

AGRONOMY ICAR SEPT 2022

Topic:- 05 AGRONOMY_PG

1) Which of the following is the non-physiological oxidant used by Robert Hill known as Hill reagent?[Question ID = 841]
[Question Description = 101_28_AGR_AUG22_Q01]

1. Ferricyanide [Option ID = 3361]
2. Ferric oxalate [Option ID = 3362]
3. DCPIP [Option ID = 3363]
4. NADP⁺ [Option ID = 3364]

2) Conversion of glucose to glucose-6-phosphate, is catalyzed by _____[Question ID = 842][Question Description = 102_28_AGR_AUG22_Q02]

1. Aldolase [Option ID = 3365]
2. Enolase [Option ID = 3366]
3. Phosphofructokinase [Option ID = 3367]
4. Hexokinase [Option ID = 3368]

3) The daughter cells produced after mitosis will have _____ number of chromosomes as original cells.

[Question ID = 843][Question Description = 103_28_AGR_AUG22_Q03]

1. Twice more [Option ID = 3369]
2. Half of [Option ID = 3370]
3. Thrice more [Option ID = 3371]
4. Same [Option ID = 3372]

4) A band of suberin layer develops all around the cell in the middle of the transverse and radial walls. This suberin is called _____ strip.

[Question ID = 844][Question Description = 104_28_AGR_AUG22_Q04]

1. Intercalary [Option ID = 3373]
2. Pericycle [Option ID = 3374]
3. Cambium [Option ID = 3375]
4. Casparian [Option ID = 3376]

5) Given below are two statements

Statement I: Osmotic pressure is always negative.

Statement II: Osmotic potential is also always negative.

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

[Question ID = 845][Question Description = 105_28_AGR_AUG22_Q05]

1. Both Statement I and Statement II are true [Option ID = 3377]
2. Both Statement I and Statement II are false [Option ID = 3378]
3. Statement I is true but Statement II is false [Option ID = 3379]
4. Statement I is false but Statement II is true [Option ID = 3380]

6) The soil with more than 20 Kg/ ha Phosphorus are rated as

[Question ID = 846][Question Description = 106_28_AGR_AUG22_Q06]

1. Low in P
[Option ID = 3381]
2. Medium in P
[Option ID = 3382]
3. High in P
[Option ID = 3383]
4. Very low in P
[Option ID = 3384]

7) Which of the following is the latest addition to the list of essential nutrients?

[Question ID = 847][Question Description = 107_28_AGR_AUG22_Q07]

1. Selenium [Option ID = 3385]
2. Cobalt [Option ID = 3386]
3. Chlorine [Option ID = 3387]
4. Nickel [Option ID = 3388]

8) Given below are two statements

Statement I: C_3 plants are more efficient than C_4 plants in terms of carbon dioxide fixation

Statement II: C_4 plants are less water efficient and consume more amount of water than C_3 plants for same amount of CO_2 fixed.

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

[Question ID = 848][Question Description = 108_28_AGR_AUG22_Q08]

1. Both Statement I and Statement II are true [Option ID = 3389]
2. Both Statement I and Statement II are false [Option ID = 3390]
3. Statement I is true but Statement II is false [Option ID = 3391]
4. Statement I is false but Statement II is true [Option ID = 3392]

9) The first acceptor of CO_2 _____ and first product of C_4 plant is _____ [Question ID = 849][Question Description = 109_28_AGR_AUG22_Q09]

1. Oxaloacetic acid and phosphoenolpyruvate [Option ID = 3393]
2. Malic acid and oxaloacetate [Option ID = 3394]
3. Phosphoenolpyruvate and oxaloacetate [Option ID = 3395]
4. Oxaloacetic acid and malate [Option ID = 3396]

10) Match List I with List II

List I	List II
Inhibitor	Function
A. Malonate	I. Blocks complex III in ETC
B. Cyanide	II. Prevents oxidation of succinate in Krebs cycle
C. Oligomycin	III. Inhibits cytochrome oxidase in ETC
D. Rotenone	IV. Inhibits ATP synthase

Choose the correct answer from the options given below:

[Question ID = 850][Question Description = 110_28_AGR_AUG22_Q10]

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

[Option ID = 3397]

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

[Option ID = 3398]

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

[Option ID = 3399]

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

[Option ID = 3400]

11) Which of the following hormone deficiency causes dwarfism in plant? [Question ID = 851][Question Description = 111_28_AGR_AUG22_Q11]

1. Auxin [Option ID = 3401]
2. Gibberellin [Option ID = 3402]
3. Brassinosteroid [Option ID = 3403]
4. Ethylene [Option ID = 3404]

12) Which of the following are correct about C_4 cycle and C_4 plant?

- A. Phosphoenolpyruvate carboxylase is located in cytosol
- B. C_4 cycle occurs in the chloroplasts of bundle sheath cells
- C. C_4 cycle is a CO_2 enrichment cycle

D. C₄ cycle occurs in the chloroplasts of mesophyll cells.

[Question ID = 852][Question Description = 112_28_AGR_AUG22_Q12]

1. A and B only
[Option ID = 3405]
2. B and C only [Option ID = 3406]
3. A, B and C only [Option ID = 3407]
4. C and D only [Option ID = 3408]

13) NAD⁺ in cellular respiration acts as _____

[Question ID = 853][Question Description = 113_28_AGR_AUG22_Q13]

1. A source for ATP synthase [Option ID = 3409]
2. An enzymes [Option ID = 3410]
3. An electron carrier [Option ID = 3411]
4. An electron acceptor for anaerobic respiration [Option ID = 3412]

14) Which of these statements is incorrect?

- A. Glycolysis occurs in cytosol
- B. Oxidative phosphorylation takes place in outer mitochondrial membrane
- C. Respiratory ETS in plants located in inner mitochondrial membrane
- D. ATP is synthesized through complex V

[Question ID = 854][Question Description = 114_28_AGR_AUG22_Q14]

1. A [Option ID = 3413]
2. B [Option ID = 3414]
3. C [Option ID = 3415]
4. D [Option ID = 3416]

15) Out of the following statements, which one is not correct ?

[Question ID = 855][Question Description = 115_28_AGR_AUG22_Q15]

1. Number of stomata found in all different leaves is different in plants [Option ID = 3417]
2. Distribution of stomata is different in different plants [Option ID = 3418]
3. Distribution, number, size and type of stomata are same in every plant [Option ID = 3419]
4. Size and type of stomata is different in different plants [Option ID = 3420]

16) In oxygenic photosynthetic organism, photosynthetic pigment is located in _____

[Question ID = 856][Question Description = 116_28_AGR_AUG22_Q16]

1. Peroxisome
[Option ID = 3421]
2. Stroma
[Option ID = 3422]
3. Chlorosome
[Option ID = 3423]
4. Thylakoid membranes
[Option ID = 3424]

17) Which phytohormone forms the association between roots and microbes?[Question ID = 857][Question Description = 117_28_AGR_AUG22_Q17]

1. Gibberellin [Option ID = 3425]
2. Auxin [Option ID = 3426]
3. Brassinosteroid [Option ID = 3427]
4. Strigolactones [Option ID = 3428]

18) The basic cell membrane structure consists of and in the animal cell of an organism.

