

# National Testing Agency

<b>Question Paper Name :</b>	Agricultural Chemicals 23rd Sep 2020 Shift 2
<b>Subject Name :</b>	Agricultural Chemicals
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<b>Actual Answer Key :</b>	Yes

## Agricultural Chemicals

<b>Group Number :</b>	1
<b>Group Id :</b>	71087068
<b>Group Maximum Duration :</b>	0
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<b>Show Attended Group? :</b>	No
<b>Edit Attended Group? :</b>	No
<b>Break time :</b>	0
<b>Group Marks :</b>	480
<b>Is this Group for Examiner? :</b>	No

## Part A General Knowledge

<b>Section Id :</b>	710870202
<b>Section Number :</b>	1
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	20

<b>Number of Questions to be attempted :</b>	20
<b>Section Marks :</b>	80
<b>Display Number Panel :</b>	Yes
<b>Group All Questions :</b>	Yes
<b>Mark As Answered Required? :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	710870202
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 1 Question Id : 7108708101 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 :**

- 71087032401. 1
- 71087032402. 2
- 71087032403. 3
- 71087032404. 4

**Question Number : 2 Question Id : 7108708102 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 :**

- 71087032405. 1
- 71087032406. 2
- 71087032407. 3
- 71087032408. 4

**Question Number : 3 Question Id : 7108708103 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 :**

- 71087032409. 1



71087032410. 2

71087032411. 3

71087032412. 4

**Question Number : 4 Question Id : 7108708104 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 :**

71087032413. 1

71087032414. 2

71087032415. 3

71087032416. 4

**Question Number : 5 Question Id : 7108708105 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 :**

- 71087032417. 1
- 71087032418. 2
- 71087032419. 3
- 71087032420. 4

**Question Number : 6 Question Id : 7108708106 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 :**

- 71087032421. 1
- 71087032422. 2
- 71087032423. 3
- 71087032424. 4

**Question Number : 7 Question Id : 7108708107 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 :**

- 71087032425. 1
- 71087032426. 2
- 71087032427. 3
- 71087032428. 4

**Question Number : 8 Question Id : 7108708108 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 :**

71087032429. 1  
71087032430. 2  
71087032431. 3  
71087032432. 4

**Question Number : 9 Question Id : 7108708109 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 :**

71087032433. 1  
71087032434. 2  
71087032435. 3  
71087032436. 4

**Question Number : 10 Question Id : 7108708110 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 :**

71087032437. 1



71087032438. 2

71087032439. 3

71087032440. 4

**Question Number : 11 Question Id : 7108708111 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 :**

71087032441. 1

71087032442. 2

71087032443. 3

71087032444. 4

**Question Number : 12 Question Id : 7108708112 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 :**

71087032445. 1  
71087032446. 2  
71087032447. 3  
71087032448. 4

**Question Number : 13 Question Id : 7108708113 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 34<sup>th</sup> Surajkund International Crafts Fair held in Haryana?

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

**Options :**

71087032449. 1  
71087032450. 2  
71087032451. 3  
71087032452. 4

**Question Number : 14 Question Id : 7108708114 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 :**

- 71087032453. 1
- 71087032454. 2
- 71087032455. 3
- 71087032456. 4

**Question Number : 15 Question Id : 7108708115 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 :**

- 71087032457. 1
- 71087032458. 2
- 71087032459. 3
- 71087032460. 4

**Question Number : 16 Question Id : 7108708116 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 :**

- 71087032461. 1
- 71087032462. 2
- 71087032463. 3
- 71087032464. 4

**Question Number : 17 Question Id : 7108708117 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 :**

- 71087032465. 1
- 71087032466. 2
- 71087032467. 3
- 71087032468. 4

**Question Number : 18 Question Id : 7108708118 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 :**

- 71087032469. 1
- 71087032470. 2
- 71087032471. 3
- 71087032472. 4

**Question Number : 19 Question Id : 7108708119 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 :**

- 71087032473. 1
- 71087032474. 2
- 71087032475. 3
- 71087032476. 4

**Question Number : 20 Question Id : 7108708120 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 :**

- 71087032477. 1

71087032478. 2  
71087032479. 3  
71087032480. 4

## Part B Core Natural Resource Management-II

<b>Section Id :</b>	710870203
<b>Section Number :</b>	2
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	50
<b>Number of Questions to be attempted :</b>	50
<b>Section Marks :</b>	200
<b>Display Number Panel :</b>	Yes
<b>Group All Questions :</b>	Yes
<b>Mark As Answered Required? :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	710870203
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 21 Question Id : 7108708121 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 commonly used carrier gas in GC-MS/MS is

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

**Options :**

71087032481. 1  
71087032482. 2



71087032483. 3

71087032484. 4

**Question Number : 22 Question Id : 7108708122 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**

Organic compounds used by insects to convey specific chemical messages that modify behaviour or physiology are

1. Semiochemicals
2. Chemosterilant
3. Juvenile Hormone
4. Antibiotics

**Options :**

71087032485. 1

71087032486. 2

71087032487. 3

71087032488. 4

**Question Number : 23 Question Id : 7108708123 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**

Carbamate pesticides are developed from which natural lead containing molecule?

1. Rotenone
2. Nicotine
3. Physostigmine
4. Anabasine

**Options :**

71087032489. 1

71087032490. 2

71087032491. 3

71087032492. 4

**Question Number : 24 Question Id : 7108708124 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**

Addition of PBO with the pyrethrum extract is a / an

1. Additive effect
2. Synergistic effect
3. Antagonistic effect
4. Symbiotic effect

**Options :**

- 71087032493. 1
- 71087032494. 2
- 71087032495. 3
- 71087032496. 4

**Question Number : 25 Question Id : 7108708125 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. Insect growth regulator	I. Azadirachtin
B. Insect pheromone	II. Methyl eugenol
C. Insect repellent	III. DEET
D. Insect chitin synthesis inhibitor	IV. Diflubenzuron

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

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

**Options :**

- 71087032497. 1
- 71087032498. 2
- 71087032499. 3
- 71087032500. 4

**Question Number : 26 Question Id : 7108708126 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**

MRL is the amount of residue that will NOT be a concern to human health. MRL stands for

1. Multiple Residue Limit
2. Minimum Residue Limit
3. Minimum Residual Limit
4. Maximum Residue Limit

**Options :**

- 71087032501. 1
- 71087032502. 2
- 71087032503. 3



71087032504. 4

**Question Number : 27 Question Id : 7108708127 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 NOT true about haemoglobin and leghaemoglobin?

