

# National Testing Agency

**Question Paper Name :** Agronomy 17th September Shift 2  
**Subject Name :** AGRONOMY  
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**Display Marks:** Yes

## Agronomy

**Group Number :** 1  
**Group Id :** 190889138  
**Group Maximum Duration :** 0  
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**Group Marks :** 480  
**Is this Group for Examiner? :** No

## Part A: General Knowledge

**Section Id :** 190889338  
**Section Number :** 1  
**Section type :** Online  
**Mandatory or Optional :** Mandatory

<b>Number of Questions :</b>	20
<b>Number of Questions to be attempted :</b>	20
<b>Section Marks :</b>	80
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	190889378
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 1 Question Id : 19088915862 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Which of the following is the device used to measure the power and speed of the wind?

1. Avometer
2. Anemometer
3. Airometer
4. Aviontimeter

**Options :**

19088963341. 1

19088963342. 2

19088963343. 3

19088963344. 4

**Question Number : 2 Question Id : 19088915863 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Optical fibre used the concept of which of the following?

1. Reflection
2. Refraction
3. Total internal reflection
4. Total internal refraction

**Options :**

- 19088963345. 1
- 19088963346. 2
- 19088963347. 3
- 19088963348. 4

**Question Number : 3 Question Id : 19088915864 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

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

Yellow vein mosaic is the viral disease of which of the following plants?

- 1. Ladyfinger
- 2. Papaya
- 3. Sugarcane
- 4. Banana

**Options :**

- 19088963349. 1
- 19088963350. 2
- 19088963351. 3
- 19088963352. 4

**Question Number : 4 Question Id : 19088915865 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

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

Which of the following organ(s) is affected by Mumps disease?

- 1. Entire body
- 2. Skin
- 3. Eye
- 4. Parotid

**Options :**

- 19088963353. 1
- 19088963354. 2
- 19088963355. 3

19088963356. 4

**Question Number : 5 Question Id : 19088915866 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

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

Which of the following is the chemical name of vitamin B<sub>2</sub>?

1. Riboflavin
2. Calciferol
3. Pyridoxin
4. Niacin

**Options :**

19088963357. 1

19088963358. 2

19088963359. 3

19088963360. 4

**Question Number : 6 Question Id : 19088915867 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

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

Which of the following is not the input unit of the computer?

1. Mouse
2. Keyboard
3. Screen
4. Scanner

**Options :**

19088963361. 1

19088963362. 2

19088963363. 3

19088963364. 4

**Question Number : 7 Question Id : 19088915868 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

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

The digital computer operates on which of the following principle?

1. Measurement
2. Calculation
3. Logical
4. Electrification

**Options :**

19088963365. 1

19088963366. 2

19088963367. 3

19088963368. 4

**Question Number : 8 Question Id : 19088915869 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

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

The non-cooperation movement of Gandhiji was launched in which of the following year?

1. 1915
2. 1922
3. 1920
4. 1930

**Options :**

19088963369. 1

19088963370. 2

19088963371. 3

19088963372. 4

**Question Number : 9 Question Id : 19088915870 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

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

An Islamic revivalist movement named Wahabi movement was founded by which of the following person?

1. Sian Saheb
2. Syed Ahmed
3. Haji Shariat-Allah
4. DaduMian

**Options :**

19088963373. 1

19088963374. 2

19088963375. 3

19088963376. 4

**Question Number : 10 Question Id : 19088915871 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which of the following is considered as the “Magna Carta of England Education in India”?

1. Hunter education commission
2. Lord Macaulay’s Minute
3. Wood’s Despatch
4. Thomas Babington Macaulay

**Options :**

19088963377. 1

19088963378. 2

19088963379. 3

19088963380. 4

**Question Number : 11 Question Id : 19088915872 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which of the following nutrient does not come under the ambit of 'macro-nutrients in Soil Health Card?

1. Nitrogen
2. Zinc
3. Phosphorous
4. Potassium

**Options :**

19088963381. 1

19088963382. 2

19088963383. 3

19088963384. 4

**Question Number : 12 Question Id : 19088915873 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Cole crops, root crops and legumes come under the ambit of which of the following?

1. Olericulture
2. Pomology
3. Viticulture
4. Arboriculture

**Options :**

19088963385. 1

19088963386. 2

19088963387. 3

19088963388. 4

**Question Number : 13 Question Id : 19088915874 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

The study of individual trees, shrubs, vines, and perennial woody plants is known as which of the following?

1. Turf management
2. Arboriculture
3. Pomology
4. Viticulture

**Options :**

19088963389. 1

19088963390. 2

19088963391. 3

19088963392. 4

**Question Number : 14 Question Id : 19088915875 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

The ministry is implementing MIDH (Mission for Integrated Development of Horticulture) with effect from which of the following year?

1. 2012-13
2. 2019-20
3. 2015-16
4. 2014-15

**Options :**

19088963393. 1

19088963394. 2

19088963395. 3

19088963396. 4

**Question Number : 15 Question Id : 19088915876 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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



The interaction of soils with living things, particularly plants are well known as which of the following?

1. Edaphology
2. Pedology
3. Soil zoology
4. Pedogenesis

**Options :**

19088963397. 1

19088963398. 2

19088963399. 3

19088963400. 4

**Question Number : 16 Question Id : 19088915877 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which of the following systems has also incorporated social aspects in itself?

1. Landscaping
2. Permaculture
3. Horticulture
4. Forest gardening

**Options :**

19088963401. 1

19088963402. 2

19088963403. 3

19088963404. 4

**Question Number : 17 Question Id : 19088915878 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

What do you term the phenomenon whereby the specific gene is added to the plant for producing a desirable phenotype?

1. Genetic manipulation
2. Genetic recombination
3. Genetic modification
4. Genetic hybridisation

**Options :**

19088963405. 1

19088963406. 2

19088963407. 3

19088963408. 4

**Question Number : 18 Question Id : 19088915879 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

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

What is the focus of the participatory plant breeding program?