[Question ID = 858][Question Description = 118_28_AGR_AUG22_Q18]

1. Lipid bilayer
[Option ID = 3429]
2. Embedded proteins
[Option ID = 3430]
3. Golgi vesicles

[Option ID = 3431]

4. Lipid bilayer and embedded proteins [Option ID = 3432]

19) Match List I with List II

List I	List II
Theory proposed	Author
A. Root pressure theory	I. J. C . Bose
B. Pulsation theory	II. Priestley
C. Relay pump hypothesis	III. Dixon and Jolly
D. Transpiration pull	IV. Godlewski

Choose the correct answer from the options given below:

[Question ID = 859][Question Description = 119_28_AGR_AUG22_Q19]

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

[Option ID = 3433]

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

[Option ID = 3434]

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

[Option ID = 3435]

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

[Option ID = 3436]

20) Match List I with List II

List I	List II
A. Enoplasmic reticulum	I. Robert Brown, 1831
B. Nucleus	II. T. Boveri, 1888
C. Centrosomes	III. F. Miescher, 1869
D. Nucleic acid	IV. Carniar, 1897

Choose the correct answer from the options given below:

[Question ID = 860][Question Description = 120_28_AGR_AUG22_Q20]

1. A - III , B - I, C - IV , D - II [Option ID = 3437]

2. A - II, B - III , C - I , D - IV [Option ID = 3438]

3. A - I, B - II , C - IV , D - III [Option ID = 3439]

4. A - IV, B - I , C - II , D - III [Option ID = 3440]

21) Which one of the following is NOT a pressure unit?

[Question ID = 861][Question Description = 121_28_AGR_AUG22_Q21]

1. Atmosphere [Option ID = 3441]

2. Pascal [Option ID = 3442]

3. Newton [Option ID = 3443]

4. Torr [Option ID = 3444]

22) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: The temperature increases with increasing height in the stratosphere.

Reason R: Ozone absorbs ultra violet radiation in the stratosphere and makes it warm.

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

[Question ID = 862][Question Description = 122_28_AGR_AUG22_Q22]

1. Both A and R are true and R is the correct explanation of A [Option ID = 3445]

2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 3446]

3. A is true but R is false [Option ID = 3447]

4. A is false but R is true [Option ID = 3448]

23) What is the date of winter solstice in the southern hemisphere?

[Question ID = 863][Question Description = 123_28_AGR_AUG22_Q23]

1. 22nd December [Option ID = 3449]

2. 21st March [Option ID = 3450]

3. 21st June [Option ID = 3451]

4. 23rd September [Option ID = 3452]

24) Match List I with List II

List I	List II
Crop	Minimum cardinal temperature (°C)
A. Rice	I. 1.0 - 2.0
B. Wheat	II. 3.0 - 4.5
C. Maize	III. 8.0 - 10.0
D. Peas	IV. 10.0 -12.0

Choose the correct answer from the options given below:

[Question ID = 864][Question Description = 124_28_AGR_AUG22_Q24]

1. A - I, B - II, C - IV, D - III [Option ID = 3453]
2. A - II, B - IV, C - I, D - III [Option ID = 3454]
3. A - IV, B - II, C - III, D - I [Option ID = 3455]
4. A - II, B - IV, C - III, D - I [Option ID = 3456]

25) Which of the following is responsible for the anthropogenic climate change phenomenon?[Question ID = 865][Question Description = 125_28_AGR_AUG22_Q25]

1. Volcanic eruption [Option ID = 3457]
2. Variation in earth's orbital characteristics or Milankovitch cycles [Option ID = 3458]
3. Variation in solar output [Option ID = 3459]
4. Effect of green house gases [Option ID = 3460]

26) Which of the following sequences is correct in terms of the Global Warming Potential?

[Question ID = 866][Question Description = 126_28_AGR_AUG22_Q26]

1. $\text{CO}_2 > \text{CH}_4 > \text{N}_2\text{O} > \text{SF}_6$ [Option ID = 3461]
2. $\text{SF}_6 > \text{N}_2\text{O} > \text{CH}_4 > \text{CO}_2$ [Option ID = 3462]
3. $\text{N}_2\text{O} > \text{CH}_4 > \text{CO}_2 > \text{SF}_6$ [Option ID = 3463]
4. $\text{N}_2\text{O} > \text{F}_6 > \text{CH}_4 > \text{CO}_2$ [Option ID = 3464]

27) At what height, geostationary satellites are placed above the earth surface? [Question ID = 867][Question Description = 127_28_AGR_AUG22_Q27]

1. 800 km [Option ID = 3465]
2. 1000 km [Option ID = 3466]
3. 18000 km [Option ID = 3467]
4. 36000 km [Option ID = 3468]

28) For how many days in advance, weather forecasts are currently issued by IMD in DAMU Project?

[Question ID = 868][Question Description = 128_28_AGR_AUG22_Q28]

1. 3 days [Option ID = 3469]
2. 5 days [Option ID = 3470]
3. 10 days [Option ID = 3471]
4. 21 days [Option ID = 3472]

29) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: In a Global Positioning System (GPS), four satellites are accommodated in each orbit at an altitude of 20,185 km from surface of earth.

Reason R: All these GPS satellites are placed in six orbits.

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

[Question ID = 869][Question Description = 129_28_AGR_AUG22_Q29]

1. Both A and R are true and R is the correct explanation of A [Option ID = 3473]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 3474]
3. A is true but R is false [Option ID = 3475]
4. A is false but R is true [Option ID = 3476]

30) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A : A Geographical Information System (GIS) links spatial data with descriptive information about a particular feature on a map.

Reason R : The information is stored as attributes of the geographically represented features.

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

[Question ID = 870][Question Description = 130_28_AGR_AUG22_Q30]

1. Both A and R are true and R is the correct explanation of A [Option ID = 3477]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 3478]
3. A is true but R is false [Option ID = 3479]
4. A is false but R is true [Option ID = 3480]

31) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: Rayleigh scattering causes the sky to appear blue.

Reason R: As most of the Rayleigh scatterers have size $\ll \lambda$ (wavelength).