- A. Both are oxygen carriers
- B. Haemoglobin is red in colour but leghaemoglobin is blue in colour
- C. Both are hemoproteins
- D. Haemoglobin has significantly higher oxygen affinity than leghaemoglobin

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

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

**Options :**

- 71087032505. 1
- 71087032506. 2
- 71087032507. 3
- 71087032508. 4

**Question Number : 28 Question Id : 7108708128 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 year, did the Supreme Court of India ban production, use and sale of Endosulfan, an organochlorine contact pesticide?

1. 2014
2. 2011
3. 1999
4. 2006

**Options :**

71087032509. 1  
71087032510. 2  
71087032511. 3  
71087032512. 4

**Question Number : 29 Question Id : 7108708129 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, one is labelled as **Assertion A** and the other is labelled as **Reason R**

**Assertion A:** Insects develop resistance to natural pesticides more than synthetic pesticides

**Reason R:** Active ingredient of natural pesticides comprises a number of homologous compounds

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

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

**Options :**

71087032513. 1  
71087032514. 2  
71087032515. 3  
71087032516. 4

**Question Number : 30 Question Id : 7108708130 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**

2 - PAM is known to be effective as a

1. Synergist
2. Antidote
3. Insect growth regulator
4. Plant growth regulator

**Options :**

71087032517. 1  
71087032518. 2  
71087032519. 3  
71087032520. 4

**Question Number : 31 Question Id : 7108708131 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**

FSSAI stands for

1. Food Standards and Safety Authority of India
2. Food Safety and Standards Authority of India
3. Food Safety and Sanitary Authority of India
4. Food Sanitary and Safety Authority of India

**Options :**

71087032521. 1  
71087032522. 2



71087032523. 3

71087032524. 4

**Question Number : 32 Question Id : 7108708132 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**

Phosphorus-containing pesticides may be analysed with GLC coupled with which detector?

1. ECD
2. RI
3. NPD
4. UV-Vis

**Options :**

71087032525. 1

71087032526. 2

71087032527. 3

71087032528. 4

**Question Number : 33 Question Id : 7108708133 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 general, which one of the following is NOT the purpose of pesticide formulation?

1. To facilitate the application in the field
2. To reduce drift hazard
3. To improve bioefficacy
4. To provide stability to the active ingredient

**Options :**

71087032529. 1

71087032530. 2

71087032531. 3

71087032532. 4

**Question Number : 34 Question Id : 7108708134 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**

World Water Day is celebrated on which day every year?

1. 22 April
2. 22 March
3. 16 October
4. 4 December

**Options :**

- 71087032533. 1
- 71087032534. 2
- 71087032535. 3
- 71087032536. 4

**Question Number : 35 Question Id : 7108708135 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**

Downward movement of water through saturated or nearly saturated soil in response to gravity is known as

1. Infiltration
2. Seepage
3. Permeability
4. Percolation

**Options :**

- 71087032537. 1
- 71087032538. 2
- 71087032539. 3
- 71087032540. 4

**Question Number : 36 Question Id : 7108708136 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:** Consumptive use of water in a crop is the amount of water lost through evaporation, percolation, run-off and seepage

**Statement II:** Irrigation water requirement of crop includes water used in evapotranspiration, special operations and water lost through percolation, run-off and seepage etc

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 :**

- 71087032541. 1
- 71087032542. 2
- 71087032543. 3
- 71087032544. 4

**Question Number : 37 Question Id : 7108708137 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 a sprinkler irrigation system, the required total capacity of the system is  $0.005 \text{ m}^3/\text{s}$ . The total head required is 37 m of water column. Determine the size of a monobloc pumpset. Assume pump and motor efficiency as 70% each.

1. 3.0 h.p
2. 1.0 h.p
3. 7.5 h.p
4. 5.0 h.p

**Options :**

71087032545. 1  
71087032546. 2  
71087032547. 3  
71087032548. 4

**Question Number : 38 Question Id : 7108708138 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**

Central Research Institute for Dryland Agriculture is located at

1. Jodhpur
2. Hyderabad
3. Jaipur
4. Nagpur

**Options :**

71087032549. 1  
71087032550. 2  
71087032551. 3  
71087032552. 4

**Question Number : 39 Question Id : 7108708139 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 rectangular wire mesh box filled with stones is a

1. Chute spillway
2. Gabion
3. Drop spillway
4. Drop inlet spillway

**Options :**

- 71087032553. 1
- 71087032554. 2
- 71087032555. 3
- 71087032556. 4

**Question Number : 40 Question Id : 7108708140 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 hydrograph is a graphical representation of

1. Rainfall and time
2. Total runoff and time
3. Surface runoff and time
4. Base flow and time

**Options :**

- 71087032557. 1
- 71087032558. 2
- 71087032559. 3
- 71087032560. 4

**Question Number : 41 Question Id : 7108708141 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, one is labelled as **Assertion A** and the other is labelled as **Reason R**

**Assertion A:** Gypsum is not considered a liming material for reclamation of acid soils although it contains calcium

**Reason R:** Calcium sulphate dissociates into calcium and sulphate. While the former replaces aluminium in the exchange complex, the latter forms sulphuric acid reacting with soil moisture. Both processes reduce pH.