1. Scientists
2. Plants
3. Environment
4. Farmers

**Options :**

19088963409. 1

19088963410. 2

19088963411. 3

19088963412. 4

**Question Number : 19 Question Id : 19088915880 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

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

How do you term the form of agriculture, in which, industrialized production of crops and animal products takes place?

1. Manufactured agriculture
2. Modern agriculture
3. Industrial agriculture
4. Mechanistic agriculture

**Options :**

19088963413. 1

19088963414. 2

19088963415. 3

19088963416. 4

**Question Number : 20 Question Id : 19088915881 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Micro-irrigation fund of Rs. 5.000 crore has been placed with which of the following organization?

1. NABARD
2. IDBI
3. SBI
4. RRBs

**Options :**

19088963417. 1

19088963418. 2

19088963419. 3

19088963420. 4

## **Part B Core : Natural Resource Management-II**

**Section Id :** 190889339

**Section Number :** 2

**Section type :** 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>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	190889379
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 21 Question Id : 19088915882 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

According to agro-climatic zones regrouped by CAZRI, the potential cropping system in the cold arid zone of Jammu and Kashmir

1. No-cropping
2. Single cropping
3. Intercropping
4. Double cropping

**Options :**

19088963421. 1

19088963422. 2

19088963423. 3

19088963424. 4

**Question Number : 22 Question Id : 19088915883 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
(Weeds)	(Major medicinal value)
A. <i>Achyranthes aspera</i>	I. Measles, enlargement of liver and spleen
B. <i>Acmella oleracea</i>	II. Stammering, tooth ache, stomatitis
C. <i>Leucas aspera</i>	III. Antidote for poisoning due to seeds of <i>Datura</i> spp., arsenic and mercury
D. <i>Solanum nigrum</i>	IV. Nasal congestion, sinusitis, snake bite, scorpion bite, chronic rheumatism
E. <i>Oxalis corniculata</i>	V. Asthma, cough, diuretic, piles, boils

Choose the correct answer from the options given below:

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

**Options :**

19088963425. 1

19088963426. 2

19088963427. 3

19088963428. 4

**Question Number : 23 Question Id : 19088915884 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Correct order of nitrogen fertilizers with respect to their acidifying effect on soil

1. Ammonium sulphate > Ammonium chloride > Ammonium nitrate > urea
2. Ammonium chloride > Ammonium sulphate > Urea > Ammonium nitrate
3. Ammonium sulphate > Ammonium chloride > urea > Ammonium nitrate
4. Ammonium nitrate < Ammonium chloride > Ammonium sulphate > urea

**Options :**

19088963429. 1

19088963430. 2

19088963431. 3

19088963432. 4

**Question Number : 24 Question Id : 19088915885 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
(Water harvesting structure)	(Major purpose)
A. Farm pond	I. Gully reclamation, irrigation and ground water recharge
B. Percolation tank	II. Irrigation and fishery
C. Nala bund	III. Ground water recharge and surface moistening of down side sloping plot
D. Low earthen dam	IV. All sorts of community purposes and groundwater recharge
E. Khadin	V. Moisture and nutrient conservation, moisture recharge in the profile for raising <i>rabi</i> crops

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

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

**Options :**

19088963433. 1

19088963434. 2

19088963435. 3

19088963436. 4

**Question Number : 25 Question Id : 19088915886 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

The energy rich drinks like 'bournvita', 'boost', 'horlicks', 'maltova', etc. are prepared from the extract of which crop?

1. Barley
2. Lentil
3. Pearlmillet
4. Sorghum

**Options :**

19088963437. 1

19088963438. 2

19088963439. 3

19088963440. 4

**Question Number : 26 Question Id : 19088915887 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

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

Soils with less than \_\_\_\_\_ ppm available S are considered deficient for groundnut.

1. 10.0
2. 12.5
3. 15.0
4. 17.5

**Options :**

19088963441. 1

19088963442. 2

19088963443. 3

19088963444. 4

**Question Number : 27 Question Id : 19088915888 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

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

Which index provides actual yield advantage of intercropping?

1. Relative crowding coefficient
2. Aggressivity
3. Competition ratio
4. Land equivalent ratio

**Options :**

19088963445. 1

19088963446. 2

19088963447. 3

19088963448. 4

**Question Number : 28 Question Id : 19088915889 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

What is the magnitude of water potential (bars) in the leaf?

1. -0.1 to -20
2. -5 to -50
3. -100 to -200
4. -1000 to -2000

**Options :**

19088963449. 1

19088963450. 2

19088963451. 3

19088963452. 4

**Question Number : 29 Question Id : 19088915890 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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



Which country has highest area under organic cultivation?

1. Australia
2. Argentina
3. China
4. USA

**Options :**

19088963453. 1

19088963454. 2

19088963455. 3

19088963456. 4

**Question Number : 30 Question Id : 19088915891 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which among the following activities improves soil structure?

1. Summer deep ploughing
2. Frequent harrowings
3. Tillage at improper moisture
4. Tillage activity has no effect on soil structure

**Options :**

19088963457. 1

19088963458. 2

19088963459. 3

19088963460. 4

**Question Number : 31 Question Id : 19088915892 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which among the following is not the method to control *Striga* in sorghum?

1. The use of anti-transpirant on *Striga*
2. Application of more nitrogen to fertile land of sorghum
3. Crop rotation of sorghum with cotton
4. Application of herbicide that does not interfere with mannitol metabolism

**Options :**

19088963461. 1

19088963462. 2

19088963463. 3

19088963464. 4

**Question Number : 32 Question Id : 19088915893 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Combination of which of the following chemicals when sprayed at first node and flag leaf stages has been reported to reduce plant height, enhance lodging resistance and increase the grain yield of irrigated wheat?