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

[Question ID = 871][Question Description = 131_28_AGR_AUG22_Q31]

1. Both A and R are true and R is the correct explanation of A
[Option ID = 3481]
2. Both A and R are true but R is NOT the correct explanation of A
[Option ID = 3482]
3. A is true but R is false
[Option ID = 3483]
4. A is false but R is true
[Option ID = 3484]

32) Match List I with List II

List I	List II
Name of ICAR research institute	Head quarter
A. ICAR-Indian Institute of Seed Science	I. Bhopal
B. ICAR-National Institute of High Security Animal Diseases	II. Bhimtal
C. ICAR- National Research Centre on Integrated Farming	III. Motihari
D. ICAR-Directorate of Cold Water Fisheries Research	IV. Mau

Choose the correct answer from the options given below:

[Question ID = 872][Question Description = 132_28_AGR_AUG22_Q32]

1. A - II, B - IV, C - I, D - III
[Option ID = 3485]
2. A - I, B - III, C - II, D - IV
[Option ID = 3486]
3. A - III, B - II, C - IV, D - III
[Option ID = 3487]
4. A - IV, B - I, C - III, D - II
[Option ID = 3488]

33) Given below are two statements

Statement I: A soil with good tilth is quite porous and has free drainage up to water table

Statement II: The capillary and non-capillary pores should be in a ratio of 1:4 so that sufficient amount of water is retained in the soil as well as free air

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

[Question ID = 873][Question Description = 133_28_AGR_AUG22_Q33]

1. Both Statement I and Statement II are true [Option ID = 3489]
2. Both Statement I and Statement II are false [Option ID = 3490]
3. Statement I is true but Statement II is false [Option ID = 3491]
4. Statement I is false but Statement II is true [Option ID = 3492]

34) Arrange in correct sequence the steps of Precision Agriculture

A. Evaluation of Precision Agriculture

B. Preparation of variability maps

C. Managing Variability

D. Assessing Variability

Choose the *correct* answer from the options given below

[Question ID = 874][Question Description = 134_28_AGR_AUG22_Q34]

1. A, B, C, D
[Option ID = 3493]
2. D, B, C, A
[Option ID = 3494]
3. B, C, D, A
[Option ID = 3495]
4. C, D, A, B
[Option ID = 3496]

35) What is the optimum plant population for wheat crop?[Question ID = 875][Question Description = 135_28_AGR_AUG22_Q35]

1. 3.33 lakh/ ha [Option ID = 3497]
2. 4.33 lakh/ ha [Option ID = 3498]
3. 5.66 lakh/ ha [Option ID = 3499]
4. 6.66 lakh/ ha [Option ID = 3500]

36) Which of the following statements are correct for “Cytokinins”?

- A. Cytokinin stimulates cell division
- B. One of the potent cytokinin is 6-Benzyladenine
- C. Cytokinin hastens senescence
- D. Cytokinin breaks dormancy of seeds and buds

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

[Question ID = 876][Question Description = 136_28_AGR_AUG22_Q36]

1. B, C and D only [Option ID = 3501]
2. A, B and C only [Option ID = 3502]
3. A, B and D only [Option ID = 3503]
4. B and D only [Option ID = 3504]

37) What is the enzyme responsible for carboxylation in C4 plants?[Question ID = 877][Question Description = 137_28_AGR_AUG22_Q37]

1. Phosphoenol pyruvic acid (PEP) carboxylase [Option ID = 3505]
2. Phosphophenol pyruvic acid (PEP) carboxylase [Option ID = 3506]
3. Phospho pyruvic acid (PEP) carboxylase [Option ID = 3507]
4. Phosphanol pyruvic acid (PEP) carboxylase [Option ID = 3508]

38) What is the weight of one centimeter of surface soil over one hectare of land?[Question ID = 878][Question Description = 138_28_AGR_AUG22_Q38]

1. 100 t [Option ID = 3509]
2. 150 t [Option ID = 3510]
3. 200 t [Option ID = 3511]
4. 250 t [Option ID = 3512]

39) Weight of a soil sample with can is 210 g and dry weight with can is 180 g. Weight of empty moisture can is 40 g. What will be moisture content of soil sample?

[Question ID = 879][Question Description = 139_28_AGR_AUG22_Q39]

1. 18.7 % [Option ID = 3513]
2. 21.4 % [Option ID = 3514]
3. 25.7% [Option ID = 3515]
4. 27.3 % [Option ID = 3516]

40) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: Theoretically, a planophile canopy would be more efficient if radiation were distributed more evenly over leaf surfaces.

Reason R: Such an equitable distribution could be accomplished by having leaves, at least the upper leaves, at a vertical leaf inclination when the sun is at high elevations.

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

[Question ID = 880][Question Description = 140_28_AGR_AUG22_Q40]

1. Both A and R are true and R is the correct explanation of A [Option ID = 3517]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 3518]
3. A is true but R is false [Option ID = 3519]
4. A is false but R is true [Option ID = 3520]

41) The total age of rice seedlings for transplanting in main field through double transplanting method[Question ID = 881]

[Question Description = 141_28_AGR_AUG22_Q41]

1. 60-70 days [Option ID = 3521]
2. 50-60 days [Option ID = 3522]
3. 40-50 days [Option ID = 3523]
4. 30-40 days [Option ID = 3524]

42) The optimum temperature for the ideal vegetative growth of wheat

[Question ID = 882][Question Description = 142_28_AGR_AUG22_Q42]

1. 4-6 °C [Option ID = 3525]
2. 10-16 °C [Option ID = 3526]
3. 16-22 °C [Option ID = 3527]
4. 22-28 °C [Option ID = 3528]

43) The botanical name of pop corn[Question ID = 883][Question Description = 143_28_AGR_AUG22_Q43]

1. *Zea mays amylacea* [Option ID = 3529]
2. *Zea mays everta* [Option ID = 3530]
3. *Zea mays tunicata* [Option ID = 3531]
4. *Zea mays ceratina* [Option ID = 3532]

44) The suitable seed rate of pearl millet to get seedlings for transplanting in one hectare area[Question ID = 884][Question Description = 144_28_AGR_AUG22_Q44]

1. 2 kg/ha [Option ID = 3533]
2. 4 kg/ha [Option ID = 3534]
3. 6 kg/ha [Option ID = 3535]
4. 8 kg/ha [Option ID = 3536]

45) Buggy whipping condition in sorghum is caused by[Question ID = 885][Question Description = 145_28_AGR_AUG22_Q45]

1. Deficiency of nitrogen [Option ID = 3537]
2. Deficiency of Zn [Option ID = 3538]
3. Application of higher dose of 2, 4-D [Option ID = 3539]
4. Application of higher dose of atrazine [Option ID = 3540]

46) Which of the following is NOT in the mustard group?

