

60 Agricultural Meteorology ICAR SEPT 2022

Topic:- GEN KNOW COMMON PHD

1) Colour of the tag used on certified seed bags is[Question ID = 16958][Question Description = 101_221_GKD_SEP22_Q01]

1. Blue [Option ID = 37829]
2. Purple [Option ID = 37830]
3. White [Option ID = 37831]
4. Golden Yellow [Option ID = 37832]

2) Following are the statements regarding the Usar soil -

- A. It is reclaimed by adding lime.
- B. This soil has pH more than seven.
- C. Paddy crop can be grown in this soil.

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

[Question ID = 16959][Question Description = 102_221_GKD_SEP22_Q02]

1. A and B only [Option ID = 37833]
2. B and C only [Option ID = 37834]
3. C only [Option ID = 37835]
4. A only [Option ID = 37836]

3) When total utility of a commodity increases, marginal utility will be

[Question ID = 16960][Question Description = 103_221_GKD_SEP22_Q03]

1. Negative but increasing
[Option ID = 37837]
2. Positive but decreasing
[Option ID = 37838]
3. Constant
[Option ID = 37839]
4. Either positive or negative
[Option ID = 37840]

4) Where is the headquarter of International Fund for Agriculture Development located?

[Question ID = 16961][Question Description = 104_221_GKD_SEP22_Q04]

1. Vienna, Austria
[Option ID = 37841]
2. Rome, Italy
[Option ID = 37842]
3. New York, USA
[Option ID = 37843]
4. Berlin, Germany
[Option ID = 37844]

5) Mid-Oceanic Ridges are one of the important divisions of the ocean floor. In this respect, point out the incorrect statement regarding the 'Mid-Oceanic Ridges'. [Question ID = 16962][Question Description = 105_221_GKD_SEP22_Q05]

1. It is the largest mountain chain on the surface of the earth [Option ID = 37845]
2. It is a series of interconnected chain within the ocean. [Option ID = 37846]
3. It is characterised by a central rift system [Option ID = 37847]
4. The rift system at the crest is the zone of very low volcanic activity. [Option ID = 37848]

6) Consider the following facts about the union territory of India and point out the one which is incorrect in relation to union territory.[Question ID = 16963][Question Description = 106_221_GKD_SEP22_Q06]

1. These are the areas under the direct control of central government. [Option ID = 37849]
2. Also known as the 'centrally administered territories. [Option ID = 37850]

3. These territories constitute a conspicuous departure from the unitary feature of India. [Option ID = 37851]
4. There is no uniformity in their administrative systems. [Option ID = 37852]

7) Variety of flora and fauna are found in the different types of forest in India. In this regard, species of trees like teak, *sal shisham*, *sandalwood*, etc. are found in which of the following type of forests in India?[Question ID = 16964][Question Description = 107_221_GKD_SEP22_Q07]

1. Tropical evergreen forests [Option ID = 37853]
2. Tropical thorn forests [Option ID = 37854]
3. Tropical deciduous forests [Option ID = 37855]
4. Montane forests [Option ID = 37856]

8) The Marginal Preference Theory of consumption behaviour was proposed by

[Question ID = 16965][Question Description = 108_221_GKD_SEP22_Q08]

1. Armstrong
[Option ID = 37857]
2. J.K.Hicks
[Option ID = 37858]
3. Neumann
[Option ID = 37859]
4. Edmund Cannon
[Option ID = 37860]

9) Point out the incorrect statements regarding the service sector in India.[Question ID = 16966][Question Description = 109_221_GKD_SEP22_Q09]

1. It is the highest contributor to GDP [Option ID = 37861]
2. It requires skilled labour [Option ID = 37862]
3. It is the fastest growing sector [Option ID = 37863]
4. It is restricted to very few sectors. [Option ID = 37864]

10) Consider the statements regarding the agriculture sector in India and point out the incorrect statement.[Question ID = 16967][Question Description = 110_221_GKD_SEP22_Q10]

1. Agriculture sector is the largest employer of workforce [Option ID = 37865]
2. It has contributed to the Gross Value Added (GVA) [Option ID = 37866]
3. Growth in allied sectors is the major drivers of overall growth in the sector. [Option ID = 37867]
4. Minimum Support Price (MSP) policy is used as to promote crop uniformity. [Option ID = 37868]

11) In case of related goods, the cross elasticity of demand is[Question ID = 16968][Question Description = 111_221_GKD_SEP22_Q11]

1. Low [Option ID = 37869]
2. High [Option ID = 37870]
3. Zero [Option ID = 37871]
4. Unity [Option ID = 37872]

12) With reference to organic farming in India, consider the following statements :

- A. The National Programme for Organic Production' (NPOP) is operated under the guidelines and directions of the Union Ministry of Rural Development.
- B. The Agricultural and Processed Food Products Export Development Authority' (APEDA) functions as the Secretariat for the implementation of NPOP.
- C. Sikkim has become India's first fully organic state.

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

[Question ID = 16969][Question Description = 112_221_GKD_SEP22_Q12]

1. A and B only
[Option ID = 37873]
2. B and C only
[Option ID = 37874]
3. C only
[Option ID = 37875]
4. A, B and C

[Option ID = 37876]

13) With reference to the circumstances in Indian agriculture, the concept of "Conservation Agriculture" assumes significance. Which of the following falls under the Conservation Agriculture ?

- A. Avoiding the monoculture practices.
- B. Adopting minimum tillage.
- C. Avoiding the cultivation of plantation crops.
- D. Using crop residues to cover soil surface.
- E. Adopting spatial and temporal crop sequencing/ crop rotations.

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

[Question ID = 16970][Question Description = 113_221_GKD_SEP22_Q13]

- 1. A, C and D only [Option ID = 37877]
- 2. B, C, D and E only [Option ID = 37878]
- 3. B, D and E only [Option ID = 37879]
- 4. A, B, C and E only [Option ID = 37880]

14) Consumers are likely to get a variety of goods in which kind of market competition[Question ID = 16971][Question Description = 114_221_GKD_SEP22_Q14]

- 1. Monopoly [Option ID = 37881]
- 2. Duopoly [Option ID = 37882]
- 3. Oligopoly [Option ID = 37883]
- 4. Monopolistic [Option ID = 37884]

15) What is the correct chronological order of the following laws enacted for the conservation and protection of environment ?

- A. Environment (Protection) Act.
- B. Water (Prevention & Control of Pollution) Act.
- C. Air (Prevention & Control of pollution) Act.
- D. National Green Tribunal Act.