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

1. Both **A** and **R** are true and **R** is the correct explanation of **A**
2. Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**
3. **A** is true but **R** is false
4. **A** is false but **R** is true

**Options :**

- 71087032561. 1
- 71087032562. 2
- 71087032563. 3
- 71087032564. 4

**Question Number : 42 Question Id : 7108708142 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 the sprinkler head to move freely, it is lubricated with

1. Oil
2. Grease
3. Mineral Oil
4. No lubricant is used

**Options :**

- 71087032565. 1



71087032566. 2

71087032567. 3

71087032568. 4

**Question Number : 43 Question Id : 7108708143 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**

Water Horse Power (WHP) developed by a pump is given as  $WHP = (\text{Discharge} \times \text{Total Head against which pump is working})/75$ . If the head is in meters then discharge in the formula is in

1.  $m^3/s$
2. Litres/s
3.  $cm^3/s$
4.  $m^3/hr$

**Options :**

71087032569. 1

71087032570. 2

71087032571. 3

71087032572. 4

**Question Number : 44 Question Id : 7108708144 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**

Spreading type of varieties in groundnut belong to the sub-species

1. Procumbens
2. Indica
3. Fastigata
4. Javanica

**Options :**

71087032573. 1

71087032574. 2

71087032575. 3

71087032576. 4

**Question Number : 45 Question Id : 7108708145 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 condition influencing weed - crop competition?

1. pH
2. Nitrogen
3. CO<sub>2</sub>
4. Space

**Options :**

71087032577. 1

71087032578. 2

71087032579. 3

71087032580. 4

**Question Number : 46 Question Id : 7108708146 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**

What is the Rate of atrazine (Kg/ha) if 3 Kg is applied in 2 ha area at 50% WP?

1. 0.75
2. 1.50
3. 3.00
4. 2.25

**Options :**

71087032581. 1

71087032582. 2

71087032583. 3

71087032584. 4

**Question Number : 47 Question Id : 7108708147 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 fresh soil sample weighing 100 gm contains 18% soil moisture. Find out the dry weight of the soil.

1. 84.74
2. 90.74
3. 75.74
4. 82.0

**Options :**

- 71087032585. 1
- 71087032586. 2
- 71087032587. 3
- 71087032588. 4

**Question Number : 48 Question Id : 7108708148 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 is relatively resistant to low water stress?

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

**Options :**

- 71087032589. 1
- 71087032590. 2
- 71087032591. 3
- 71087032592. 4



**Question Number : 49 Question Id : 7108708149 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, as per the Mitscherlich equation

**Statement I:** 1 Baule of N = 1 Baule of  $P_2O_5$  = 1 Baule of  $K_2O$

**Statement II:** Amount of nutrient required to produce 50% of maximum possible yield.

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 :**

71087032593. 1

71087032594. 2

71087032595. 3

71087032596. 4

**Question Number : 50 Question Id : 7108708150 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:** In the Mitscherlich equation, the value of C indicates the efficiency factor of input x

**Statement II:** There is an inverse relationship between input and efficiency

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 :**

71087032597. 1

71087032598. 2

71087032599. 3

71087032600. 4

**Question Number : 51 Question Id : 7108708151 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**

Cultivation of chickpeas and sarson is believed to have started around

1. 2000 BC
2. 2200 BC
3. 2300 BC
4. 1800 BC

**Options :**

71087032601. 1

71087032602. 2

71087032603. 3

71087032604. 4

**Question Number : 52 Question Id : 7108708152 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 the following problem soil with it's characteristics

List I	List II
Problem soil	Characteristics
A. Saline alkali soil	I. pH > 8.5, ESP > 15%, EC > 4 dsm <sup>-1</sup>
B. Alkali soil	II. pH < 8.5, ESP < 15%, EC > 4 dsm <sup>-1</sup>
C. Saline soil	III. pH > 8.5, ESP > 15%, EC < 4 dsm <sup>-1</sup>
D. Non-saline alkali soil	IV. pH > 8.5, compact and dark coloured soils
E. Degraded alkali soil	V. ESP > 15%

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

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

**Options :**

71087032605. 1

71087032606. 2

71087032607. 3

71087032608. 4

**Question Number : 53 Question Id : 7108708153 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**



Sea water has salt content within the range

1. 20,000 - 30,000 ppm
2. 30,000 - 40,000 ppm
3. 40,000 - 50,000 ppm
4. 50,000 - 60,000 ppm

**Options :**

71087032609. 1  
71087032610. 2  
71087032611. 3  
71087032612. 4

**Question Number : 54 Question Id : 7108708154 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**

What is the acceptable limit of biuret for most crops?

1. 1.0%
2. 1.5%
3. 2.0%
4. 2.5%

**Options :**

71087032613. 1  
71087032614. 2  
71087032615. 3  
71087032616. 4

**Question Number : 55 Question Id : 7108708155 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 principle of allelopathy was first reported by

1. Zimmerman
2. Molisch
3. Jethro Tull
4. Wilcox

**Options :**

71087032617. 1  
71087032618. 2  
71087032619. 3  
71087032620. 4

**Question Number : 56 Question Id : 7108708156 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 yield obtained from a treated plot is 20 q/ha. The yield obtained from a similar but untreated plot is 10 q/ha. Calculate the weed index (WI)

1. 40%
2. 50%
3. 75%
4. 100%

**Options :**

71087032621. 1  
71087032622. 2  
71087032623. 3  
71087032624. 4

**Question Number : 57 Question Id : 7108708157 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**

Weeds which mature in few weeks are called as

1. Biennial weeds
2. Annual weeds
3. Ephemerals
4. Peripherals

**Options :**

71087032625. 1  
71087032626. 2  
71087032627. 3  
71087032628. 4

**Question Number : 58 Question Id : 7108708158 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 the name of the weed and the crop in which it occurs

List I	List II
Crop	Weed
A. Rice	I. Dodder
B. Sorghum	II. Phalaris
C. Mango	III. Striga
D. Oats	IV. Echinochloa
E. Citrus	V. Loranthus

Choose the correct answer from the options given below

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

**Options :**



71087032629. 1  
71087032630. 2  
71087032631. 3  
71087032632. 4

**Question Number : 59 Question Id : 7108708159 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 States has the highest area under drip irrigation?