[Question ID = 886][Question Description = 146_28_AGR_AUG22_Q46]

1. *Brassica juncea* [Option ID = 3541]
2. *Brassica napus* [Option ID = 3542]
3. *Brassica nigra* [Option ID = 3543]
4. *Brassica carinata* [Option ID = 3544]

47) The suitable seed rate for row-sown sesame[Question ID = 887][Question Description = 147_28_AGR_AUG22_Q47]

1. 3-4 kg/ha [Option ID = 3545]
2. 9-10 kg/ha [Option ID = 3546]
3. 14-15 kg/ha [Option ID = 3547]
4. 19-20 kg/ha [Option ID = 3548]

48) The optimum spacing (row × plant) of hybrid cotton grown in the irrigated areas[Question ID = 888][Question Description = 148_28_AGR_AUG22_Q48]

1. 30 × 15 cm [Option ID = 3549]
2. 60 × 30 cm [Option ID = 3550]
3. 90 × 45 cm [Option ID = 3551]
4. 120 × 60 cm [Option ID = 3552]

49) In greengram, nitrogen fixation starts at the age of

[Question ID = 889][Question Description = 149_28_AGR_AUG22_Q49]

1. 12-15 days [Option ID = 3553]
2. 18-21 days [Option ID = 3554]
3. 24-27 days [Option ID = 3555]
4. 30-33 days [Option ID = 3556]

50) Small seeded late maturing type of blackgram[Question ID = 890][Question Description = 150_28_AGR_AUG22_Q50]

1. *Vigna mungo* var. *niger* [Option ID = 3557]
2. *Vigna mungo* var. *viridis* [Option ID = 3558]
3. Both 1 and 2 [Option ID = 3559]
4. *Vigna aconitifolia* [Option ID = 3560]

51) Deep sowing of chickpea is better than shallow depth in rainfed areas; which of the following statements not linked with benefits of deep sowing?

[Question ID = 891][Question Description = 151_28_AGR_AUG22_Q51]

1. Reduces incidence of wilt [Option ID = 3561]
2. Promotes better root development [Option ID = 3562]
3. Promotes good germination [Option ID = 3563]
4. Protection of seed from U.V. radiation [Option ID = 3564]

52) Land area needed to raise seedlings for transplanting in 1 ha through spaced transplanting method of sugarcane[Question ID = 892][Question Description = 152_28_AGR_AUG22_Q52]

1. 50-100 m² [Option ID = 3565]
2. 500-600 m² [Option ID = 3566]
3. 1000-1100 m² [Option ID = 3567]
4. 1500-1600 m² [Option ID = 3568]

53) Which of the following is not synonymous with soybean crop?

[Question ID = 893][Question Description = 153_28_AGR_AUG22_Q53]

1. Wonder crop [Option ID = 3569]
2. Miracle crop [Option ID = 3570]
3. Golden bean [Option ID = 3571]
4. Queen of oilseeds [Option ID = 3572]

54) In Ca and S deficient soils, gypsum placement should be done at

[Question ID = 894][Question Description = 154_28_AGR_AUG22_Q54]

1. 10 days after sowing [Option ID = 3573]
2. 30 days after sowing [Option ID = 3574]
3. 50 days after sowing [Option ID = 3575]
4. 70 days after sowing [Option ID = 3576]

55) The most critical growth stage for moisture stress in lentil

[Question ID = 895][Question Description = 155_28_AGR_AUG22_Q55]

1. Branching [Option ID = 3577]
2. Flower bud initiation [Option ID = 3578]
3. Pod formation [Option ID = 3579]
4. Rosetting [Option ID = 3580]

56) Match List I with List II

List I	List II
Vegetative organ	Weed species
A. Tuber	I. <i>Trifolium repens</i>
B. Rhizomes	II. <i>Allium vineale</i>
C. Stolons	III. <i>Elytrigia repens</i>
D. Bulb	IV. <i>Cyperus rotundus</i>

Choose the correct answer from the options given below:

[Question ID = 896][Question Description = 156_28_AGR_AUG22_Q56]

1. A - IV, B - III, C - I, D - II [Option ID = 3581]
2. A - IV, B - I, C - III, D - II [Option ID = 3582]
3. A - II, B - I, C - IV, D - III [Option ID = 3583]

4. A - III, B - I, C - IV, D - II [Option ID = 3584]

57) Match List I with List II

List I	List II
A. Pappus/parachute	I. <i>Anemone sp</i>
B. Comose	II. <i>Physalis minima</i>
C. Persistence/feathery calyx	III. Canada thistle
D. Baloon	IV. <i>Saccharum sp</i>

Choose the correct answer from the options given below:

[Question ID = 897][Question Description = 157_28_AGR_AUG22_Q57]

1. A - III, B - IV, C - I, D - II [Option ID = 3585]
2. A - II, B - IV, C - I, D - III [Option ID = 3586]
3. A - IV, B - I, C - II, D - III [Option ID = 3587]
4. A - III, B - I, C - IV, D - II [Option ID = 3588]

58) Match List I with List II

List I	List II
Bio-herbicide	Weed species controlled
A. Devine	I. <i>Sorghum halepense</i>
B. Collego	II. <i>Morrenial odorata</i>
C. Bipolaris	III. <i>Cuscuta</i>
D. Lubao-2	IV. <i>Aeschynomene</i>

Choose the correct answer from the options given below:

[Question ID = 898][Question Description = 158_28_AGR_AUG22_Q58]

1. A - IV, B - I, C - III, D - II [Option ID = 3589]
2. A - II, B - III, C - IV, D - I [Option ID = 3590]
3. A - III, B - I, C - IV, D - II [Option ID = 3591]
4. A - II, B - IV, C - I, D - III [Option ID = 3592]

59) Match List I with List II

List I	List II
Habitat type	Weed species
A. Roadside	I. <i>Hydrilla verticillata</i>
B. Xerophytic	II. <i>Parthenium sp</i>
C. Floating aquatic	III. <i>Pluchia lanceolata</i>
D. Submerged aquatic	IV. <i>Eichhornia crassipes</i>

Choose the correct answer from the options given below:

[Question ID = 899][Question Description = 159_28_AGR_AUG22_Q59]

1. A - II, B - I, C - IV, D - III [Option ID = 3593]
2. A - II, B - IV, C - III, D - I [Option ID = 3594]
3. A - II, B - III, C - IV, D - I [Option ID = 3595]
4. A - III, B - I, C - IV, D - II [Option ID = 3596]

60) Match List I with List II

List I	List II
Mechanism of action	Condidate herbicide
A. Inhibition of EPSP synthase	I. Clomazone
B. Carotenoid biosynthesis inhibitor	II. Carfentrazone
C. ALS inhibitor	III. Metsulfuron methyl
D. PPO inhibitor	IV. Glyphosate