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

[Question ID = 16972][Question Description = 115_221_GKD_SEP22_Q15]

- 1. B, C, A, D [Option ID = 37885]
- 2. A, B, C, D [Option ID = 37886]
- 3. C, B, A, D [Option ID = 37887]
- 4. D, C, B, A [Option ID = 37888]

16) The scientific study of soil is[Question ID = 16973][Question Description = 116_221_GKD_SEP22_Q16]

- 1. Earth Study [Option ID = 37889]
- 2. Soil Science [Option ID = 37890]
- 3. Pedology [Option ID = 37891]
- 4. Soil Chemistry [Option ID = 37892]

17) *Triticum aestivum*, the common bread wheat is -

[Question ID = 16974][Question Description = 117_221_GKD_SEP22_Q17]

- 1. Tetraploid
[Option ID = 37893]
- 2. Hexaploid
[Option ID = 37894]
- 3. Haploid
[Option ID = 37895]
- 4. Diploid
[Option ID = 37896]

18) Sectoral inflation refers to[Question ID = 16975][Question Description = 118_221_GKD_SEP22_Q18]

- 1. Running inflation [Option ID = 37897]

2. Comprehensive inflation [Option ID = 37898]
3. Sporadic inflation [Option ID = 37899]
4. Creeping inflation [Option ID = 37900]

19) Keynes Liquidity trap refers to[Question ID = 16976][Question Description = 119_221_GKD_SEP22_Q19]

1. Speculative demand for money [Option ID = 37901]
2. Transactions motive of money is inelastic [Option ID = 37902]
3. Precautionary motive of money is inelastic [Option ID = 37903]
4. Transactions motive of money is constant [Option ID = 37904]

20) A business is solvent if[Question ID = 16977][Question Description = 120_221_GKD_SEP22_Q20]

1. Total receipts exceed total expenditures [Option ID = 37905]
2. Total debt exceeds total equity [Option ID = 37906]
3. Total sales exceed total cash expense [Option ID = 37907]
4. Total assets exceed total liabilities [Option ID = 37908]

Topic:- Natural Resource Mgmt 1_PHD

1) A tensiometer reading of 10-25 centibar indicates

[Question ID = 15953][Question Description = 101_148_NR1_SEP22_Q01]

1. Saturation water content [Option ID = 33809]
2. Field capacity water content [Option ID = 33810]
3. Water content between field capacity and wilting point [Option ID = 33811]
4. Wilting point water content [Option ID = 33812]

2) Following are the facts about soil temperature

- A. It oscillates as a pure harmonic function of time around an average value
- B. Soil temperature and air temperature changes happen at the same pace
- C. Application of charcoal over the surface enhance the soil temperature
- D. Conduction is the primary mode of heat transfer in soil

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

[Question ID = 15954][Question Description = 102_148_NR1_SEP22_Q02]

1. A, B and D only [Option ID = 33813]
2. A and C only [Option ID = 33814]
3. B, C and D only [Option ID = 33815]
4. A, C and D only [Option ID = 33816]

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

Assertion A : When a sandy layer is overlying a clay loam layer, a “perched water table” develops in the sandy layer during infiltration, just above its boundary with the clay loam layer

Reason R : Sandy soil has higher saturated hydraulic conductivity compared to clay loam layer

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

[Question ID = 15955][Question Description = 103_148_NR1_SEP22_Q03]

1. Both A and R are true and R is the correct explanation of A [Option ID = 33817]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 33818]
3. A is true but R is false [Option ID = 33819]
4. A is false but R is true [Option ID = 33820]

4) Which of the following is NOT true?

[Question ID = 15956][Question Description = 104_148_NR1_SEP22_Q04]

1. Emissivity relates to Planck's law [Option ID = 33821]
2. Emissivity has no unit [Option ID = 33822]
3. For a perfect black body, emissivity has the highest value [Option ID = 33823]
4. The emissivity of soil decreases when its water content becomes higher [Option ID = 33824]

5) Which of the following is NOT an active remote sensing sensor.[Question ID = 15957][Question Description = 105_148_NR1_SEP22_Q05]

1. Radar [Option ID = 33825]
2. Lidar [Option ID = 33826]

3. SONAR [Option ID = 33827]
4. Microwave radiometer [Option ID = 33828]

6) The earth behaves as a blackbody with mean average temperature of [Question ID = 15958][Question Description = 106_148_NR1_SEP22_Q06]

1. 65 °F [Option ID = 33829]
2. 300 °K [Option ID = 33830]
3. 15 °C [Option ID = 33831]
4. 25 °C [Option ID = 33832]

7) Which of the following thermometers placed inside the Stevenson screen in a meteorological observatory is used to measure humidity?

[Question ID = 15959][Question Description = 107_148_NR1_SEP22_Q07]

1. Wet bulb thermometer and dry bulb thermometer [Option ID = 33833]
2. Wet bulb thermometer, dry bulb thermometer and normal thermometer [Option ID = 33834]
3. Wet bulb thermometer and normal thermometer [Option ID = 33835]
4. Wet bulb thermometer, dry bulb thermometer, maximum thermometer and minimum thermometer [Option ID = 33836]

8) Which of the following instrument is used to measure global solar radiation? [Question ID = 15960][Question Description = 108_148_NR1_SEP22_Q08]

1. Pyrheliometer [Option ID = 33837]
2. Pyranometer [Option ID = 33838]
3. Pyradiometer [Option ID = 33839]
4. Albedometer [Option ID = 33840]

9) In relational database management system (RDBMS) of geographical information system (GIS) environment, number of rows and columns are called as [Question ID = 15961][Question Description = 109_148_NR1_SEP22_Q09]

1. Attribute and tuple, respectively [Option ID = 33841]
2. Cardinality and degree, respectively [Option ID = 33842]
3. Tuple and cardinality, respectively [Option ID = 33843]
4. Tuple and attribute, respectively [Option ID = 33844]

10) Which one is correct in cylindrical equal area projection system, which is also known as Lambert's projection system

[Question ID = 15962][Question Description = 110_148_NR1_SEP22_Q10]

1. View of pole is distorted [Option ID = 33845]
2. The shape of the area at high latitude is distorted [Option ID = 33846]
3. Both area and all four edges are distorted [Option ID = 33847]
4. All four edges are distorted [Option ID = 33848]

11) The time interval after a pulse has occurred during which the counter is insensitive to further ionizing events is called as [Question ID = 15963][Question Description = 111_148_NR1_SEP22_Q11]