1. Maharashtra
2. Rajasthan
3. Karnataka
4. Telangana

**Options :**

71087032633. 1  
71087032634. 2  
71087032635. 3  
71087032636. 4

**Question Number : 60 Question Id : 7108708160 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**

World Wetlands Day is celebrated on

1. 2<sup>nd</sup> October
2. 12<sup>th</sup> October
3. 2<sup>nd</sup> February
4. 12<sup>th</sup> February

**Options :**

71087032637. 1  
71087032638. 2

71087032639. 3

71087032640. 4

**Question Number : 61 Question Id : 7108708161 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**

Highest proportion of plant tissue is made up of

1. N, P, K
2. C, H, O
3. Ca, Mg, S
4. Zn, Mn, Fe

**Options :**

71087032641. 1

71087032642. 2

71087032643. 3

71087032644. 4

**Question Number : 62 Question Id : 7108708162 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**

Mineralisation is the process of

- A. Conversion from organic form to an inorganic form
- B. Conversion from inorganic to an organic form
- C. Conversion from oxidised form to a reduced form
- D. Conversion from reduced form to an oxidised form.

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

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

**Options :**

- 71087032645. 1
- 71087032646. 2
- 71087032647. 3
- 71087032648. 4

**Question Number : 63 Question Id : 7108708163 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**



Level terrace or inward sloping is suggested for

A. 6 - 50% slope

B. More than 1000 mm annual rainfall

Choose the correct answer from the options given below

1. A only
2. B only
3. Both A and B
4. Neither A nor B

**Options :**

71087032649. 1

71087032650. 2

71087032651. 3

71087032652. 4

**Question Number : 64 Question Id : 7108708164 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 the natural flow of wind is in the E - W direction, ploughing to prevent soil erosion by wind is suggested to be made in the

1. E - W direction
2. N - S direction
3. Direction of ploughing has no effect
4. Ploughing cannot prevent soil erosion by wind

**Options :**

71087032653. 1

71087032654. 2

71087032655. 3

71087032656. 4

**Question Number : 65 Question Id : 7108708165 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 the design of a gravel pack for the aquifer material, the sieve analysis curve is plotted on a

1. Simple graph paper
2. Semilog paper
3. Log-log paper
4. Combination of semi-log and log log paper

**Options :**

71087032657. 1

71087032658. 2

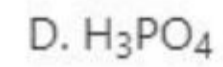
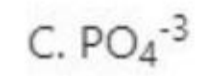
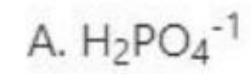
71087032659. 3

71087032660. 4

**Question Number : 66 Question Id : 7108708166 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**

Plant absorbable form of phosphorus in soil are



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

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

**Options :**

71087032661. 1

71087032662. 2

71087032663. 3

71087032664. 4

**Question Number : 67 Question Id : 7108708167 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. Nitrogen	I. Secondary nutrient
B. Calcium	II. Micronutrient
C. Aluminium	III. Macronutrient
D. Zinc	IV. Beneficial nutrient

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

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

**Options :**

- 71087032665. 1
- 71087032666. 2
- 71087032667. 3
- 71087032668. 4

**Question Number : 68 Question Id : 7108708168 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**

Ratoon stunting disease of sugar cane is caused by

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

**Options :**

- 71087032669. 1
- 71087032670. 2
- 71087032671. 3

71087032672. 4

**Question Number : 69 Question Id : 7108708169 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 the scientists with their contribution to plant nutrition

List I	List II
Scientist	Contribution
A. Francis Bacon	I. Water is the sole nutrient of plants
B. Van Helmont	II. Plants contain salt, spirit and earth
C. Robert Boyle	III. Saltpeter ( $\text{KNO}_3$ ) is the principle of vegeta
D. J. R. Glauber	IV. Principle nourishment to plants is water
E. John Woodward	V. Earth is the principle of vegetation

Which of the following match is **correct** ?

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

**Options :**

71087032673. 1

71087032674. 2

71087032675. 3

71087032676. 4

**Question Number : 70 Question Id : 7108708170 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 soil considered to be very fertile, when percent base saturation is

1. 50 - 80%
2. 30 - 50%
3. < 30%
4. > 80%

**Options :**

- 71087032677. 1
- 71087032678. 2
- 71087032679. 3
- 71087032680. 4

## Part C Agricultural Chemicals

<b>Section Id :</b>	710870204
<b>Section Number :</b>	3
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	50
<b>Number of Questions to be attempted :</b>	50
<b>Section Marks :</b>	200
<b>Display Number Panel :</b>	Yes
<b>Group All Questions :</b>	Yes
<b>Mark As Answered Required? :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	710870204
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 71 Question Id : 7108708171 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**