Choose the correct answer from the options given below:

[Question ID = 900][Question Description = 160_28_AGR_AUG22_Q60]

1. A - II, B - III, C - IV, D - I [Option ID = 3597]
2. A - IV, B - I, C - II, D - III [Option ID = 3598]
3. A - IV, B - III, C - I, D - II [Option ID = 3599]
4. A - II, B - IV, C - I, D - III [Option ID = 3600]

61) Glutathione -S-transferase is responsible for the selectivity of [Question ID = 901][Question Description =

161_28_AGR_AUG22_Q61]

1. Phenyl ureas [Option ID = 3601]
2. Sulfonyl ureas [Option ID = 3602]
3. Imidazolinones [Option ID = 3603]
4. Triazines [Option ID = 3604]

62) Match List I with List II

List I	List II
A. Liquid formulation	I. Surfactant
B. Utility modifier	II. CIBRC
C. Activator adjuvant	III. Emulsifier
D. Regulatory Agency	IV. WSC

Choose the correct answer from the options given below:

[Question ID = 902][Question Description = 162_28_AGR_AUG22_Q62]

1. A - IV, B - III, C - I, D - II [Option ID = 3605]
2. A - II, B - IV, C - I, D - III [Option ID = 3606]
3. A - II, B - I, C - IV, D - III [Option ID = 3607]
4. A - IV, B - I, C - II, D - III [Option ID = 3608]

63) Glufosinate inhibits the enzyme[Question ID = 903][Question Description = 163_28_AGR_AUG22_Q63]

1. Glutamine synthetase [Option ID = 3609]
2. EPSP [Option ID = 3610]
3. ACCase [Option ID = 3611]
4. PPO [Option ID = 3612]

64) Bispyribac sodium is commonly used in

[Question ID = 904][Question Description = 164_28_AGR_AUG22_Q64]

1. Maize [Option ID = 3613]
2. Rice [Option ID = 3614]
3. Tomato [Option ID = 3615]
4. Okra [Option ID = 3616]

65) *Orobanche* is a problem weed in

[Question ID = 905][Question Description = 165_28_AGR_AUG22_Q65]

1. Wheat [Option ID = 3617]
2. Tomato [Option ID = 3618]
3. Cotton [Option ID = 3619]
4. Sugarcane [Option ID = 3620]

66) Give the chronological order in the development of following herbicides

- A. Atrazine
- B. 2,4-D
- C. Bispyribac Sodium
- D. Alachlor
- E. Butachlor

Choose the *correct* answer from the options given below

[Question ID = 906][Question Description = 166_28_AGR_AUG22_Q66]

1. B, A, C, D, E [Option ID = 3621]
2. B, A, D, E, C [Option ID = 3622]
3. C, B, A, E, D [Option ID = 3623]
4. D, B, E, A, C [Option ID = 3624]

67) A herbicide for the control of *Lantana camara*[Question ID = 907][Question Description = 167_28_AGR_AUG22_Q67]

1. Simazine [Option ID = 3625]
2. Fenoxaprop -p- ethyl [Option ID = 3626]
3. Paraquat [Option ID = 3627]
4. Glyphosate [Option ID = 3628]

68) *Imperata cylindrica* is propagated by means of

[Question ID = 908][Question Description = 168_28_AGR_AUG22_Q68]

1. Rhizomes [Option ID = 3629]
2. Off-sets [Option ID = 3630]
3. Stolon [Option ID = 3631]
4. Sucker [Option ID = 3632]

69) Which of the following sprayers require the minimum volume of spray solution to cover a hectare of wheat crop?

[Question ID = 909][Question Description = 169_28_AGR_AUG22_Q69]

1. Power sprayer [Option ID = 3633]
2. Hand sprayer [Option ID = 3634]
3. Foot sprayer [Option ID = 3635]
4. Knapsack sprayer [Option ID = 3636]

70) If the tank capacity of the sprayer is 20 litres and the application rate is 500 l/ha, then butachlor 50 EC required at 1.4 kg ai/ha per spray load is will be

[Question ID = 910][Question Description = 170_28_AGR_AUG22_Q70]

1. 100 ml [Option ID = 3637]
2. 50 ml [Option ID = 3638]
3. 25 ml [Option ID = 3639]
4. 75 ml [Option ID = 3640]

71) Match List I with List II

List I	List II
A. Machkund	I. Maharashtra
B. Gobindsagar	II. Odisha
C. Ukai	III. Himachal Pradesh
D. Jayalwadi	IV. Tamil Nadu
E. Adiyar	V. Gujarat

Choose the correct answer from the options given below:

[Question ID = 911][Question Description = 171_28_AGR_AUG22_Q71]

1. A - II, B - III, C - V, D - I, E - IV [Option ID = 3641]
2. A - II, B - IV, C - V, D - I, E - III [Option ID = 3642]
3. A - I, B - V, C - III, D - II, E - IV [Option ID = 3643]
4. A - V, B - III, C - IV, D - II, E - I [Option ID = 3644]

72) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: The probe of a neutron moisture meter is inserted into an access tube fixed vertically in the soil

Reason R: The probe of a neutron moisture meter contains a source of fast protons and a detector of slow electrons and helps in estimating soil moisture content

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

[Question ID = 912][Question Description = 172_28_AGR_AUG22_Q72]

1. Both A and R are correct and R is the correct explanation of A [Option ID = 3645]
2. Both A and R are correct but R is NOT the correct explanation of A [Option ID = 3646]
3. A is correct but R is not correct [Option ID = 3647]
4. A is not correct but R is correct [Option ID = 3648]

73) Dew can also be a water resource; accumulation of dew in north and north-east India during 6 months from October to March is[Question ID = 913][Question Description = 173_28_AGR_AUG22_Q73]

1. 5 - 10 mm [Option ID = 3649]
2. 10-15 mm [Option ID = 3650]
3. 15- 30 mm [Option ID = 3651]
4. 30-50 mm [Option ID = 3652]

74) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: Ratio between the area of crop irrigated and quantity of water applied to the crop is called as delta

Reason R: Any crop management practice aimed at economy in irrigation water application increases delta

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

[Question ID = 914][Question Description = 174_28_AGR_AUG22_Q74]

1. Both A and R are correct and R is the correct explanation of A [Option ID = 3653]
2. Both A and R are correct but R is NOT the correct explanation of A [Option ID = 3654]
3. Both A and R are incorrect [Option ID = 3655]
4. A is incorrect but R is correct [Option ID = 3656]

75) Correct order of irrigation terminologies with respect to amount of water involved during a given event of irrigation (WR stands for water requirement, IR for irrigation requirement, NIR for net irrigation requirement and E for evaporation)