1. Dead time [Option ID = 33849]
2. Resolving time [Option ID = 33850]
3. Ionizing time [Option ID = 33851]
4. Sensitive time [Option ID = 33852]

12) First law of thermodynamics for isothermal expansion of an ideal gas can be expressed as

[Question ID = 15964][Question Description = 112_148_NR1_SEP22_Q12]

1. $\Delta Q = \Delta W$ [Option ID = 33853]
2. $\Delta Q = \Delta U$ [Option ID = 33854]
3. $\Delta U = \Delta W$ [Option ID = 33855]
4. $\Delta Q = \Delta T$ [Option ID = 33856]

13) The statement "two systems in thermal equilibrium with a third system separately are in thermal equilibrium with each other" represents

[Question ID = 15965][Question Description = 113_148_NR1_SEP22_Q13]

1. First law of thermodynamics [Option ID = 33857]
2. Second law of thermodynamics [Option ID = 33858]
3. Zeroth law of thermodynamics [Option ID = 33859]
4. Third law of thermodynamics [Option ID = 33860]

14) Match List I with List II

List I	List II
Physical quantity	SI unit
A. Momentum	I. Volt
B. Viscosity	II. kg m^{-3}
C. Density	III. $\text{kg m}^{-1}\text{s}^{-1}$
D. Electromotive force	IV. kg ms^{-1}

Choose the correct answer from the options given below:

[Question ID = 15966][Question Description = 114_148_NR1_SEP22_Q14]

1. A-IV, B-III, C-II, D-I [Option ID = 33861]
2. A-III, B-I, C-IV, D-II [Option ID = 33862]
3. A-III, B-II, C- IV, D-I [Option ID = 33863]
4. A-I, B-II, C-III, D-IV [Option ID = 33864]

15) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R
Assertion A : Characteristic X-rays are produced with specific energies

Reason R : Continuous X-rays have broad spectrum of photon energies

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

[Question ID = 15967][Question Description = 115_148_NR1_SEP22_Q15]

1. Both A and R are true and R is the correct explanation of A [Option ID = 33865]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 33866]
3. A is true but R is false [Option ID = 33867]
4. A is false but R is true [Option ID = 33868]

16) Due to rising CO_2 in the atmosphere, the C/N ratio of C3 plants is likely to [Question ID = 15968][Question Description = 116_148_NR1_SEP22_Q16]

1. Increase [Option ID = 33869]
2. Decrease [Option ID = 33870]
3. No change [Option ID = 33871]
4. First decrease then increase [Option ID = 33872]

17) Crop model 'CERES' stands for [Question ID = 15969][Question Description = 117_148_NR1_SEP22_Q17]

1. Crop Environment Resource Synthesis [Option ID = 33873]
2. Crop Environment Resource Simulation [Option ID = 33874]
3. Crop Engineered for Resource Synthesis [Option ID = 33875]
4. Crop Environment Interaction Research [Option ID = 33876]

18) Large Aperture Scientillometer directly measures [Question ID = 15970][Question Description = 118_148_NR1_SEP22_Q18]

1. Latent heat flux [Option ID = 33877]
2. Sensible heat flux [Option ID = 33878]
3. Water Vapour flux [Option ID = 33879]
4. Methane flux [Option ID = 33880]

19) Practical measurement of gaseous flux in turbulent atmosphere requires at the order of [Question ID = 15971][Question Description = 119_148_NR1_SEP22_Q19]

1. One minute [Option ID = 33881]
2. One second [Option ID = 33882]
3. One mili-second [Option ID = 33883]
4. One-tenth of second [Option ID = 33884]

20) IBSNAT stands for [Question ID = 15972][Question Description = 120_148_NR1_SEP22_Q20]

1. International Beureau of Sites Network for Agrotechnology Transfer [Option ID = 33885]
2. International Benchmark Sites Network for Agrotechnology Transfer [Option ID = 33886]
3. International Books System Network for Agrotechnology Transfer [Option ID = 33887]
4. International Books System Network for Agroecology Transfer

[Option ID = 33888]

21) Which type of relationship is there between El Nino and Indian summer monsoon rainfall in general? [Question ID = 15973][Question Description = 121_148_NR1_SEP22_Q21]

1. Positive [Option ID = 33889]
2. Negative [Option ID = 33890]
3. Neutral [Option ID = 33891]

4. Nonsense [Option ID = 33892]

22) What information is given through 'Damini' App of IMD ?

A. Lightning and thunderstorm

B. Name of the clouds

C. Rainfall analysis

D. Weather based Agroadvisory

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

[Question ID = 15974][Question Description = 122_148_NR1_SEP22_Q22]

1. A only [Option ID = 33893]
2. B and C only [Option ID = 33894]
3. C and D only [Option ID = 33895]
4. A and D only [Option ID = 33896]

23) What is the normal date of onset of south west monsoon at mainland of India?[Question ID = 15975][Question Description = 123_148_NR1_SEP22_Q23]

1. 10th May [Option ID = 33897]
2. 25th May [Option ID = 33898]
3. 1st June [Option ID = 33899]
4. 7th June [Option ID = 33900]

24) By which process frosting occur on leaves of the plant?[Question ID = 15976][Question Description = 124_148_NR1_SEP22_Q24]

1. Condensation [Option ID = 33901]
2. Sublimation [Option ID = 33902]
3. Evaporation [Option ID = 33903]
4. Transpiration [Option ID = 33904]

25) By which instrument the outgoing longwave radiation from the Earth surface can be measured?[Question ID = 15977][Question Description = 125_148_NR1_SEP22_Q25]

1. Pyranometer [Option ID = 33905]
2. Pyrhelimeter [Option ID = 33906]
3. Pyrgeometer [Option ID = 33907]
4. Line Quantum sensor [Option ID = 33908]

26) About 50% of atmospheric mass lies within the altitude of

[Question ID = 15978][Question Description = 126_148_NR1_SEP22_Q26]

1. 10.4 km [Option ID = 33909]
2. 15.5 km [Option ID = 33910]
3. 5.6 km [Option ID = 33911]
4. 22.4 km [Option ID = 33912]

27) The word "klima" means and derived from

[Question ID = 15979][Question Description = 127_148_NR1_SEP22_Q27]

1. Atmosphere, Greek word [Option ID = 33913]
2. Slope, Greek word [Option ID = 33914]
3. Earth, Latin word [Option ID = 33915]
4. Climate, Latin word [Option ID = 33916]