Williamson's ether synthesis proceeds via

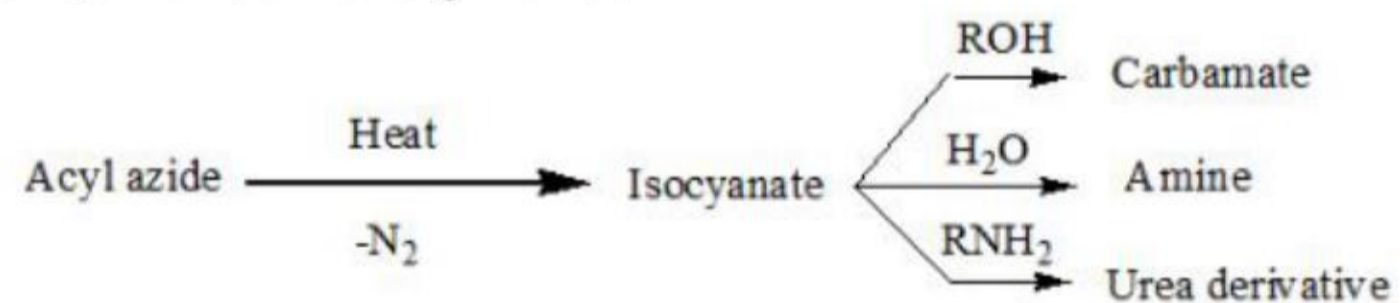
1.  $S_N2$
2.  $S_N1$
3. Both  $S_N1$  and  $S_N2$
4. Neither  $S_N1$  and  $S_N2$

**Options :**

71087032681. 1  
71087032682. 2  
71087032683. 3  
71087032684. 4

**Question Number : 72 Question Id : 7108708172 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 reaction is

1. Curtius reaction
2. Michael reaction
3. Kolbes reaction
4. Beckmann reaction

**Options :**

71087032685. 1  
71087032686. 2  
71087032687. 3  
71087032688. 4

**Question Number : 73 Question Id : 7108708173 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 following reaction

Aldehyde/Ketone + Triphenyl phosphonium ylide  $\longrightarrow$  Alkene + Triphenyl phosphonium oxide

1. Wittig reaction
2. Norish type II reaction
3. Reformatsky reaction
4. Williamson ether synthesis

**Options :**

- 71087032689. 1
- 71087032690. 2
- 71087032691. 3
- 71087032692. 4

**Question Number : 74 Question Id : 7108708174 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**

Photochemical cycloaddition between aldehydes and alkenes to form oxetanes is known as

1. Arndt-Eistert reaction
2. Paterno Buchi reaction
3. Aldol condensation
4. Assymmetric synthesis

**Options :**

- 71087032693. 1
- 71087032694. 2
- 71087032695. 3
- 71087032696. 4

**Question Number : 75 Question Id : 7108708175 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 compounds is most reactive towards electrophilic reactions?

1. Toluene
2. Benzene
3. Benzoic acid
4. Nitrobenzene

**Options :**

71087032697. 1  
71087032698. 2  
71087032699. 3  
71087032700. 4

**Question Number : 76 Question Id : 7108708176 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**

An isotropic effect is related to

1. IR spectroscopy
2. NMR spectroscopy
3. UV-Vis spectroscopy
4. Mass spectrometry

**Options :**

71087032701. 1  
71087032702. 2  
71087032703. 3  
71087032704. 4

**Question Number : 77 Question Id : 7108708177 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**

Polar and thermally unstable compounds can be characterised by using which one of the following techniques?

1. LC-MS
2. GC-MS
3. LC
4. GC

**Options :**

71087032705. 1  
71087032706. 2  
71087032707. 3  
71087032708. 4

**Question Number : 78 Question Id : 7108708178 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 hard ionization method?

1. ESI
2. CI
3. EI
4. MALDI

**Options :**

71087032709. 1  
71087032710. 2  
71087032711. 3  
71087032712. 4

**Question Number : 79 Question Id : 7108708179 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 criteria to determine whether a peak at a given  $m/z$  value represents  $M^+$  or not?

- A. Ions of highest  $m/z$  except for isotopic variation
- B. An odd electron ion
- C. Ion of maximum intensity
- D. Yield significant high mass ions by logical neutral loss

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

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

**Options :**

- 71087032713. 1
- 71087032714. 2
- 71087032715. 3
- 71087032716. 4

**Question Number : 80 Question Id : 7108708180 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. Thiacloprid	I. Chitin synthesis inhibitor
B. Ethiofencarb	II. Acetylcholine receptor
C. Buprofezin	III. GABA gated chloride channel
D. Avermectin A	IV. Acetylcholine esterase inhibitor

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

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

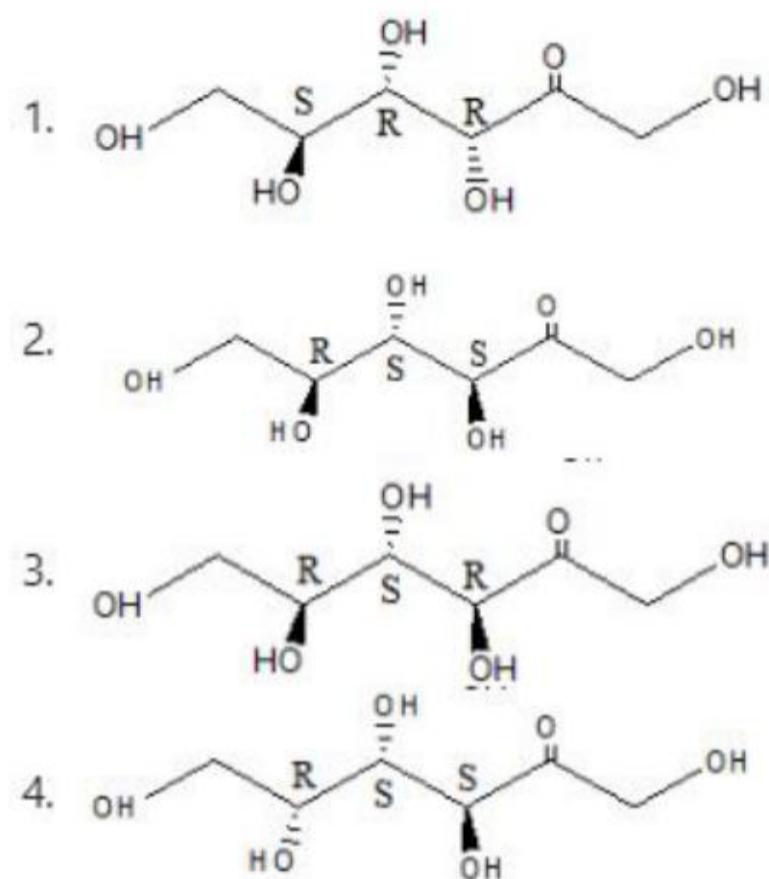
**Options :**

71087032717. 1  
71087032718. 2  
71087032719. 3  
71087032720. 4

**Question Number : 81 Question Id : 7108708181 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**



Tagatose is a functional sweetener and can be found in milk in small amounts. Based on the Fischer projection, which one of the following Wedge-dash structure correctly represents D-tagatose?



