A. Pure lines	I. Heterozygous and homogenous
B. Composites	II. Near Isogenic Lines
C. F1 hybrids	III. Homogyzous and heterogenous
D. Multilines	IV. Homogyzous and homogenous

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

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

Options :

- 21052950129. 1
- 21052950130. 2
- 21052950131. 3
- 21052950132. 4

Question Number : 104 Question Id : 21052912714 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
A. Double cross hybrid	I. $A \times B$
B. F_1 hybrid	II. Better than check hybrid
C. Three-way cross hybrid	III. $(A \times B) \times (C \times D)$
D. Standard heterosis	IV. $F_1 \times C$

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

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

Options :

- 21052950133. 1
- 21052950134. 2
- 21052950135. 3
- 21052950136. 4

Question Number : 105 Question Id : 21052912715 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
A. Central dogma	I. Sir Archibald Garrod
B. Operon in prokaryotes	II. Sir Francis Galton
C. Eugenics	III. H. F. C Crick
D. Alkaptonuria	IV. Francois Jacob and Jacques Monod

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

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

Options :

21052950137. 1
21052950138. 2
21052950139. 3
21052950140. 4

Question Number : 106 Question Id : 21052912716 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Match List I (Sex constitution symbol) with List II (organism)

List I	List II
A. XX-XY	I. Fumea
B. XX-XO	II. Birds
C. XO-XX	III. Grass hopper
D. ZW-ZZ	IV. Drosophila

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

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

Options :

21052950141. 1
21052950142. 2
21052950143. 3
21052950144. 4

Question Number : 107 Question Id : 21052912717 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

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

List I	List II
(Crop)	(Germination (%) for certified seeds)
A. Maize	I. 70
B. Wheat	II. 90
C. Mung bean	III. 75
D. Groundnut	IV. 85

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

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

Options :

- 21052950145. 1
- 21052950146. 2
- 21052950147. 3
- 21052950148. 4

Question Number : 108 Question Id : 21052912718 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : Functional alleles can complement to produce wild-type phenotype

Statement II : Heteroalleles are structurally and functionally non-allelic

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

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

Options :

- 21052950149. 1

21052950150. 2

21052950151. 3

21052950152. 4

Question Number : 109 Question Id : 21052912719 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : Linked genes are present on the same chromosome

Statement II : The genes present on the same chromosome cannot show independent assortment if they are not present wide apart

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

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

Options :

21052950153. 1

21052950154. 2

21052950155. 3

21052950156. 4

Question Number : 110 Question Id : 21052912720 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : The crossing-over takes place at 4-strand stage of the chromosome

Statement II : Recombinant frequency usually does not exceed 50%

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

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

Options :

21052950157. 1

21052950158. 2

21052950159. 3

21052950160. 4

Question Number : 111 Question Id : 21052912721 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : Higher the degree of cross pollination in a crop, more will be the isolation distance requirement in seed production

Statement II : Self-pollinated crops need minimum isolation distance for seed production

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

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

Options :

21052950161. 1

21052950162. 2

21052950163. 3

21052950164. 4

Question Number : 112 Question Id : 21052912722 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : Light reaction takes place in grana

Statement II : Dark reaction in-takes place in stroma

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

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

Options :

21052950165. 1

21052950166. 2

21052950167. 3

21052950168. 4

Question Number : 113 Question Id : 21052912723 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : Genetic variation is created by recombination

Statement II : Genetic variation is cannot be created by independent assortment of the chromosomes

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

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

Options :

21052950169. 1

21052950170. 2

21052950171. 3

21052950172. 4

Question Number : 114 Question Id : 21052912724 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : Two-point test cross is used to know the linkage and map distance between genes

Statement II : Three-point test cross is performed to know the map distance and order of the genes on the chromosome

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

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

Options :

21052950173. 1

21052950174. 2

21052950175. 3

21052950176. 4

Question Number : 115 Question Id : 21052912725 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : When two dominant alleles of two different genes are present in a chromosome and corresponding recessive alleles are present in the other homologue, this is called *cis*-heterozygote

Statement II : When two dominant alleles of two different genes are present in both the homologous chromosomes in homozygous condition, this is called *cis*-heterozygote

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

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

Options :

21052950177. 1

21052950178. 2

21052950179. 3

21052950180. 4

Question Number : 116 Question Id : 21052912726 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : In cytoplasmic genetic male sterility system, the R line is used to produce hybrid seeds

Statement II : In cytoplasmic genetic male sterility system, A and B lines are crossed to produce B line only

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

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

Options :

21052950181. 1

21052950182. 2

21052950183. 3

21052950184. 4

Question Number : 117 Question Id : 21052912727 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Given below are two statements

Statement I : Hybrid seeds produced by crossing a female parent (certified seed level) with a male parent (certified seed level) can be categorized as 'certified hybrid seeds'.

Statement II : The hybrid seeds produced by crossing a female parent (foundation seed) with a male parent (foundation seed) can be considered as 'certified hybrid seed'.

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

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

Options :

21052950185. 1

21052950186. 2

21052950187. 3

21052950188. 4

Question Number : 118 Question Id : 21052912728 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Arrange the below mentioned institutes as per year of establishment (oldest first):

- A. Sugarcane Breeding Institute, Coimbatore
- B. Indian (Imperial) Agricultural Research Institute, Pusa
- C. National Bureau of Plant Genetic Resources, New Delhi
- D. G.B. Pant University of Agriculture and Technology, Pant Nagar
- E. Jute Agriculture Research Institute (now CRIJAF), Barrackpore,

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

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

Options :

- 21052950189. 1
- 21052950190. 2
- 21052950191. 3
- 21052950192. 4

Question Number : 119 Question Id : 21052912729 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

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

List I	List II
(International Institute)	(Headquarter located in)
A. International Rice Research Institute	I. Lima, Peru
B. International Water Management Institute	II. Ibadan, Nigeria
C. International Center for Potato	III. Los Banos, Philippines
D. International Institute of Tropical Agriculture	IV. Colombo, Sri Lanka

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

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

Options :

- 21052950193. 1
- 21052950194. 2
- 21052950195. 3

21052950196. 4

Question Number : 120 Question Id : 21052912730 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

'Golden brown' color of the tag is used to label which kind of seed?

1. Breeders seed
2. Foundation seed
3. Certified seed
4. Truthfully labelled seed

Options :

21052950197. 1

21052950198. 2

21052950199. 3

21052950200. 4