28) Match List I with List II

List I	List II
Cloud	Characteristics
A. Cirrus	I. Silky appearance
B. Altostratus	II. Medium cloud
C. Nimbostratus	III. Cloud with vertical development
D. Cumulus	IV. Rainfall producing cloud

Choose the correct answer from the options given below:

[Question ID = 15980][Question Description = 128_148_NR1_SEP22_Q28]

1. A - I, B - II, C - IV, D - III [Option ID = 33917]

2. A - II, B - IV, C - I, D - III [Option ID = 33918]
3. A - IV, B - II, C - III, D - I [Option ID = 33919]
4. A - II, B - IV, C - III, D - I [Option ID = 33920]

29) Monitoring meteorological drought using SPI (Standardized Precipitation Index) requires

[Question ID = 15981][Question Description = 129_148_NR1_SEP22_Q29]

1. Moisture data [Option ID = 33921]
2. Precipitation data [Option ID = 33922]
3. Rainfall and humidity data [Option ID = 33923]
4. Rainfall and evapotranspiration data [Option ID = 33924]

30) Which of the following wind system or zone is observed between 5 degree North to 5 degree South Latitude?[Question ID = 15982][Question Description = 130_148_NR1_SEP22_Q30]

1. Trade wind belt [Option ID = 33925]
2. Easterlies [Option ID = 33926]
3. Westerlies [Option ID = 33927]
4. Doldrum [Option ID = 33928]

31) The first issue of the journal 'The Indian Forester' was published in which year?

[Question ID = 15983][Question Description = 131_148_NR1_SEP22_Q31]

1. December, 1863 [Option ID = 33929]
2. July, 1875 [Option ID = 33930]
3. January, 1906 [Option ID = 33931]
4. October, 1827 [Option ID = 33932]

32) As per the India State of Forest Report-2021, highest average net annual gains in forest cover for the period 2010-2020 has been recorded in the country:[Question ID = 15984][Question Description = 132_148_NR1_SEP22_Q32]

1. Australia [Option ID = 33933]
2. Pakistan [Option ID = 33934]
3. China [Option ID = 33935]
4. India [Option ID = 33936]

33) Given below are two statements

Statement I: The Indian Forest (Amendment) Bill, 2017 was introduced in Lok Sabha by Mr. Harsh Vardhan, then Minister of Environment, Forest, and Climate Change on December 18, 2017.

Statement II: The Bill replaces the Indian Forest (Amendment) Ordinance, 2017 and amends the Indian Forest Act, 1927. The Act consolidates laws relating to forests, transit of forest-produce and the duty to be levied on them.

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

[Question ID = 15985][Question Description = 133_148_NR1_SEP22_Q33]

1. Both Statement I and Statement II are true [Option ID = 33937]
2. Both Statement I and Statement II are false [Option ID = 33938]
3. Statement I is true but Statement II is false [Option ID = 33939]
4. Statement I is false but Statement II is true [Option ID = 33940]

34) Forestry Statistics India- 2021 an important document compilation of important time series data on forestry aspects from 2010-11 to 2021-21 and is published by

[Question ID = 15986][Question Description = 134_148_NR1_SEP22_Q34]

1. Forestry Survey of India, Dehradun [Option ID = 33941]
2. Indian Council of Forestry Research and Education, Dehradun [Option ID = 33942]
3. National Sample Survey Organization, Govt. of India [Option ID = 33943]
4. Regional office, World Agroforestry Centre, New Delhi [Option ID = 33944]

35) Match List I with List II

List I	List II
International Day of Forests	Theme
A. 2022	I. Forests and Biodiversity: Too precious to loose
B. 2021	II. Forests and Education
C. 2020	III. Forest restoration: a path to recovery and well being
D. 2019	IV. Forests and sustainable production and consumption

Choose the correct answer from the options given below:

[Question ID = 15987][Question Description = 135_148_NR1_SEP22_Q35]

1. A - I, B - II, C - III, D - IV [Option ID = 33945]
2. A - IV, B - III, C - I, D - II [Option ID = 33946]
3. A - III, B - I, C - II, D - IV [Option ID = 33947]
4. A - II, B - IV, C - III, D - I [Option ID = 33948]

36) Forest Research Institute (FRI), Dehradun has its roots in the erstwhile Imperial Forest Research Institute established in the year

[Question ID = 15988][Question Description = 136_148_NR1_SEP22_Q36]

1. 1894 [Option ID = 33949]
2. 1906 [Option ID = 33950]
3. 1927 [Option ID = 33951]
4. 1947 [Option ID = 33952]

37) The headquarter of International Tropical Timber Organization (ITTO) is located at

[Question ID = 15989][Question Description = 137_148_NR1_SEP22_Q37]

1. Vienna, Austria [Option ID = 33953]
2. Sydney, Australia [Option ID = 33954]
3. Yokohama, Japan [Option ID = 33955]
4. Nairobi, Kenya [Option ID = 33956]

38) Based on the analysis of robust data pertaining to forest fires for fairly long period as reported in India State of Forest Report (ISFR) 2021, ____ % of the forest cover of the country is in the category of 'less fire prone'.

[Question ID = 15990][Question Description = 138_148_NR1_SEP22_Q38]

1. 64.54 [Option ID = 33957]
2. 53.39 [Option ID = 33958]
3. 37.67 [Option ID = 33959]
4. 23.59 [Option ID = 33960]

39) Advanced Research Centre for Bamboo and Rattan is located at.....[Question ID = 15991][Question Description = 139_148_NR1_SEP22_Q39]

1. Aizawal, Mizoram [Option ID = 33961]
2. Barapani, Meghalaya [Option ID = 33962]
3. Jorhat, Assam [Option ID = 33963]
4. Imphal, Manipur [Option ID = 33964]

40) Which of the following protocol is related to ozone depletion?[Question ID = 15992][Question Description = 140_148_NR1_SEP22_Q40]

1. Copenhagen Protocol [Option ID = 33965]
2. Kyoto Protocol [Option ID = 33966]
3. Montreal Protocol [Option ID = 33967]
4. Doha Protocol [Option ID = 33968]

41) Eco-auditing focuses on[Question ID = 15993][Question Description = 141_148_NR1_SEP22_Q41]

1. Assessment of actual effects of existing activities [Option ID = 33969]
2. Assessment of project decisions [Option ID = 33970]
3. Policy assessment [Option ID = 33971]
4. Post project assessment [Option ID = 33972]