- A. Tebuconazole
- B. Cycocel
- C. Phenyl mercuric acetate
- D. Chloromequat chloride

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

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

**Options :**

19088963465. 1

19088963466. 2

19088963467. 3

19088963468. 4

**Question Number : 33 Question Id : 19088915894 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Calculate the amount of farmyard manure (FYM) to be applied for 1.2 ha area of wheat crop to provide 150 kg N/ha to the soil When N content of FYM is 0.6% and the moisture content of FYM on dry weight basis is 50%.

1. 37.5 t
2. 45.0 t
3. 50.0 t
4. 60.0 t

**Options :**

19088963469. 1

19088963470. 2

19088963471. 3

19088963472. 4

**Question Number : 34 Question Id : 19088915895 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

For reducing the experimental error, we can use

1. Replication and local control
2. Selection of treatments and choice of experimental design
3. Selection of experimental material and data analysis
4. All of the above

**Options :**

19088963473. 1

19088963474. 2

19088963475. 3

19088963476. 4

**Question Number : 35 Question Id : 19088915896 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Ionic strength of a solution containing mixture of 0.06 M CaCl<sub>2</sub> and 0.025 M KCl is

1. 0.205
2. 0.115
3. 0.025
4. 0.175

**Options :**

19088963477. 1

19088963478. 2

19088963479. 3

19088963480. 4

**Question Number : 36 Question Id : 19088915897 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Acid sulphate soil is represented by:

- A. Cat-clay
- B. Kari soil
- C. Kole soil
- D. Kallar soil

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

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

**Options :**

19088963481. 1

19088963482. 2

19088963483. 3

19088963484. 4

**Question Number : 37 Question Id : 19088915898 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Diameter of fine particle in sand fraction according to USDA

1. 0.25-0.10 mm
2. 0.50-0.25 mm
3. 0.05-0.002 mm
4. 2.00 -1.00 mm

**Options :**

19088963485. 1

19088963486. 2

19088963487. 3

19088963488. 4

**Question Number : 38 Question Id : 19088915899 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

The equation used to describe the multilayer adsorption isotherm and to calculate the surface area

1. Freundlich isotherm
2. BET isotherm
3. Kerr equation
4. Langmuir isotherm

**Options :**

19088963489. 1

19088963490. 2

19088963491. 3

19088963492. 4

**Question Number : 39 Question Id : 19088915900 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**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 :**

For synthesis of  $\text{NH}_3$  by Haber Bosch process, hydrogen ( $\text{H}_2$ ) gas is required which comes from hydrocarbon by the process of steam reforming and non-catalytic partial oxidation.

**Reason R :**

Steam reforming is an endothermic process while non-catalytic partial oxidation is an exothermic process.

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 :**

19088963493. 1

19088963494. 2

19088963495. 3

19088963496. 4

**Question Number : 40 Question Id : 19088915901 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Match List I with List II

List I (Book/Theory proposed/Characteristic, etc.)	List II (Author/Thinker/Name of Theory, etc.)
A. Soil colour chart	I. Jenny
B. Soil forming equation	II. Donnan
C. Membrane potential	III. Munshell
D. Ratio Law	IV. Schofield

Choose the correct answer from the options given below:

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

**Options :**

19088963497. 1

19088963498. 2

19088963499. 3

19088963500. 4

**Question Number : 41 Question Id : 19088915902 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Match List I with List II

List I (Book/Theory proposed/Characteristic, etc.)	List II (Author/Thinker/Name of Theory, etc.)
A. Sulphur oxidizing bacteria	I. Desulfovibrio
B. Sulphur reducing bacteria	II. <i>Thiobacillus thiooxidans</i>
C. Iron oxidizing bacteria	III. Arthrobacter
D. Manganese oxidizing bacteria	IV. <i>Thiobacillus ferrooxidans</i>

Choose the correct answer from the options given below:

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

**Options :**

19088963501. 1

19088963502. 2

19088963503. 3

19088963504. 4

**Question Number : 42 Question Id : 19088915903 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Iron oxides, hydroxides and oxyhydroxides are

- A. Gibbsite
- B. Goethite
- C. Hematite
- D. Maghemite

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

**Options :**



19088963505. 1

19088963506. 2

19088963507. 3

19088963508. 4

**Question Number : 43 Question Id : 19088915904 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

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

Adsorption process involves accumulation of the substance adsorbed

1. Throughout the body of the substance adsorbing it
2. On the surface of the adsorbing substance
3. In a solution in contact with the adsorbing substance
4. Below the adsorbing substance

**Options :**

19088963509. 1

19088963510. 2

19088963511. 3

19088963512. 4

**Question Number : 44 Question Id : 19088915905 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

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

Carrier hypothesis describes the active accumulation of ions across the cell membrane which was proposed by

1. Lundegardh
2. Mitchell
3. Barber
4. Epstein

**Options :**

19088963513. 1

19088963514. 2

19088963515. 3

19088963516. 4

**Question Number : 45 Question Id : 19088915906 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which of the following is not used as urease inhibitor?