[Question ID = 915][Question Description = 175_28_AGR_AUG22_Q75]

1. $E > WR > NIR > IR$ [Option ID = 3657]
2. $IR > WR > E > NIR$ [Option ID = 3658]
3. $IR > WR > NIR > E$ [Option ID = 3659]
4. $WR > IR > NIR > E$ [Option ID = 3660]

76) A 1.5 ha wheat crop field was supplied with 6 cm depth of irrigation, compute how many liters of water has gone into the field.[Question ID = 916][Question Description = 176_28_AGR_AUG22_Q76]

1. 3 lakh [Option ID = 3661]
2. 4.5 lakh [Option ID = 3662]
3. 7.5 lakh [Option ID = 3663]
4. 9 lakh [Option ID = 3664]

77) Match List I with List II

List I	List II
Soil texture	Moisture content at saturation level
A. Sand	I. 45%
B. Silt loam	II. 50%
C. Sandy loam	III. 42%
D. Loamy sand	IV. 40%
E. Clay Loam	V. 38 %

Choose the correct answer from the options given below:

[Question ID = 917][Question Description = 177_28_AGR_AUG22_Q77]

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

[Option ID = 3665]

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

[Option ID = 3666]

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

[Option ID = 3667]

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

[Option ID = 3668]

78) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: When the water moving downward through a fine textured soil encounters a layer of coarse sand, the downward movement is temporarily increased until the soil suction in wetting front is sufficiently reduced

Reason R: Presence of large macrospores in the coarse sand are too large to take in water from the unsaturated microspores of the soil rapidly.

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

[Question ID = 918][Question Description = 178_28_AGR_AUG22_Q78]

1. Both A and R are correct and R is the correct explanation of A [Option ID = 3669]
2. Both A and R are correct but R is NOT the correct explanation of A [Option ID = 3670]
3. A is correct but R is not correct [Option ID = 3671]
4. A is not correct but R is correct [Option ID = 3672]

79) Following are the statements with respect to economization of irrigation water in rice

- A. Rice should be cultivated on heavy soils with percolation above 5 mm per day
- B. Subsoil loosening to enhance water flux to soil.
- C. Rice should be grown in small isolated blocks to reduce seepage
- D. Application of tank silt to light soils
- E. Puddling to reduce soil permeability

Choose the *correct* answer from the options given below

[Question ID = 919][Question Description = 179_28_AGR_AUG22_Q79]

1. B, C and E only

[Option ID = 3673]

2. B and E only

[Option ID = 3674]

3. A and D only

[Option ID = 3675]

4. D and E only

[Option ID = 3676]

80) Read the statements with respect to water management in maize

- A. Most critical stage for irrigation is flowering period including tasseling, silking and pollination
- B. Water deficit at flowering stage causes heaviest yield loss mainly due to reduction in grain size
- C. Under the conditions of adequate irrigation water, irrigations should be applied at 25 % depletion of available soil moisture
- D. Under the conditions of adequate irrigation water, irrigations should be applied at IW/CPE of 0.6 or 0.8 throughout growth period of crop
- E. As maize is mostly grown in rainy season, applying irrigation is wasteful

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

[Question ID = 920][Question Description = 180_28_AGR_AUG22_Q80]

- 1. A, B and C only [Option ID = 3677]
- 2. B, D and E only [Option ID = 3678]
- 3. A and C only [Option ID = 3679]
- 4. A, B and D only [Option ID = 3680]

81) If irrigation water is NOT limited, groundnut grown in a sandy loam soil should be irrigated throughout crop period using which of the following schedule

[Question ID = 921][Question Description = 181_28_AGR_AUG22_Q81]

- 1. 50 % depletion of available soil moisture or IW/CPE ratio of 0.6 [Option ID = 3681]
- 2. 25 % depletion of available soil moisture or IW/CPE ratio of 1.0 [Option ID = 3682]
- 3. 25 % depletion of available soil moisture or IW/CPE ratio of 0.6 [Option ID = 3683]
- 4. 50 % depletion of available soil moisture or IW/CPE ratio of 0.75 [Option ID = 3684]

82) An area of 0.6 ha each of wheat and maize is irrigated daily with a discharge of 2000 litre per minute for a period of 15 hours. Each crop receives 8 cm of water. Determine efficiency (%) of irrigation system [Question ID = 922][Question Description = 182_28_AGR_AUG22_Q82]

- 1. 66.7 [Option ID = 3685]
- 2. 76.7 [Option ID = 3686]
- 3. 80.7 [Option ID = 3687]
- 4. 85.6 [Option ID = 3688]

83) Irrigation requirement of 90 days duration maize variety is 50 cm. How much area can be irrigated with a flow rate of 20 litre per second for 8 hours in a day.

[Question ID = 923][Question Description = 183_28_AGR_AUG22_Q83]

- 1. 20.2 ha [Option ID = 3689]
- 2. 16.5 ha [Option ID = 3690]
- 3. 12 ha [Option ID = 3691]
- 4. 10.4 ha [Option ID = 3692]

84) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: Sulphuric acid can be used to amend water quality and can be applied directly to soil or in the irrigation water

Reason R: Sulphuric acid rapidly neutralizes the Na constituents of water or reacts with lime in the soil to produce soluble Ca

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

[Question ID = 924][Question Description = 184_28_AGR_AUG22_Q84]

1. Both A and R are correct and R is the correct explanation of A [Option ID = 3693]
2. Both A and R are correct but R is NOT the correct explanation of A [Option ID = 3694]
3. A is correct but R is not correct [Option ID = 3695]
4. A is not correct but R is correct [Option ID = 3696]

85) Drainage of one ha-cm in 24 hours equals to drainage of how much water

[Question ID = 925][Question Description = 185_28_AGR_AUG22_Q85]

1. 1.157 lps [Option ID = 3697]
2. 1.671 lps [Option ID = 3698]
3. 1.925 lps [Option ID = 3699]
4. 2.157 lps [Option ID = 3700]

86) A typical mineral soil, on volume basis, contains:[Question ID = 926][Question Description = 186_28_AGR_AUG22_Q86]

1. Mineral material 45%, organic matter 15%, air 10-20% and water 20-30% [Option ID = 3701]
2. Mineral material 55%, organic matter 5%, air 10-20% and water 20-30% [Option ID = 3702]
3. Mineral material 45%, organic matter 5%, air 20-30% and water 20-30% [Option ID = 3703]
4. Mineral material 55%, organic matter 5%, air 20-30% and water 10-20% [Option ID = 3704]

87) The bulk density is expressed as:

- A. g/cm^3
- B. Mg/m^3
- C. kg/m^3
- D. g/m^3

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

[Question ID = 927][Question Description = 187_28_AGR_AUG22_Q87]