42) Under the Climate Change Action Plan of Government of India, which of the renewable source of energy has been identified as a priority for exploitation?[Question ID = 15994][Question Description = 142_148_NR1_SEP22_Q42]

1. Solar energy [Option ID = 33973]
2. Wind energy [Option ID = 33974]
3. Geothermal energy [Option ID = 33975]
4. Tidal energy [Option ID = 33976]

43) According to the Bureau of Indian Standards (BIS), the upper limit of total dissolved solids (TDS) levels in drinking water supply should not exceed[Question ID = 15995][Question Description = 143_148_NR1_SEP22_Q43]

1. 250 ppm [Option ID = 33977]
2. 500 ppm [Option ID = 33978]
3. 350 ppm [Option ID = 33979]
4. 600 ppm [Option ID = 33980]

44) Michael Carsson in her book Silent Spring has raised concern on[Question ID = 15996][Question Description = 144_148_NR1_SEP22_Q44]

1. Economical & social impacts [Option ID = 33981]
2. Deforestation [Option ID = 33982]
3. Climate Change [Option ID = 33983]
4. Environmental harm caused by the indiscriminate use of pesticides [Option ID = 33984]

45) Which one of the following air pollution control device has the highest efficiency in controlling dust?[Question ID = 15997][Question Description = 145_148_NR1_SEP22_Q45]

1. Wet Scrubber [Option ID = 33985]
2. Electrostatic precipitator [Option ID = 33986]
3. Venturi Scrubber [Option ID = 33987]
4. Cyclonic spray scrubber [Option ID = 33988]

46) In which year the Ganga Action Plan (GAP) was launched?[Question ID = 15998][Question Description = 146_148_NR1_SEP22_Q46]

1. 1985 [Option ID = 33989]
2. 1987 [Option ID = 33990]
3. 1990 [Option ID = 33991]
4. 1995 [Option ID = 33992]

47) Seawater is a solution of?

[Question ID = 15999][Question Description = 147_148_NR1_SEP22_Q47]

1. 0.5 N NaCl and 0.05 N MnSO_4 [Option ID = 33993]
2. 0.5 N NaCl and 0.05 N MgSO_4 [Option ID = 33994]
3. 0.5 M NaCl and 0.05 M MnSO_4 [Option ID = 33995]
4. 0.5 M NaCl and 0.05 M MgSO_4 [Option ID = 33996]

48) In a catalytic converter, what is the correct order of reactions?

[Question ID = 16000][Question Description = 148_148_NR1_SEP22_Q48]

1. First reduction (NO) and after oxidation (HCs) [Option ID = 33997]
2. First oxidation (NO) and after reduction (HCs) [Option ID = 33998]
3. First oxidation (HCs) and after Reduction (NO) [Option ID = 33999]
4. First reduction (HCs) and after oxidation (NO) [Option ID = 34000]

49) Which detector is used for the analysis of peroxyacetyl nitrate (PAN) in gas chromatography?[Question ID = 16001][Question Description = 149_148_NR1_SEP22_Q49]

1. Flame ionization detector (FID) [Option ID = 34001]
2. Electron capture detector (ECD) [Option ID = 34002]
3. Flame photometric detector (FPD) [Option ID = 34003]
4. Thermal conductivity detector (TCD) [Option ID = 34004]

50) Which pollutant is responsible for the hardening of rubber?

[Question ID = 16002][Question Description = 150_148_NR1_SEP22_Q50]

1. Ozone [Option ID = 34005]
2. Peroxyacetyl nitrate [Option ID = 34006]
3. SO_2 [Option ID = 34007]
4. Hydrocarbons [Option ID = 34008]

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1) The wind speed of cyclonic storm is[Question ID = 16053][Question Description = 101_150_AGM_SEP22_Q01]

1. 25 to 33 knot [Option ID = 34209]
2. 34 to 47 knot [Option ID = 34210]
3. 45 to 67 knot [Option ID = 34211]
4. More than 67 knot [Option ID = 34212]

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

Assertion A : When the chlorine oxide reacts with ozone, the ozone concentration is reduced in the stratosphere.

Reason R : The polar vortex is illuminated by the sun.

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

[Question ID = 16054][Question Description = 102_150_AGM_SEP22_Q02]

1. Both A and R are true and R is the correct explanation of A [Option ID = 34213]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 34214]
3. A is true but R is false [Option ID = 34215]
4. A is false but R is true [Option ID = 34216]

3) Absolute humidity is the ratio of[Question ID = 16055][Question Description = 103_150_AGM_SEP22_Q03]

1. volume of water vapour to volume of air [Option ID = 34217]
2. mass of water vapour to mass of air [Option ID = 34218]
3. mass of water vapour to volume of air [Option ID = 34219]
4. Actual Vapour Pressure (AVP) to Saturated Vapour Pressure (SVP) [Option ID = 34220]

4) Match List I with List II

List I	List II
Radiation band	Physiological response
A. X-Rays	I. Thermal effect
B. Blue	II. Extremely harmful
C. Green	III. Strong photosynthetic activity
D. IR	IV. Phototropism

Choose the correct answer from the options given below:

[Question ID = 16056][Question Description = 104_150_AGM_SEP22_Q04]

1. A - I , B - II, C - IV, D - III [Option ID = 34221]
2. A - II, B - IV, C - I, D - III [Option ID = 34222]
3. A - IV, B - II, C - III, D - I [Option ID = 34223]
4. A - II, B - IV, C - III, D - I [Option ID = 34224]

5) The area between two highs and two lows is known as[Question ID = 16057][Question Description = 105_150_AGM_SEP22_Q05]

1. Ridge [Option ID = 34225]
2. Wedge [Option ID = 34226]
3. Col [Option ID = 34227]
4. Trough [Option ID = 34228]

6) Match List I with List II

List I	List II
Law	Statement related to
A. Kirchoff's law	I. Attenuation of light relates to the properties the material through which light is travelling
B. Plank's law	II. Wavelength distribution for a black body
C. Wein's law	III. Product of temperature of a radiating body and wavelength corresponding to maximum intensity is constant
D. Beer-Lambert law	IV. Ratio of emitted energy to absorbed energy as a function of T and λ

Choose the correct answer from the options given below:

[Question ID = 16058][Question Description = 106_150_AGM_SEP22_Q06]

1. A - IV, B - II, C - III, D - I
[Option ID = 34229]
2. A - II, B - IV, C - I, D - III
[Option ID = 34230]
3. A - I, B - II, C - IV, D - III
[Option ID = 34231]
4. A - II, B - IV, C - III, D - I
[Option ID = 34232]