1. N-butyl thiophosphric triamide
2. Phenyl mercury acetate
3. Dicyanamide
4. Phenylphosphorodiamidate

**Options :**

19088963517. 1

19088963518. 2

19088963519. 3

19088963520. 4

**Question Number : 46 Question Id : 19088915907 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

In red soil, the dominant clay mineral present is

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

**Options :**

19088963521. 1

19088963522. 2

19088963523. 3

19088963524. 4

**Question Number : 47 Question Id : 19088915908 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Given below are two statements

Statement I: Thin layer chromatography is adsorption chromatography

Statement II: HPLC is both adsorption and partition chromatography

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 :**

19088963525. 1

19088963526. 2

19088963527. 3

19088963528. 4

**Question Number : 48 Question Id : 19088915909 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which of the following pesticide is an oxime

1. Aldrin
2. Allethrin
3. Aldicarb
4. Atrazine

**Options :**

19088963529. 1

19088963530. 2

19088963531. 3

19088963532. 4

**Question Number : 49 Question Id : 19088915910 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Senthil has taken 10 mg of spinosad and dissolved in 1 ml of solvent. From this solution, he has to prepare 0.01 ppm of stock, how many times he will dilute

1. 1000
2. 10000
3. 100000
4. 1000000

**Options :**

19088963533. 1

19088963534. 2

19088963535. 3

19088963536. 4

**Question Number : 50 Question Id : 19088915911 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Refractive index detector is a part of which analytical equipment

1. ICP
2. UPLC
3. GC
4. Spectrophotometer

**Options :**

19088963537. 1

19088963538. 2

19088963539. 3

19088963540. 4

**Question Number : 51 Question Id : 19088915912 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Tween, Span, Triton-X are the examples of

1. Carrier
2. Surfactant
3. Binder
4. Encapsulant

**Options :**

19088963541. 1

19088963542. 2

19088963543. 3

19088963544. 4

**Question Number : 52 Question Id : 19088915913 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Given below are two statements

Statement I: Insecticide Act was enacted in 1968

Statement II: Pesticide Management Bill was introduced to replace Insecticide act, 1968

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

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

**Options :**

19088963545. 1

19088963546. 2

19088963547. 3

19088963548. 4

**Question Number : 53 Question Id : 19088915914 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Emamectin benzoate is an insecticide of which group

1. Synthetic
2. Microbial
3. Botanical
4. Semi-synthetic

**Options :**

19088963549. 1

19088963550. 2

19088963551. 3

19088963552. 4

**Question Number : 54 Question Id : 19088915915 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Given below are two statements

Statement I: Waiting period and MRL is interrelated

Statement II: MRL in India is fixed by CIB&RC

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 :**

19088963553. 1

19088963554. 2

19088963555. 3

19088963556. 4

**Question Number : 55 Question Id : 19088915916 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Conjugate residue is

1. Pesticide or its product binds with sugar's etc.
2. Pesticide itself
3. Degradation products only
4. Residue which is bound tightly in the matrix

**Options :**

19088963557. 1

19088963558. 2

19088963559. 3

19088963560. 4

**Question Number : 56 Question Id : 19088915917 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Till date number of pesticides registered in India

1. 278
2. 291
3. 298
4. 299

**Options :**

19088963561. 1

19088963562. 2

19088963563. 3

19088963564. 4

**Question Number : 57 Question Id : 19088915918 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Essential oil can be characterised by

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

**Options :**

19088963565. 1

19088963566. 2

19088963567. 3

19088963568. 4

**Question Number : 58 Question Id : 19088915919 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

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

Which of the following botanicals is fish toxic

1. Rotenone
2. Azadirachtin
3. Sabadilla
4. Karanjin

**Options :**

19088963569. 1

19088963570. 2

19088963571. 3

19088963572. 4

**Question Number : 59 Question Id : 19088915920 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

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



Which of the followings are not soil moisture sensors

- A. Tensiometer
- B. SPAD
- C. Granular matrix
- D. Infrared sensor
- E. Resistance block

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

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

**Options :**

- 19088963573. 1
- 19088963574. 2
- 19088963575. 3
- 19088963576. 4

**Question Number : 60 Question Id : 19088915921 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

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

Two hydrogen and one oxygen atom of a water molecule are arranged at an angle of

1. 92.5°
2. 104.5°
3. 112.5°
4. 132.5°

**Options :**

- 19088963577. 1
- 19088963578. 2
- 19088963579. 3

19088963580. 4

**Question Number : 61 Question Id : 19088915922 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which of the following salts is the main cause of permanent hardness of water?

1. Magnesium sulphate
2. Magnesium bicarbonate
3. Magnesium carbonate
4. Sodium chloride

**Options :**

19088963581. 1

19088963582. 2

19088963583. 3

19088963584. 4

**Question Number : 62 Question Id : 19088915923 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

According to the Geological survey, water with less than 1000 mg/litre of total dissolved solids is

1. Brine water
2. Slightly saline
3. Freshwater
4. Moderately saline

**Options :**

19088963585. 1

19088963586. 2

19088963587. 3

19088963588. 4

**Question Number : 63 Question Id : 19088915924 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which of the following sectors is the largest consumer of water?

1. Agriculture
2. Industrial
3. Domestic
4. Textile

**Options :**

19088963589. 1

19088963590. 2

19088963591. 3

19088963592. 4

**Question Number : 64 Question Id : 19088915925 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

An underground layer of water-bearing permeable rock, rock fractures or unconsolidated materials is called as

1. Aquifuge
2. Aquitard
3. Aquifer
4. Aquiclude

**Options :**

19088963593. 1

19088963594. 2

19088963595. 3

19088963596. 4

**Question Number : 65 Question Id : 19088915926 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Water from precipitation that is stored in the root zone of the soil and evaporated, transpired or incorporated by plants is referred as

1. Blue water footprint
2. Grey water footprint
3. Rainbow water footprint
4. Green water footprint

**Options :**

19088963597. 1

19088963598. 2

19088963599. 3

19088963600. 4

**Question Number : 66 Question Id : 19088915927 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Crop water demand of winter wheat is about

1. 200 mm
2. 400 mm
3. 800 mm
4. 1000 mm

**Options :**

19088963601. 1

19088963602. 2

19088963603. 3

19088963604. 4

**Question Number : 67 Question Id : 19088915928 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which of the following systems has maximum water saving efficiency

1. Sprinkler system
2. Central Pivot system
3. Raingun system
4. Trickle system

**Options :**

19088963605. 1

19088963606. 2

19088963607. 3

19088963608. 4

**Question Number : 68 Question Id : 19088915929 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Deviation of rainfall from normal indicates which of the following types of drought