**Options :**

- 71087032721. 1
- 71087032722. 2
- 71087032723. 3
- 71087032724. 4

**Question Number : 82 Question Id : 7108708182 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. Ocimene	I. Lemongrass oil
B. Menthol	II. Turpentine oil
C. Citral	III. Peppermint oil
D. $\alpha$ -pinene	IV. Basil oil

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

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

**Options :**

71087032725. 1  
71087032726. 2  
71087032727. 3  
71087032728. 4

**Question Number : 83 Question Id : 7108708183 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**

Ergocalciferol is also known as

1. Vitamin D<sub>1</sub>
2. Vitamin D<sub>2</sub>
3. Vitamin D<sub>3</sub>
4. Vitamin E

**Options :**

71087032729. 1  
71087032730. 2

71087032731. 3

71087032732. 4

**Question Number : 84 Question Id : 7108708184 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 holds true for brassinolides?

1. It is a phytoalexins comprising "olide" structure
2. It is a stem elongation chemical with diterpenoid structure
3. It is a plant hormone comprising cyclic lactone ring structure
4. It is a plant alkaloid with insecticidal activity

**Options :**

71087032733. 1

71087032734. 2

71087032735. 3

71087032736. 4

**Question Number : 85 Question Id : 7108708185 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 does NOT have a "macrolide" structure?

1. Avermectin
2. Tetranactin
3. Ascorbic acid
4. Nimbin

**Options :**

71087032737. 1

71087032738. 2

71087032739. 3

71087032740. 4



**Question Number : 86 Question Id : 7108708186 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**

Avermectins are macrocyclic lactone isolated from which one of the following soil microorganisms?

1. *Streptomyces avermitilis*
2. *Streptomyces hygroscopicus*
3. *Streptomyces Saccharopolyspora spinosa*
4. None of these

**Options :**

- 71087032741. 1
- 71087032742. 2
- 71087032743. 3
- 71087032744. 4

**Question Number : 87 Question Id : 7108708187 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**

Most promising alkylating chemosterilant is

1. Chlorambucil
2. Apholate
3. 2,6-diaminopurine
4. Triphenyltin

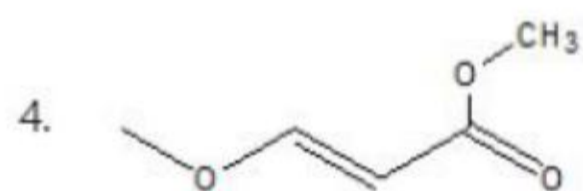
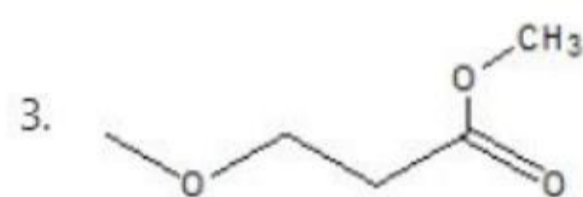
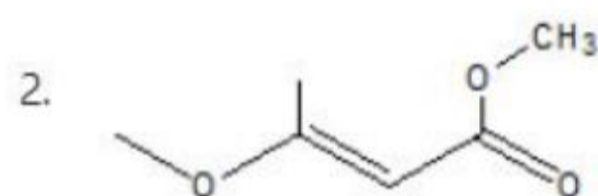
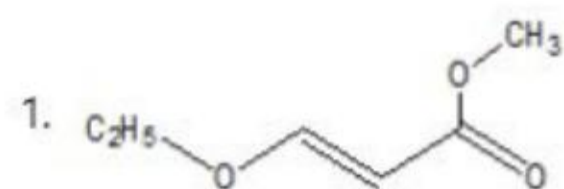
**Options :**

- 71087032745. 1
- 71087032746. 2
- 71087032747. 3
- 71087032748. 4

**Question Number : 88 Question Id : 7108708188 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**

Strobilurin fungicides are known as methoxyacrylate derivatives. Which one of the following structure is methoxyacrylate?



**Options :**

71087032749. 1

71087032750. 2

71087032751. 3

71087032752. 4

**Question Number : 89 Question Id : 7108708189 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 fungicides interferes with the biosynthesis of fungal sterols and ergosterol?

1. Benzimidazole
2. Triazole
3. Napthaquinone
4. Dithiocarbamates

**Options :**

71087032753. 1  
71087032754. 2  
71087032755. 3  
71087032756. 4

**Question Number : 90 Question Id : 7108708190 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 is the composition of Bordeaux mixture?