7) Frontal fog is also known as

- A. Advection fog
- B. Steam fog
- C. Rain fog

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

[Question ID = 16059][Question Description = 107_150_AGM_SEP22_Q07]

- 1. A and B only [Option ID = 34233]
- 2. A only [Option ID = 34234]
- 3. C only [Option ID = 34235]
- 4. B and C only [Option ID = 34236]

8) Baroclinic wave theory is related with[Question ID = 16060][Question Description = 108_150_AGM_SEP22_Q08]

- 1. Cyclonic activity [Option ID = 34237]
- 2. Advection [Option ID = 34238]
- 3. Radiation flux [Option ID = 34239]
- 4. Vapour formation [Option ID = 34240]

9) Thermal concept of Monsoon was proposed by[Question ID = 16061][Question Description = 109_150_AGM_SEP22_Q09]

- 1. Walker [Option ID = 34241]
- 2. Halley [Option ID = 34242]
- 3. Bergeron [Option ID = 34243]
- 4. Campbell [Option ID = 34244]

10) Hot, dry southerly wind that blows in Egypt in spring is called[Question ID = 16062][Question Description = 110_150_AGM_SEP22_Q10]

- 1. Khamsin [Option ID = 34245]
- 2. Samsoco [Option ID = 34246]
- 3. Wester [Option ID = 34247]
- 4. Quesqueen [Option ID = 34248]

11) Match List I with List II

List I	List II
Climatic types	Moisture indices
A. B2-Humid	I. 0 to 20
B. E-Arid	II. -100 to -66.7
C. D-Semiarid	III. -66.7 to -33.3
D. C2-Moist subhumid	IV. 40 to 80

Choose the correct answer from the options given below:

[Question ID = 16063][Question Description = 111_150_AGM_SEP22_Q11]

- 1. A - I, B - II, C - IV, D - III [Option ID = 34249]
- 2. A - II, B - IV, C - I, D - III [Option ID = 34250]
- 3. A - IV, B - II, C - III, D - I [Option ID = 34251]
- 4. A - II, B - IV, C - III, D - I [Option ID = 34252]

12) In case of modified Koppen System, the average temperature of the coolest month for “A” type of climate is[Question ID = 16064][Question Description = 112_150_AGM_SEP22_Q12]

- 1. Less than 5°C [Option ID = 34253]
- 2. 5°C to 10°C [Option ID = 34254]
- 3. 10°C to 18°C [Option ID = 34255]
- 4. More than 18°C [Option ID = 34256]

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

Assertion A : The ITCZ and the monsoon trough are seen as two distinct entities with positive vorticity fields and vertical motion.

Reason R : They can be identified as separate cloud band in satellite imagery.

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

[Question ID = 16065][Question Description = 113_150_AGM_SEP22_Q13]

1. Both A and R are true and R is the correct explanation of A [Option ID = 34257]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 34258]
3. A is true but R is false [Option ID = 34259]
4. A is false but R is true [Option ID = 34260]

14) Hargreaves (1971) defined moisture availability index (MAI) as the ratio of “X” to potential evapotranspiration. Here “X” denotes to[Question ID = 16066][Question Description = 114_150_AGM_SEP22_Q14]

1. amount of precipitation at 25% probability level [Option ID = 34261]
2. amount of precipitation at 50% probability level [Option ID = 34262]
3. amount of precipitation at 75% probability level [Option ID = 34263]
4. amount of precipitation at 100% probability level [Option ID = 34264]

15) La Nina is also called as[Question ID = 16067][Question Description = 115_150_AGM_SEP22_Q15]

1. El Merina [Option ID = 34265]
2. El Dodo [Option ID = 34266]
3. El maestro [Option ID = 34267]
4. El Viejo [Option ID = 34268]

16) Growing degree days concept is originated from which law?[Question ID = 16068][Question Description = 116_150_AGM_SEP22_Q16]

1. Kirchoof's law [Option ID = 34269]
2. Stephan Boltzmann law [Option ID = 34270]
3. Wein's law [Option ID = 34271]
4. Vant Hoff's law [Option ID = 34272]

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

Assertion A : January is the coldest month at Delhi.

Reason R : The earth gets minimum radiation as the sun-earth distance is maximum in January.

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

[Question ID = 16069][Question Description = 117_150_AGM_SEP22_Q17]

1. Both A and R are true and R is the correct explanation of A [Option ID = 34273]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 34274]
3. A is true but R is false [Option ID = 34275]
4. A is false but R is true [Option ID = 34276]

18) Which of the following law states that an increase in temperature will cause an increase in the rate of an endothermic reaction?

[Question ID = 16070][Question Description = 118_150_AGM_SEP22_Q18]

1. Kliff's law [Option ID = 34277]
2. Van't Hoff's law [Option ID = 34278]
3. Lamarck's law [Option ID = 34279]
4. Law of Dalton Hooker [Option ID = 34280]

19) Match List I with List II

List I	List II
Type of plants	Crop
A. Short day plants	I. Wheat
B. Long day plants	II. Tomato
C. Day neutral plants	III. Andropogon
D. Intermediate plants	IV. Rice

Choose the correct answer from the options given below:

[Question ID = 16071][Question Description = 119_150_AGM_SEP22_Q19]

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

[Option ID = 34281]

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

[Option ID = 34282]

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

[Option ID = 34283]

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

[Option ID = 34284]

20) Which of the following particles are used for cloud seeding in artificial rain making?

- A. Silver iodide
- B. Dry ice
- C. Common salt
- D. Dust particle

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

[Question ID = 16072][Question Description = 120_150_AGM_SEP22_Q20]

- 1. A, B and C only [Option ID = 34285]
- 2. A, B and D only [Option ID = 34286]
- 3. A, C and D only [Option ID = 34287]
- 4. A, B, C and D [Option ID = 34288]

21) In which layer of the atmosphere, ozone act as a Greenhouse gas?

[Question ID = 16073][Question Description = 121_150_AGM_SEP22_Q21]

- 1. Troposphere [Option ID = 34289]
- 2. Stratosphere [Option ID = 34290]
- 3. Mesosphere [Option ID = 34291]
- 4. Thermosphere [Option ID = 34292]

22) IMD launched the mKisan portal in the year

[Question ID = 16074][Question Description = 122_150_AGM_SEP22_Q22]

- 1. 2010 [Option ID = 34293]
- 2. 2013 [Option ID = 34294]
- 3. 2015 [Option ID = 34295]
- 4. 2019 [Option ID = 34296]

23) Given below are two statements

Statement I: In very humid climates, the diurnal temperature range is very low, even in dry season in tropical areas.