1. Agricultural drought
2. Meteorological drought
3. Hydrological drought
4. Environmental drought

**Options :**

19088963609. 1

19088963610. 2

19088963611. 3

19088963612. 4

**Question Number : 69 Question Id : 19088915930 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

The present Director of ICAR-IISWC is

1. Dr. V.K. Singh
2. Dr. J.S. Samra
3. Dr. P.R. Ojasvi
4. Dr. M. Madhu

**Options :**

19088963613. 1

19088963614. 2

19088963615. 3

19088963616. 4

**Question Number : 70 Question Id : 19088915931 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

One of the water management Institutes of ICAR is located at

1. Bhubaneswar
2. Bhopal
3. Jammu
4. Coimbatore

**Options :**

19088963617. 1

19088963618. 2

19088963619. 3

19088963620. 4

## Part C : Agronomy

<b>Section Id :</b>	190889340
<b>Section Number :</b>	3
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory

**Number of Questions :** 50  
**Number of Questions to be attempted :** 50  
**Section Marks :** 200  
**Enable Mark as Answered Mark for Review and Clear Response :** Yes  
**Sub-Section Number :** 1  
**Sub-Section Id :** 190889380  
**Question Shuffling Allowed :** Yes

**Question Number : 71 Question Id : 19088915932 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
(Growth parameter)	(Definition)
A. Specific leaf area	I. Dry weight of leaf/unit total plant biomass
B. Specific leaf weight	II. Leaf area/unit total plant biomass
C. Leaf weight ratio	III. Increase in dry weight/ leaf area/time
D. Leaf area ratio	IV. Leaf dry weight/unit leaf area
E. Net assimilation rate	V. Ratio between leaf area to leaf dry matter

Choose the correct answer from the options given below:

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

**Options :**

19088963621. 1
19088963622. 2
19088963623. 3
19088963624. 4

**Question Number : 72 Question Id : 19088915933 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**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:** CAM Plants have the highest water-use efficiencies of any plants and usually grow where water is scarce, or it is difficult to get.

**Reason R:** In CAM plants formation of mallic acid with the help of PEP carboxylase enzyme occurs in the day time when stomates are closed and  $C_3$  photo synthesis occurs at night time when stomata are open.

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

1. A is correct and R is not correct
2. R is correct but A is not correct
3. Both A and R are correct
4. Both A and R are not correct

**Options :**

19088963625. 1

19088963626. 2

19088963627. 3

19088963628. 4

**Question Number : 73 Question Id : 19088915934 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Increase in atmospheric  $CO_2$  has a fertilization effect on crops with a  $C_3$  photosynthetic pathway and thus promotes their growth and productivity but this positive effect of increase in atmospheric  $CO_2$  concentration on world agricultural production is constrained by:

1. Increase in temperature in temperate countries
2. Reduction in temperature in temperate countries
3. Increase in temperature in tropical countries
4. Decrease in evapo-transpiration in tropical countries



**Options :**

- 19088963629. 1
- 19088963630. 2
- 19088963631. 3
- 19088963632. 4

**Question Number : 74 Question Id : 19088915935 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Southern state of India having largest area under rice

- 1. Karnataka
- 2. Andhra Pradesh
- 3. Tamil Nadu
- 4. Odisha

**Options :**

- 19088963633. 1
- 19088963634. 2
- 19088963635. 3
- 19088963636. 4

**Question Number : 75 Question Id : 19088915936 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Find out the weed control index for a weed control experiment on maize crop, when weed dry matter in control plot was  $0.150 \text{ kg/m}^2$  and in the herbicide treated plot  $75 \text{ g/m}^2$ , and dry matter of maize in control plot was  $0.300 \text{ kg/m}^2$  and in herbicide treated plot  $0.450 \text{ kg/m}^2$

- 1. 50
- 2. 100
- 3. 33.3
- 4. 66.6

**Options :**

- 19088963637. 1

19088963638. 2

19088963639. 3

19088963640. 4

**Question Number : 76 Question Id : 19088915937 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

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

Following are statements about allelopathy

Choose the *correct* answer from the options given below

- A. The term originates from a Latin Word 'allelon' and pathos
- B. Allelo chemicals are produced by crops only
- C. The use of allelopathy can completely eliminate the use of herbicides
- D. Sunflower, sorghum, *Brassica* spp. are the potential allelopathic plants for weed management in wheat
- E. *Sorgaab* is the extract of rice hulls that can be used as natural herbicide

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

**Options :**

19088963641. 1

19088963642. 2

19088963643. 3

19088963644. 4

**Question Number : 77 Question Id : 19088915938 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**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:** Light has a negligible influence on the germination of weed seeds and thus germination behavior of different weeds differ in light and dark to a minute extent

**Reason R:** *Cyperus difformis* and *Eclipta prostrata* are the examples of weeds that do not germinate at all in dark

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

1. A is correct but R is not incorrect
2. A is incorrect and R is correct
3. Both A and R are correct but R does not explain A
4. Both A and R are correct and R explains A

**Options :**

19088963645. 1

19088963646. 2

19088963647. 3

19088963648. 4

**Question Number : 78 Question Id : 19088915939 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

The herbicide tolerant crop grown in highest number of countries

1. Canola
2. Cotton
3. Soybean
4. Maize

**Options :**

19088963649. 1

19088963650. 2

19088963651. 3

19088963652. 4

**Question Number : 79 Question Id : 19088915940 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

A farmer has only 350 L of water for spray and recommended spray volume is 500 L /ha; what quantity of isoproturon (80%) should be added in water to obtain recommended rate of 0.75 kg ai/ha?