1. A and D only [Option ID = 3705]
2. A and B only [Option ID = 3706]
3. A and C only [Option ID = 3707]
4. B and C only [Option ID = 3708]

88) The most abundant minerals and mineral groups in sand and silt of soils throughout the world is:[Question ID = 928]
[Question Description = 188_28_AGR_AUG22_Q88]

1. Olivines [Option ID = 3709]
2. Feldspars [Option ID = 3710]
3. Pyroxenes and Amphiboles [Option ID = 3711]
4. Quartz [Option ID = 3712]

89) The use of Stokes' law for measurement of the size of soil particle depends on certain simplifying assumptions. These are:

- A. Particles must be spherical, smooth and rigid
- B. Fall must be unhindered
- C. Particles must be of uniform density
- D. Size of particles must be small compared to the size of molecules of liquid

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

[Question ID = 929][Question Description = 189_28_AGR_AUG22_Q89]

1. A, B and D only
[Option ID = 3713]
2. A, B and C only

[Option ID = 3714]

3. A, C and D only

[Option ID = 3715]

4. B, C and D only

[Option ID = 3716]

90) The sulphur (S) containing mineral is:[Question ID = 930][Question Description = 190_28_AGR_AUG22_Q90]

1. Zeolite [Option ID = 3717]
2. Dolomite [Option ID = 3718]
3. Magnesite [Option ID = 3719]
4. Epsomite [Option ID = 3720]

91) Match List I with List II

List I	List II
A. Manganese	I. Master cation
B. Boron	II. Grey speck of oats
C. Molybdenum	III. Seed setting and fertilization
D. Potassium	IV. Whiptail of cauliflower

Choose the correct answer from the options given below:

[Question ID = 931][Question Description = 191_28_AGR_AUG22_Q91]

1. A - III, B - IV, C - I, D - II [Option ID = 3721]
2. A - IV, B - II, C - III, D - I [Option ID = 3722]
3. A - II, B - III, C - IV, D - I [Option ID = 3723]
4. A - I, B - III, C - II, D - IV [Option ID = 3724]

92) Honey-comb structure is found in

[Question ID = 932][Question Description = 192_28_AGR_AUG22_Q92]

1. Black soils [Option ID = 3725]
2. Red soils [Option ID = 3726]
3. Salt-affected soils [Option ID = 3727]
4. Laterites and lateritic soils [Option ID = 3728]

93) Fertilizers having least hygroscopicity is

[Question ID = 933][Question Description = 193_28_AGR_AUG22_Q93]

1. Ammonium nitrate [Option ID = 3729]
2. Ammonium sulphate [Option ID = 3730]
3. Anhydrous chloride [Option ID = 3731]
4. Urea [Option ID = 3732]

94) Beneficial elements of plants are:

- A. Sodium
- B. Vanadium
- C. Selenium
- D. Cobalt

Choose the *correct* answer from the options given below

[Question ID = 934][Question Description = 194_28_AGR_AUG22_Q94]

1. A, B and D only [Option ID = 3733]
2. A, B and C only [Option ID = 3734]
3. A, C and D only [Option ID = 3735]
4. B, C and D only [Option ID = 3736]

95) Methemoglobinemia disease is caused due to toxic concentration of

[Question ID = 935][Question Description = 195_28_AGR_AUG22_Q95]

1. Nitrate [Option ID = 3737]
2. Sulphate [Option ID = 3738]
3. Phosphate [Option ID = 3739]
4. Silicate [Option ID = 3740]

96) Mineral having maximum cation exchange capacity is

[Question ID = 936][Question Description = 196_28_AGR_AUG22_Q96]

1. Mica [Option ID = 3741]
2. Illite [Option ID = 3742]
3. Smectite [Option ID = 3743]
4. Kaolinite [Option ID = 3744]

97) Ammonium sulphate fertilizer is advisable for

[Question ID = 937][Question Description = 197_28_AGR_AUG22_Q97]

1. Potato [Option ID = 3745]
2. Wheat [Option ID = 3746]
3. Cotton [Option ID = 3747]
4. Maize [Option ID = 3748]

98) The soil formation equation, $S = f(cl, o, r, p, t, \dots)$ was first formulated by:[Question ID = 938][Question Description = 198_28_AGR_AUG22_Q98]

1. Jackson [Option ID = 3749]
2. Jenny [Option ID = 3750]
3. Dokuchaev [Option ID = 3751]
4. Hilgard [Option ID = 3752]

99) The water soluble P (as % P_2O_5) in diammonium phosphate (DAP) is

[Question ID = 939][Question Description = 199_28_AGR_AUG22_Q99]

1. 42.5 [Option ID = 3753]
2. 44.5 [Option ID = 3754]
3. 46.0 [Option ID = 3755]
4. 40.5 [Option ID = 3756]

100) The book *Nature and Properties of Soils* is written by

[Question ID = 940][Question Description = 200_28_AGR_AUG22_Q100]

1. M. L. Jackson [Option ID = 3757]
2. H. Marschner [Option ID = 3758]
3. N. C. Brady and R. R. Weil [Option ID = 3759]
4. K. Mengel and E. A. Kirkby [Option ID = 3760]

101) The optimum crop combination for strip cropping[Question ID = 941][Question Description = 201_28_AGR_AUG22_Q101]

1. Sorghum and pearl millet [Option ID = 3761]
2. Soybean and groundnut [Option ID = 3762]
3. Maize and mustard [Option ID = 3763]
4. Sorghum and greengram [Option ID = 3764]

102) Farming in humid regions with growing period more than 120 days[Question ID = 942][Question Description = 202_28_AGR_AUG22_Q102]

1. Rainfed farming [Option ID = 3765]
2. Dryland farming [Option ID = 3766]
3. Dry farming [Option ID = 3767]
4. Conservation farming [Option ID = 3768]

103) ICRISAT was established in the year

[Question ID = 943][Question Description = 203_28_AGR_AUG22_Q103]

1. 1962 [Option ID = 3769]
2. 1972 [Option ID = 3770]
3. 1982 [Option ID = 3771]
4. 1992 [Option ID = 3772]

104) Which of the following is not a film forming type anti-transpirant?

[Question ID = 944][Question Description = 204_28_AGR_AUG22_Q104]

1. Mobileaf [Option ID = 3773]
2. Hexadecanol [Option ID = 3774]
3. Folicot [Option ID = 3775]
4. $CaHCO_3$ [Option ID = 3776]

105) In dry spell, during crop period, which of the following cannot be moisture stress mitigation practice?

[Question ID = 945][Question Description = 205_28_AGR_AUG22_Q105]

1. Ratooning [Option ID = 3777]
2. Thinning [Option ID = 3778]
3. Mulching [Option ID = 3779]
4. Intensive cropping [Option ID = 3780]

106) In early withdrawal of monsoon what should be best moisture mitigation practice?