Statement II: In case of dry climate, the diurnal temperature range is very high, may be 20°C or more.

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

[Question ID = 16075][Question Description = 123_150_AGM_SEP22_Q23]

- 1. Both Statement I and Statement II are correct [Option ID = 34297]
- 2. Both Statement I and Statement II are incorrect [Option ID = 34298]
- 3. Statement I is correct but Statement II is incorrect [Option ID = 34299]
- 4. Statement I is incorrect but Statement II is correct [Option ID = 34300]

24) What is the term used to denote the height above of the surface at which the neutral wind profile extrapolates to zero wind speed on semi log plot of 'z' (height above the ground) versus 'u' (wind speed)?

[Question ID = 16076][Question Description = 124_150_AGM_SEP22_Q24]

- 1. Roughness length [Option ID = 34301]
- 2. Zero plane displacement [Option ID = 34302]
- 3. Turbulence [Option ID = 34303]
- 4. Exponent height [Option ID = 34304]

25) Surface boundary layer of the Earth is dominated by which force?

[Question ID = 16077][Question Description = 125_150_AGM_SEP22_Q25]

- 1. Coriolis force [Option ID = 34305]
- 2. Pressure gradient force [Option ID = 34306]
- 3. Gravitational force [Option ID = 34307]
- 4. Frictional force [Option ID = 34308]

26) Presence of inversion near the ground indicates which type of atmospheric condition?

[Question ID = 16078][Question Description = 126_150_AGM_SEP22_Q26]

- 1. Unstable [Option ID = 34309]
- 2. Stable [Option ID = 34310]

3. Windy [Option ID = 34311]
4. Rainy [Option ID = 34312]

27) Which effects are generated by advection in the crop fields?

- A. Oasis effect
- B. Clothesline effect
- C. Seebeck effect
- D. Peltier effect

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

[Question ID = 16079][Question Description = 127_150_AGM_SEP22_Q27]

1. A and B only [Option ID = 34313]
2. A and D only [Option ID = 34314]
3. B and C only [Option ID = 34315]
4. B and D only [Option ID = 34316]

28) When the absorption of carbon dioxide is the highest within a plant canopy?

[Question ID = 16080][Question Description = 128_150_AGM_SEP22_Q28]

1. Early morning [Option ID = 34317]
2. Mid morning [Option ID = 34318]
3. Early afternoon [Option ID = 34319]
4. Early evening [Option ID = 34320]

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

Assertion A : During wind profile measurement within crop canopy, readings at more than three heights over tall row crops are preferred.

Reason R : The non-heterogeneity of the surface is so pronounced that measurements taken near the crop canopy level may not be representative of the whole field.

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

[Question ID = 16081][Question Description = 129_150_AGM_SEP22_Q29]

1. Both A and R are true and R is the correct explanation of A [Option ID = 34321]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 34322]
3. A is true but R is false [Option ID = 34323]
4. A is false but R is true [Option ID = 34324]

30) Actual crop evapotranspiration exceeds reference evapotranspiration in case of [Question ID = 16082][Question Description = 130_150_AGM_SEP22_Q30]

1. Convection [Option ID = 34325]
2. Advection [Option ID = 34326]
3. Condensation [Option ID = 34327]
4. Inversion [Option ID = 34328]

31) WPL correction compensate the effect of _____ fluctuation on fluxes in eddy-covariance system. [Question ID = 16083][Question Description = 131_150_AGM_SEP22_Q31]

1. Frequency response [Option ID = 34329]
2. Density [Option ID = 34330]
3. Sonic temperature [Option ID = 34331]
4. Humidity [Option ID = 34332]

32) Reference crop evapotranspiration computation (FAO-56) assumes the height, surface resistance and an albedo of reference crop are [Question ID = 16084][Question Description = 132_150_AGM_SEP22_Q32]

1. 12 cm, 70 s m⁻¹ and 0.23 [Option ID = 34333]
2. 15 cm, 60 s m⁻¹ and 0.24 [Option ID = 34334]
3. 8 cm, 50 s m⁻¹ and 0.25 [Option ID = 34335]
4. 10 cm, 40 s m⁻¹ and 0.26 [Option ID = 34336]

33) Match List I with List II

List I	List II
Stages of soil evaporation	Controlling factor

A. Constant rate stage	I. Soil profile controlled
B. Falling rate stage	II. Weather controlled
C. Slow rate stage	III. Vapour diffusion controlled
D. Initial stage	IV. Atmospheric demand controlled

Choose the correct answer from the options given below:

[Question ID = 16085][Question Description = 133_150_AGM_SEP22_Q33]

1. A - I, B - II, C - III, D - IV [Option ID = 34337]
2. A - II, B - IV, C - I, D - III [Option ID = 34338]
3. A - III, B - II, C - IV, D - I [Option ID = 34339]
4. A - II, B - I, C - III, D - IV [Option ID = 34340]

34) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R
Assertion A : Radiation method of estimation of evapotranspiration show good results in humid climate.

Reason R : Aerodynamic term in humid climate is relatively small

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

[Question ID = 16086][Question Description = 134_150_AGM_SEP22_Q34]

1. Both A and R are true and R is the correct explanation of A [Option ID = 34341]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 34342]
3. A is true but R is false [Option ID = 34343]
4. Both A and R are false [Option ID = 34344]

35) The mean daily air temperature is employed in FAO Penman-Monteith equation

- A. to calculate saturation vapour pressure curve
- B. to calculate the impact of mean air density
- C. to calculate the effect of temperature on solar radiation
- D. to calculate the effect of temperature on wind speed

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

[Question ID = 16087][Question Description = 135_150_AGM_SEP22_Q35]

1. A, B and D only [Option ID = 34345]
2. A,B and C only [Option ID = 34346]
3. A and B only [Option ID = 34347]
4. A, B, C and D [Option ID = 34348]

36) Computation of extra-terrestrial radiation is the function of

- A. Latitude
- B. Longitude
- C. Altitude
- D. Day of the year

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

[Question ID = 16088][Question Description = 136_150_AGM_SEP22_Q36]

1. A, B and D only [Option ID = 34349]
2. A and C only [Option ID = 34350]
3. A and D only [Option ID = 34351]
4. A, B, C and D [Option ID = 34352]