1.  $[\text{Ca}(\text{OH})_2]_2 \cdot \text{CuSO}_4$
2.  $[\text{Ca}(\text{OH})_2]_3 \cdot \text{CuSO}_4$
3.  $[\text{Ca}(\text{OH})_2] \cdot \text{CuSO}_4$
4.  $(\text{CaO})_3 \cdot \text{CuSO}_4$

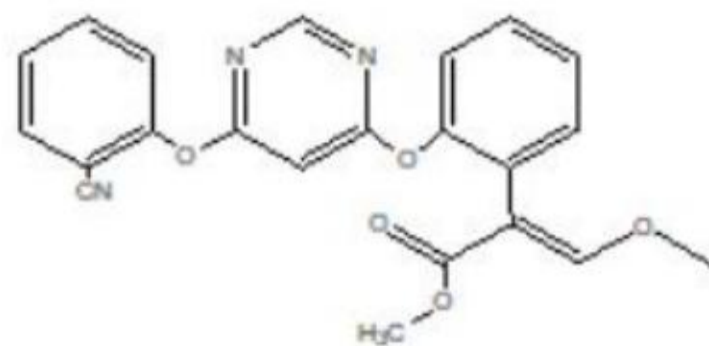
**Options :**

71087032757. 1  
71087032758. 2  
71087032759. 3  
71087032760. 4

**Question Number : 91 Question Id : 7108708191 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 following structure



1. Kresoxim methyl
2. Picoxystrobin
3. Trifloxystrobin
4. Azoxystrobin

**Options :**

71087032761. 1  
71087032762. 2  
71087032763. 3  
71087032764. 4

**Question Number : 92 Question Id : 7108708192 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**

Dichlorvos was prepared by which one of the following reactions?

1. Michaelis-Arbuzov reaction
2. Diels-Alder reaction
3. Reformatsky reaction
4. Perkow reaction

**Options :**

71087032765. 1  
71087032766. 2  
71087032767. 3

71087032768. 4

**Question Number : 93 Question Id : 7108708193 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 year was "Silent Spring" by Rachel Carson published?

1. 1958
2. 1962
3. 1964
4. 1966

**Options :**

71087032769. 1  
71087032770. 2  
71087032771. 3  
71087032772. 4

**Question Number : 94 Question Id : 7108708194 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**

Chloroacetamide is a

1. A herbicide
2. A herbicide safener
3. A plant growth regulator
4. An antisprouting agent

**Options :**

71087032773. 1  
71087032774. 2  
71087032775. 3  
71087032776. 4

**Question Number : 95 Question Id : 7108708195 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**

"Karate" is the trade name of  $\lambda$ -cyhalothrin. Which one of the following is the structure of  $\lambda$ -cyhalothrin?

1.  $C_{23}H_{18}ClF_3NO_3$
2.  $C_{23}H_{19}ClF_4NO_3$
3.  $C_{23}H_{18}ClF_4NO_3$
4.  $C_{23}H_{19}ClF_3NO_3$

**Options :**

71087032777. 1  
71087032778. 2  
71087032779. 3  
71087032780. 4

**Question Number : 96 Question Id : 7108708196 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. Paraquat	I. Photosystem II inhibitor
B. Glyphosate	II. Inhibition of photosynthesis
C. Pendimethalin	III. Inhibit the biosynthesis of aromatic amino acids
D. Atrazine	IV. Growth inhibitor

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

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

**Options :**

71087032781. 1  
71087032782. 2  
71087032783. 3  
71087032784. 4

**Question Number : 97 Question Id : 7108708197 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**

Flusilazole is a potent fungicide. In its chemical structure, it has how many 'F' and 'Si' atoms, respectively?

1. 2 and 1
2. 3 and 1
3. 2 and 2
4. 4 and 1

**Options :**

71087032785. 1

71087032786. 2

71087032787. 3

71087032788. 4

**Question Number : 98 Question Id : 7108708198 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**

Tween-80 is known to be a surfactant used in pesticide formulation. The chemical name of Tween-80 is

1. Polyoxymethylene (80) sorbitan monoleate
2. Polyoxyethylene (80) sorbitan monoleate
3. Polyoxymethylene (80) sorbitan monolinoleate
4. Polyoxyethylene (80) sorbitan monolinoleate

**Options :**

71087032789. 1

71087032790. 2

71087032791. 3

71087032792. 4

**Question Number : 99 Question Id : 7108708199 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**

Minimum flash point of a liquid formulation should be

1.  $> 27^{\circ}\text{C}$
2.  $< 27^{\circ}\text{C}$
3.  $10^{\circ}\text{C}$
4.  $54^{\circ}\text{C}$

**Options :**

71087032793. 1

71087032794. 2

71087032795. 3

71087032796. 4

**Question Number : 100 Question Id : 7108708200 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**

How much nitrogen can be supplied by *Sesbania* sp. to the soil?

1. 120 kg ha<sup>-1</sup>
2. 12 kg ha<sup>-1</sup>
3. 80 kg ha<sup>-1</sup>
4. 20 kg ha<sup>-1</sup>

**Options :**

71087032797. 1

71087032798. 2

71087032799. 3

71087032800. 4

**Question Number : 101 Question Id : 7108708201 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. Antioxidants	I. Quinazoline
B. Binders	II. Ethylcellulose
C. Encapsulants	III. Casein
D. Stabilizers	IV. Propyl gallate

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

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

**Options :**

71087032801. 1  
71087032802. 2  
71087032803. 3  
71087032804. 4

**Question Number : 102 Question Id : 7108708202 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 solution of Imidacloprid has a concentration of 400 ppm. It means that there is

1. 0.4 g Imidacloprid in 100 ml solvent
2. 4  $\mu$ g Imidacloprid in 100 ml solvent
3. 40  $\mu$ g Imidacloprid in 100 ml solvent
4. 40 mg Imidacloprid in 100 ml solvent

**Options :**

71087032805. 1  
71087032806. 2

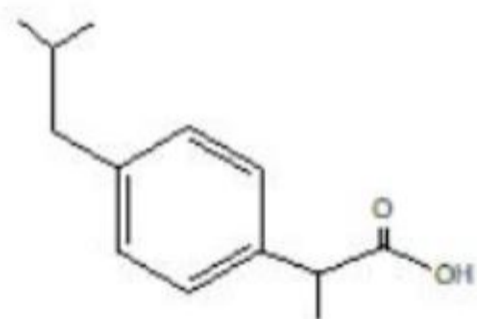
71087032807. 3

71087032808. 4

**Question Number : 103 Question Id : 7108708203 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**

How many total absorptions would appear in the  $^1\text{H-NMR}$  spectra of the following compound?