1. 656 g
2. 600 g
3. 525 g
4. 375 g

**Options :**

19088963653. 1

19088963654. 2

19088963655. 3

19088963656. 4

**Question Number : 80 Question Id : 19088915941 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Chose the correct order of weed species with respect to the seed production capacity (number of seeds/plant) from the following

1. *Solanum nigrum* > *Amaranthus spp.* > *Elusine indica* > *Chenopodium album*
2. *Amaranthus spp.* > *Chenopodium album* > *Elusine indica* > *Solanum nigrum*
3. *Solanum nigrum* > *Amaranthus spp.* > *Chenopodium album* > *Elusine indica*
4. *Amaranthus spp.* > *Solanum nigrum* > *Chenopodium album* > *Elusine indica*

**Options :**

19088963657. 1

19088963658. 2

19088963659. 3

19088963660. 4

**Question Number : 81 Question Id : 19088915942 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Correct statement(s) about nitrogen in plants

- A. Nitrogen is the constituent of chlorophyll and helps in photosynthesis
- B. Toxic levels of N results in abundant foliage and dark green colour
- C. Nitrate ion toxicity leads to blackening around tips of older leaves and necrosis
- D. Ammonium ion toxicity causes marginal burn of older leaves followed by interveinal collapse
- E. N fixation in legumes is aided by manganese as it is the structural component of nitrogenase

Choose the *correct* answer from the options given below

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

**Options :**

19088963661. 1

19088963662. 2

19088963663. 3

19088963664. 4

**Question Number : 82 Question Id : 19088915943 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

New specialty fertilizers gaining importance in several countries

- 1. Polyfeed and polyrice
- 2. N-serve and ammonium thiosulfate
- 3. Polymer coated urea and sulphur coated urea
- 4. Neem coated urea and glycerol

**Options :**

19088963665. 1

19088963666. 2

19088963667. 3

19088963668. 4

**Question Number : 83 Question Id : 19088915944 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**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 has been used as an amendment for reclamation of acidic soils

**Reason R:** Adding gypsum in acidic soils reduces exchangeable Al-ion concentration and increases the availability of P, B and Zn

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

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

**Options :**

19088963669. 1

19088963670. 2

19088963671. 3

19088963672. 4

**Question Number : 84 Question Id : 19088915945 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

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

A slow growing green-manure crop not grazed by cattle

1. *Centrosema pubescens*
2. *Phaseolus trilobus*
3. *Pueraria phaseoloides*
4. *Tephrosia purpurea*

**Options :**

19088963673. 1

19088963674. 2

19088963675. 3

19088963676. 4

**Question Number : 85 Question Id : 19088915946 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

A wheat crop yielding 5 t/ha grain and 7 t/ha straw had 220 ppm Fe in grain and 180 ppm Fe in straw. Calculate the total quantity of Fe accumulated (g/ha) by the crop.

1. 2260
2. 2360
3. 4800
4. 6162

**Options :**

19088963677. 1

19088963678. 2

19088963679. 3

19088963680. 4

**Question Number : 86 Question Id : 19088915947 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Hopkins Bio-climatic law is correctly stated as

1. Crop production activities and specific morphological developments are delayed by 8 days for each 1° latitude northwards 5° of longitude eastwards , and 122 m of altitude upwards
2. Crop production activities and specific morphological developments are delayed by 6 days for each 1° latitude northwards 5° of longitude eastwards , and 122 m of altitude upwards
3. Crop production activities and specific morphological developments are delayed by 4 days for each 1° latitude northwards 5° of longitude eastwards , and 122 m of altitude upwards
4. Crop production activities and specific morphological developments are delayed by 2 days for each 1° latitude northwards 5° of longitude eastwards , and 122 m of altitude upwards

**Options :**

19088963681. 1

19088963682. 2

19088963683. 3

19088963684. 4

**Question Number : 87 Question Id : 19088915948 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Establishment of a good crop in red soils under dryland conditions is risky because these soils

1. Are highly acidic and sometimes highly saline
2. Have very high permeability
3. Have good aggregation property and deep rooting of cultivated crops causes excessive deep percolation of rainwater
4. Have excessive gravel, weathered rock fragments, crust formation and become hard on drying

**Options :**

19088963685. 1

19088963686. 2

19088963687. 3

19088963688. 4

**Question Number : 88 Question Id : 19088915949 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**



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

Improved pigeonpea varieties suited to dry farming conditions

1. Pusa Ageti and T-21
2. T-27 and Aruna
3. T-9 and T-13
4. S-8 and Pusa Barsati

**Options :**

19088963689. 1

19088963690. 2

19088963691. 3

19088963692. 4

**Question Number : 89 Question Id : 19088915950 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Pruning of transplants is done with the prime objective

1. To hasten rooting development
2. To increase photosynthesis
3. To reduce transpiration
4. To get early maturity

**Options :**

19088963693. 1

19088963694. 2

19088963695. 3

19088963696. 4

**Question Number : 90 Question Id : 19088915951 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Grass widely recommended as vegetative barrier

1. *Khus* grass
2. Lemon grass
3. Bermuda grass
4. Wiregrass

**Options :**

19088963697. 1

19088963698. 2

19088963699. 3

19088963700. 4

**Question Number : 91 Question Id : 19088915952 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which among the followings is not the purpose of the *beushaning* operation in the direct seeded lowland rice?

1. Control of weeds
2. Optimize crop stand
3. To reduce the straw yield and increase the grain yield
4. To avoid soil aeration

**Options :**

19088963701. 1

19088963702. 2

19088963703. 3

19088963704. 4

**Question Number : 92 Question Id : 19088915953 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
Crops	Special characteristics of crops
A. Barnyard millet	I. Highly tolerant to alkalinity, can grow with pH of 11.0
B. Kodo millet	II. Susceptible to both drought and waterlogging
C. Finger millet	III. Highly drought resistant and tolerant to waterlogging
D. Foxtail millet	IV. Highly drought resistant

Choose the correct answer from the options given below:

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

**Options :**

19088963705. 1

19088963706. 2

19088963707. 3

19088963708. 4

**Question Number : 93 Question Id : 19088915954 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which among the following benefits is not related to the seeding of chickpea at a depth of 10-15 cm under dryland condition?