[Question ID = 946][Question Description = 206_28_AGR_AUG22_Q106]

1. Early sowing of suitable *Rabi* crops [Option ID = 3781]
2. Late sowing of suitable *Rabi* crops [Option ID = 3782]
3. Late sowing of suitable *Kharif* crops [Option ID = 3783]
4. Both 1 and 2 [Option ID = 3784]

107) Following are the statements about common feature of drought avoidance in plants

- A. Early stomata closure
- B. Efficient root system
- C. Lipid deposition on foliage
- D. Reduction in water uptake
- E. Straightening of leaves

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

[Question ID = 947][Question Description = 207_28_AGR_AUG22_Q107]

1. A, D and E only [Option ID = 3785]
2. B, D and E only [Option ID = 3786]
3. B, C and D only [Option ID = 3787]
4. A, B and C only [Option ID = 3788]

108) Terminal drought is also known as [Question ID = 948][Question Description = 208_28_AGR_AUG22_Q108]

1. Early season drought [Option ID = 3789]
2. Mid season drought [Option ID = 3790]
3. Late season drought [Option ID = 3791]
4. Invisible drought [Option ID = 3792]

109) Suitable agronomic soil moisture conservation technique for dryland areas [Question ID = 949][Question Description = 209_28_AGR_AUG22_Q109]

1. Contour farming [Option ID = 3793]
2. Contour bunding [Option ID = 3794]
3. Bench terracing [Option ID = 3795]
4. Trenching [Option ID = 3796]

110) IWDP stands for [Question ID = 950][Question Description = 210_28_AGR_AUG22_Q110]

1. International watershed development project [Option ID = 3797]
2. Integrated watershed development project [Option ID = 3798]
3. Integrated watershed development programme [Option ID = 3799]
4. Integrated watershed driven plan [Option ID = 3800]

111) Which one of the following crops requires highest amount of calcium?

[Question ID = 951][Question Description = 211_28_AGR_AUG22_Q111]

1. Oil seeds [Option ID = 3801]
2. Cereals [Option ID = 3802]
3. Legumes [Option ID = 3803]
4. Forage crops [Option ID = 3804]

112) Dokuchaev, the Father of Soil Science, did pioneering work on “Chernozem” somewhat similar to that of Indian soil of:

[Question ID = 952][Question Description = 212_28_AGR_AUG22_Q112]

1. Calcareous soil [Option ID = 3805]
2. Alluvial soil [Option ID = 3806]

3. Red soil [Option ID = 3807]
4. Black soil [Option ID = 3808]

113) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: After application of urea in soil, it undergoes hydrolysis where organic form of N is transformed to inorganic form of ammonium carbonate. The hydrolysis of urea is more in sandy soil than clay soil.

Reason R: Urea molecule forms positive charged ion due to *keto-enol* formation or zwitterion formation, resulting formation of positive charged urea molecules which is adsorbed by the negatively charged clay.

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

[Question ID = 953][Question Description = 213_28_AGR_AUG22_Q113]

1. Both A and R are true and R is the correct explanation of A [Option ID = 3809]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 3810]
3. A is true but R is false [Option ID = 3811]
4. A is false but R is true [Option ID = 3812]

114) For preparation of 1000 mL of 0.1 N potassium dichromate solution (0.1 N $K_2Cr_2O_7$, atomic mass of K = 39, Cr = 52, O = 16), the amount of analytical grade potassium dichromate required is:

[Question ID = 954][Question Description = 214_28_AGR_AUG22_Q114]

1. 294 gram [Option ID = 3813]
2. 49.0 gram [Option ID = 3814]
3. 4.9 gram [Option ID = 3815]
4. 29.4 gram [Option ID = 3816]

115) Major properties of soil order are:

- A. Gelisols - Occur in areas of cold region such as Arctic, Antarctic or high mountains.
- B. Histosols - Organic matter rich (>20%) soils with peaty horizon under permanent water saturated environment.
- C. Oxisols - Deeply weathered soils of humid tropics with brick red colour.
- D. Mollisols - Dark coloured low base containing soils (<50% base saturated)

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

[Question ID = 955][Question Description = 215_28_AGR_AUG22_Q115]

1. A, B and D only
[Option ID = 3817]
2. A, B and C only
[Option ID = 3818]
3. A, C and D only
[Option ID = 3819]
4. B, C and D only
[Option ID = 3820]

116) Highest area under conservation agriculture is in which of the Continent?[Question ID = 956][Question Description = 216_28_AGR_AUG22_Q116]

1. Africa [Option ID = 3821]
2. Asia [Option ID = 3822]
3. Australia [Option ID = 3823]
4. America [Option ID = 3824]

117) Which of the following books is on conservation agriculture?[Question ID = 957][Question Description = 217_28_AGR_AUG22_Q117]

1. *One Straw Revolution* [Option ID = 3825]
2. *Silent Spring* [Option ID = 3826]
3. *An Agricultural Testament* [Option ID = 3827]
4. *Look to the Land* [Option ID = 3828]

118) Percentage of lignin in sugarcane bagasse (*Saccharum officinarum*)[Question ID = 958][Question Description = 218_28_AGR_AUG22_Q118]

1. 4-6 [Option ID = 3829]
2. 15-19 [Option ID = 3830]

3. 25-32 [Option ID = 3831]
4. 40-45 [Option ID = 3832]

119) Given below are two statements

Statement I: Maximum wasteland areas in our country lies in Madhya Pradesh.

Statement II: In Haryana, most wastelands comprise saline, sodic or sandy land areas.

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

[Question ID = 959][Question Description = 219_28_AGR_AUG22_Q119]

1. Both Statement I and Statement II are correct
[Option ID = 3833]
2. Both Statement I and Statement II are incorrect
[Option ID = 3834]
3. Statement I is correct but Statement II is incorrect
[Option ID = 3835]
4. Statement I is incorrect but Statement II is correct
[Option ID = 3836]

120) Match List I with List II

List I	List II
A. Leaching	I. Acid sulphate soil
B. Gypsum requirement	II. Acid soil
C. Jarosite	III. Sodic soil
D. Liming	IV. Salt affected soil
E. Urea briquette	V. Water logged soil

Choose the correct answer from the options given below:

[Question ID = 960][Question Description = 220_28_AGR_AUG22_Q120]

1. A - II, B - IV, C - V, D - I, E - III
[Option ID = 3837]
2. A - IV, B - III, C - I, D - II, E - V
[Option ID = 3838]
3. A - III, B - II, C - I, D - IV, E - V
[Option ID = 3839]
4. A - V, B - I, C - II, D - III, E - IV
[Option ID = 3840]