1. 7

2. 8

3. 9

4. 5

**Options :**

71087032809. 1

71087032810. 2

71087032811. 3

71087032812. 4

**Question Number : 104 Question Id : 7108708204 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**

1 g of Okra sample (1g) containing acetamiprid residue with an area of 15000 mAu was processed for residue analysis in HPLC. Calculate the acetamiprid residue in okra sample using the standard area of 2500 mAu ( $0.1 \text{ mg L}^{-1}$ )

1.  $0.6 \text{ mg kg}^{-1}$
2.  $6.0 \text{ mg kg}^{-1}$
3.  $0.16 \text{ mg kg}^{-1}$
4.  $0.1 \text{ mg kg}^{-1}$

**Options :**

71087032813. 1  
71087032814. 2  
71087032815. 3  
71087032816. 4

**Question Number : 105 Question Id : 7108708205 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**

An example of phosphorodithionate insecticide is

1. Trichlorophos
2. Chloropyriphos
3. Malathion
4. Monocrotophos

**Options :**

71087032817. 1  
71087032818. 2  
71087032819. 3  
71087032820. 4

**Question Number : 106 Question Id : 7108708206 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 India, MRL of pesticide is fixed by

1. FAO/WHO committee
2. CIB & RC
3. Codex Alimentarius Commission
4. FSSAI

**Options :**

71087032821. 1  
71087032822. 2  
71087032823. 3  
71087032824. 4

**Question Number : 107 Question Id : 7108708207 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. Environmental Protection Act	I. 1914
B. DIPA	II. 1968
C. FSSA	III. 1986
D. Insecticide Act	IV. 2006

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

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

**Options :**

71087032825. 1  
71087032826. 2

71087032827. 3

71087032828. 4

**Question Number : 108 Question Id : 7108708208 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**

LEADER is the trade name of which one of the following compounds?

1. Metsufuron-methyl

2. Simazine

3. Fluchloralin

4. Sulfosulfuron

**Options :**

71087032829. 1

71087032830. 2

71087032831. 3

71087032832. 4

**Question Number : 109 Question Id : 7108708209 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**

Total number of pesticides banned in India for manufacture, import and use as on 31.10.2019 is

1. 4

2. 40

3. 8

4. 18

**Options :**

71087032833. 1

71087032834. 2

71087032835. 3

71087032836. 4

**Question Number : 110 Question Id : 7108708210 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 clay type has the maximum pesticide absorption capacity?

1. Montmorillonite
2. Illite
3. Kaolinite
4. Attapulgite

**Options :**

71087032837. 1  
71087032838. 2  
71087032839. 3  
71087032840. 4

**Question Number : 111 Question Id : 7108708211 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**

After a run of thin-layer chromatography in Hexane: Acetone (2:1), three compounds, A, B and C resolved and their  $R_f$  values are 0.72, 0.78 and 0.24. respectively.

Arrange the compounds from least polar to polar pattern.

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

**Options :**

71087032841. 1  
71087032842. 2



71087032843. 3

71087032844. 4

**Question Number : 112 Question Id : 7108708212 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 micronutrients are most widely deficient in Indian soils?

1. Zinc and Boron
2. Zinc and Iron
3. Zinc and Manganese
4. Zinc and Copper

**Options :**

71087032845. 1

71087032846. 2

71087032847. 3

71087032848. 4

**Question Number : 113 Question Id : 7108708213 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**

Maximum allowed per cent of biuret in urea, as specified by FCO is

1. 0.5 %
2. 2.0 %
3. 3.5 %
4. 2.5 %

**Options :**

71087032849. 1

71087032850. 2

71087032851. 3

71087032852. 4

**Question Number : 114 Question Id : 7108708214 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 vitamins is water-soluble?

1. Cyanocobalamin
2. Colecalciferol
3. Retinol
4.  $\gamma$ -Tocopherol

**Options :**

71087032853. 1  
71087032854. 2  
71087032855. 3  
71087032856. 4

**Question Number : 115 Question Id : 7108708215 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**

"Paper factor" is related to which one of the following compounds?

1. Toodomatuic acid
2. Oleanolic acid
3. Stigmasterol
4. Juvabione

**Options :**

71087032857. 1  
71087032858. 2  
71087032859. 3  
71087032860. 4

**Question Number : 116 Question Id : 7108708216 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 is a physical method of decontamination of pesticides?

1. Microwave heating
2. UV exposure
3. Hydrolysis
4. Blanching

**Options :**

71087032861. 1  
71087032862. 2  
71087032863. 3  
71087032864. 4

**Question Number : 117 Question Id : 7108708217 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 molecular formula of Carbofuran is

1.  $C_{12}H_{15}NO_8$
2.  $C_{12}H_{15}NO_3$
3.  $C_{12}H_{14}NO_8$
4.  $C_{12}H_{14}NO_3$

**Options :**

71087032865. 1  
71087032866. 2  
71087032867. 3  
71087032868. 4

**Question Number : 118 Question Id : 7108708218 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 used to test the goodness of fit of a distribution?

1. Normal test
2. t-test
3. F-test
4. Chi-square test

**Options :**

- 71087032869. 1
- 71087032870. 2
- 71087032871. 3
- 71087032872. 4

**Question Number : 119 Question Id : 7108708219 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 measure of variation is

1. Median
2. Standard deviation
3. Quartile
4. Standard normal variable

**Options :**

- 71087032873. 1
- 71087032874. 2
- 71087032875. 3
- 71087032876. 4

**Question Number : 120 Question Id : 7108708220 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**

An example of pyridine-piperidine alkalid is

1. Anabesine
2. Nor-nicotine
3. Morphine
4. Ephedrine

**Options :**

71087032877. 1

71087032878. 2

71087032879. 3

71087032880. 4