1. The seedling takes moisture from deep strata of the soil
2. The root system escapes the zone, where fungus causing wilt is concentrated
3. It promotes better root development
4. Higher amount of available P is reserved in this layer

**Options :**

19088963709. 1

19088963710. 2

19088963711. 3

19088963712. 4

**Question Number : 94 Question Id : 19088915955 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

The most important fibre property of cotton from economic point of view is

1. Fibre length
2. Fibre fineness
3. Fibre strength
4. Fibre maturity

**Options :**

19088963713. 1

19088963714. 2

19088963715. 3

19088963716. 4

**Question Number : 95 Question Id : 19088915956 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Under optimum plant population, generally what will be the head diameter of sunflower?

1. 10 cm
2. 15 cm
3. 20 cm
4. 25 cm

**Options :**

19088963717. 1

19088963718. 2

19088963719. 3

19088963720. 4

**Question Number : 96 Question Id : 19088915957 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

What is the most important cause of declining the area of *adsali* planting of sugarcane in recent period in India, especially in Maharashtra and Karnataka?

1. Less availability of irrigation water
2. It cannot supply sugarcane during early crushing period
3. The climate change is forcing farmers shift to other methods of planting
4. Although it increases yield, but sugar recovery is very less

**Options :**

19088963721. 1

19088963722. 2

19088963723. 3

19088963724. 4

**Question Number : 97 Question Id : 19088915958 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which experimental design provides the maximum number of degrees of freedom for the estimation of experimental error?

1. CRD
2. RBD
3. Split-plot Design
4. Strip-plot Design

**Options :**

19088963725. 1

19088963726. 2

19088963727. 3

19088963728. 4

**Question Number : 98 Question Id : 19088915959 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which experimental design should be selected for a higher precision for the interaction than the precision for the two factors?

1. Factorial RBD
2. Strip-plot Design
3. Split-plot Design
4. Split-split-plot Design

**Options :**

19088963729. 1

19088963730. 2

19088963731. 3

19088963732. 4

**Question Number : 99 Question Id : 19088915960 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

What are the uses of the analysis of covariance in agricultural research?

- A. To stabilise the variances
- B. To reduce the experimental error
- C. To assist in the interpretation of treatment effects
- D. To analyse the experimental results with missing observations

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

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

**Options :**

19088963733. 1

19088963734. 2

19088963735. 3

19088963736. 4

**Question Number : 100 Question Id : 19088915961 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**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 :** In a split-plot design, the effects of sub-plot treatments and the interactions with main-plot treatments can be estimated more precisely than the main-plot treatments.

**Reason R :** The higher precision of sub-plot treatments and interactions in split-plot design is due to the more effective local control.

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 :**

19088963737. 1

19088963738. 2

19088963739. 3

19088963740. 4

**Question Number : 101 Question Id : 19088915962 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

In which tillage, primary tillage is completely avoided and secondary tillage is restricted to seedbed preparation in the row zone only?

1. Row zone tillage
2. Minimum tillage
3. Plough-plant tillage
4. Zero tillage

**Options :**

19088963741. 1

19088963742. 2

19088963743. 3

19088963744. 4

**Question Number : 102 Question Id : 19088915963 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

A self-sustaining land-management system, which combines production of agricultural crops with that of tree crops as also with that of the livestock simultaneously or sequentially, on the same unit of land is known as

1. Agri-silviculture
2. Agroforestry
3. Agro-silvopastoral system
4. Silvopastoral system

**Options :**

19088963745. 1

19088963746. 2

19088963747. 3

19088963748. 4

**Question Number : 103 Question Id : 19088915964 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

A grouping of soils in the land capability classification that have almost the same influence on production and responses to the systems of management of common cultivated crops is known as

1. Capability class
2. Capability unit
3. Capability group
4. Capability sub-class

**Options :**

19088963749. 1

19088963750. 2

19088963751. 3



19088963752. 4

**Question Number : 104 Question Id : 19088915965 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

The volume of water present in the total pore volume of soil refers to \_\_\_\_\_.

1. Mass wetness
2. Volume wetness
3. Degree of saturation
4. Infiltration velocity

**Options :**

19088963753. 1

19088963754. 2

19088963755. 3

19088963756. 4

**Question Number : 105 Question Id : 19088915966 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

In which soil, plants gain moisture earlier from the presence of ground water if its level is about 80 cm or more below the roots?

1. Very fine-textured soil
2. Fine-textured soil
3. Coarse-textured soil
4. All soils will gain at equal time

**Options :**

19088963757. 1

19088963758. 2

19088963759. 3

19088963760. 4

**Question Number : 106 Question Id : 19088915967 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

The diffusion pressure deficit of a fully turgid tissue is

1. Zero
2. Positive
3. Negative
4. Any value

**Options :**

19088963761. 1

19088963762. 2

19088963763. 3

19088963764. 4

**Question Number : 107 Question Id : 19088915968 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Water held tightly to the surface of soil particles by adsorption forces is known as \_\_\_\_\_.

1. Hygroscopic water
2. Capillary water
3. Gravitational water
4. Adsorption water

**Options :**

19088963765. 1

19088963766. 2

19088963767. 3

19088963768. 4

**Question Number : 108 Question Id : 19088915969 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which meteorological sub-division receives the highest rainfall during the south-west monsoon?

1. Assam and Meghalaya
2. Sub-Himalayan West Bengal and Sikkim
3. Konkan and Goa
4. Coastal Karnataka

**Options :**

19088963769. 1

19088963770. 2

19088963771. 3

19088963772. 4

**Question Number : 109 Question Id : 19088915970 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Generally, water requirement of a crop includes \_\_\_\_\_.

- A. Evapotranspiration
- B. Application losses
- C. Water needed for metabolic purposes
- D. Water for special purposes of crop management

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

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

**Options :**

19088963773. 1

19088963774. 2

19088963775. 3

19088963776. 4

**Question Number : 110 Question Id : 19088915971 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Supplemental irrigation is applied to close growing row crops originally planned as rainfed crops through shallow furrows prepared by intercultivation is called \_\_\_\_\_.

1. Wild flooding
2. Within-row irrigation
3. Every-furrow irrigation
4. Corrugation

**Options :**

19088963777. 1

19088963778. 2

19088963779. 3

19088963780. 4

**Question Number : 111 Question Id : 19088915972 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

What will be the maximum non-erosive flow rate in furrows, if the slope is 0.6%?

1. 1 litre per second
2. 2 litre per second
3. 3 litre per second
4. 4 litre per second

**Options :**

19088963781. 1

19088963782. 2

19088963783. 3

19088963784. 4

**Question Number : 112 Question Id : 19088915973 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

What should be the minimum infiltration rate for suitability of sprinkler irrigation method?

1. 1 mm per hour
2. 2 mm per hour
3. 3 mm per hour
4. 4 mm per hour

**Options :**

19088963785. 1

19088963786. 2

19088963787. 3

19088963788. 4

**Question Number : 113 Question Id : 19088915974 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which among the following nutrients have very poor availability at  $\text{pH} \leq 7.0$ ?

1. P and Mg
2. Ca and Mo
3. K and Mg
4. P and K

**Options :**

19088963789. 1

19088963790. 2

19088963791. 3

19088963792. 4

**Question Number : 114 Question Id : 19088915975 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

The neutralizing value of slaked lime is 136%. What does it indicate?

1. The amount of slaked lime required to neutralize is 136% more than  $\text{CaCO}_3$
2. The amount of slaked lime required to neutralize is 36% more than  $\text{CaCO}_3$
3. The amount of slaked lime required to neutralize is 26% less than  $\text{CaCO}_3$
4. The amount of slaked lime required to neutralize is 36% less than  $\text{CaCO}_3$

**Options :**

19088963793. 1

19088963794. 2

19088963795. 3

19088963796. 4

**Question Number : 115 Question Id : 19088915976 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

The physical condition of which soil is poor?

1. Saline soil
2. Sodid soil
3. Saline-sodic soil
4. Saline, sodic and saline-sodic characters do not affect soil physical condition

**Options :**

19088963797. 1

19088963798. 2

19088963799. 3

19088963800. 4

**Question Number : 116 Question Id : 19088915977 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

If the response of soybean grain yield to the application of vermicompost is  $y = a + bx - cx^2$ , where  $y$  represents grain yield of soybean (kg/ha) and  $x$  represents amount (t/ha) of vermicompost applied. The application of recommended chemical fertilizer produces 3105 kg grain/ha, then application of how much amount (t/ha) of vermicompost can substitute the chemical fertilizer for equal amount of grain production?

$$1. \frac{-b \pm \sqrt{b^2 + \{4 \times c \times (a - 3105)\}}}{2 \times (-c)}$$

$$2. \frac{-b \pm \sqrt{b^2 - \{4 \times c \times (3105 - a)\}}}{2 \times c}$$

$$3. \frac{-b \pm \sqrt{b^2 + \{4 \times a \times (c - 3105)\}}}{2 \times a}$$

$$4. \frac{-b \pm \sqrt{b^2 - \{4 \times (-a) \times (3105 - c)\}}}{2 \times a}$$

**Options :**

19088963801. 1

19088963802. 2

19088963803. 3

19088963804. 4

**Question Number : 117 Question Id : 19088915978 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

The highest yield advantage providing intercropping of maize + pigeonpea from 1 ha area produces 2234 and 896 kg grain of maize and pigeonpea, respectively. The sole crop yield of maize and pigeonpea are 3398 and 1035 kg/ha, respectively. One farmer is interested to grow the above mentioned intercrop in his total land of 1 ha due to yield advantage. But, his annual requirement of maize is 3,130 kg, without which he cannot run his family. One scientist suggested the strategy that the farmer can grow sole maize crop in some parts of 1 ha area and rest part for intercrop. The farmer followed the advice and harvested 3,130 kg grain of maize. Then how much pigeonpea was produced by the farmer?

1. 206 kg
2. 475 kg
3. 690 kg
4. 825 kg

**Options :**

19088963805. 1

19088963806. 2

19088963807. 3

19088963808. 4

**Question Number : 118 Question Id : 19088915979 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

Which principle of the International Federation of Organic Agriculture Movements follows the statement “organic agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment”?

1. Principle of health
2. Ecological principle
3. Principle of fairness
4. Principle of care

**Options :**

19088963809. 1

19088963810. 2

19088963811. 3

19088963812. 4

**Question Number : 119 Question Id : 19088915980 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
Terminology	Description
A. Cropping pattern	I. Growing of different crops on a piece of land in a pre-planned succession
B. Cropping system	II. Yearly sequence and spatial arrangement of crops and fallow on a given area
C. Crop rotation	III. Plan for crops to raise on individual plot of a farm to get the maximum returns from each crop without impairing fertility of the soil
D. Cropping scheme	IV. Cropping patterns used on a farm and their interaction with farm resources and available technology, which determine their make up

Choose the correct answer from the options given below:

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

**Options :**

19088963813. 1  
19088963814. 2  
19088963815. 3  
19088963816. 4

**Question Number : 120 Question Id : 19088915981 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

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

In the estimation of which biological index of advantage and dominance for intercropping, the expected yield from the intercrop related to the sown proportion of sole crop yield is considered?

1. Area time equivalent ratio
2. Aggressivity
3. Relative yield total
4. Land equivalent coefficient

**Options :**

19088963817. 1

19088963818. 2

19088963819. 3

19088963820. 4