37) What is the production level of InfoCrop model?[Question ID = 16089][Question Description = 137_150_AGM_SEP22_Q37]

1. 1 [Option ID = 34353]
2. 2 [Option ID = 34354]
3. 3 [Option ID = 34355]
4. 4 [Option ID = 34356]

38) Major factor/s which influence the rate of development of tropical annual plants

- A. Thermal time

B. Vernalization

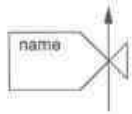
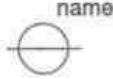
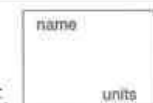
C. Photoperiod

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

[Question ID = 16090][Question Description = 138_150_AGM_SEP22_Q38]

1. A only [Option ID = 34357]
2. A and B only [Option ID = 34358]
3. A and C only [Option ID = 34359]
4. A, B and C [Option ID = 34360]

39) Match **List I** with **List II**

List I	List II
Symbol	Model variable (InfoCrop)
A. 	I. Biomass per unit area
B. 	II. Photosynthesis rate
C. 	III. Temperature
D. 	IV. Radiation use efficiency
E. 	V. Information flow

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

[Question ID = 16091][Question Description = 139_150_AGM_SEP22_Q39]

1. A - I, B - II, C - IV, D - III, E - V [Option ID = 34361]
2. A - V, B - III, C - I, D - IV, E - II [Option ID = 34362]
3. A - II, B - IV, C - V, D - III, E - I [Option ID = 34363]
4. A - IV, B - II, C - III, D - I, E - V [Option ID = 34364]

40) Choose the correct sequence for the steps of building system simulation.

A. Define goals

B. Quantify relationship between the variables

C. Define system

D. Model Calibration

E. Sensitivity analysis

F. Model validation

Choose the *correct* answer from the options given below

[Question ID = 16092][Question Description = 140_150_AGM_SEP22_Q40]

1. A, B, C, D, E, F [Option ID = 34365]
2. A, E, D, C, B, F [Option ID = 34366]
3. A, C, B, D, F, E [Option ID = 34367]
4. C, A, D, B, F, E [Option ID = 34368]

41) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R
Assertion A : Zero tillage practice in rice-wheat cropping system is a climate change mitigation strategy.

Reason R : It helps in early sowing of wheat.

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

[Question ID = 16093][Question Description = 141_150_AGM_SEP22_Q41]

1. Both A and R are true and R is the correct explanation of A [Option ID = 34369]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 34370]
3. A is true but R is false [Option ID = 34371]
4. A is false but R is true [Option ID = 34372]

42) Match List I with List II

List I	List II
Model production level	Model production type
A. Production level 1	I. Potential production
B. Production level 2	II. Nutrient limited
C. Production level 3	III. Water limited production
D. Production level 4	IV. Pest limited production

Choose the correct answer from the options given below:

[Question ID = 16094][Question Description = 142_150_AGM_SEP22_Q42]

1. A - I , B - III, C - II , D - IV [Option ID = 34373]
2. A - II , B - III, C - I , D - IV [Option ID = 34374]
3. A - II , B - IV, C - I , D - III [Option ID = 34375]
4. A - II , B - IV, C - III , D - I [Option ID = 34376]

43) Which model(s) simulate the soil carbon cycle?

- A. CENTURY
- B. InfoCrop
- C. RothC
- D. DNDC

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

[Question ID = 16095][Question Description = 143_150_AGM_SEP22_Q43]

1. A, B and C only [Option ID = 34377]
2. A and B only [Option ID = 34378]
3. A, C and D only [Option ID = 34379]
4. A, B, C and D [Option ID = 34380]

44) Which model is used for monsoon forecast at present?

[Question ID = 16096][Question Description = 144_150_AGM_SEP22_Q44]

1. Multivariate regression model [Option ID = 34381]
2. Step wise regression model [Option ID = 34382]
3. Simple regression model [Option ID = 34383]
4. Ensembled statistical model [Option ID = 34384]

45) For declaring onset of Northeast Monsoon following criteria considered:

- A. Withdrawal of south west Monsoon upto 10° N.
- B. Onset of persistent surface easterlies over Tamil Nadu coast.
- C. Depth of easterlies upto 800 hpa over Tamil Nadu coast.
- D. Fairly widespread rainfall over the coastal Tamil Nadu and adjoining areas

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

[Question ID = 16097][Question Description = 145_150_AGM_SEP22_Q45]

1. A, B and D only [Option ID = 34385]
2. A and C only [Option ID = 34386]
3. B and D only [Option ID = 34387]
4. A and D only [Option ID = 34388]

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

Assertion A : The latent heat flux sometimes may surpass net radiation value over a vegetative surface.

Reason R : This is possible where advective energy is available.

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

[Question ID = 16098][Question Description = 146_150_AGM_SEP22_Q46]

1. Both A and R are true and R is the correct explanation of A [Option ID = 34389]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 34390]
3. A is true but R is false [Option ID = 34391]
4. A is false but R is true [Option ID = 34392]

47) Match List I with List II

List I	List II
Rainfall distribution pattern	Description
A. Scattered	I. 75% of stations gets rainfall at most places
B. Fairly Widespread	II. < 25% of stations gets rainfall at one and two places
C. Wide spread	III. 51 to 75% of stations gets rainfall at many places
D. Isolated	IV. 26 to 50% of stations gets rainfall at few places

Choose the correct answer from the options given below:

[Question ID = 16099][Question Description = 147_150_AGM_SEP22_Q47]

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

[Option ID = 34393]

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

[Option ID = 34394]

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

[Option ID = 34395]

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

[Option ID = 34396]

48) India Meteorological Department (IMD) monitors the incidence, spread, intensification and cessation of drought and prepare the map of Aridity Anomaly on

[Question ID = 16100][Question Description = 148_150_AGM_SEP22_Q48]

1. Yearly basis [Option ID = 34397]
2. Monthly basis [Option ID = 34398]
3. Weekly basis [Option ID = 34399]
4. Daily basis [Option ID = 34400]

49) Which of the following statements are correct for “Monsoon Mission Coupled Forecasting System (MMCFS)?

- A. It is a coupled dynamical model developed under Monsoon Mission Project.
- B. In MMCFS, the original model frame work was developed by the National Centers for Environmental Prediction (NCEP), USA.
- C. MMCFS was modified to provide better forecast over Indian monsoon region for different spatial and temporal resolutions through mission mode.
- D. IMD uses Monsoon Mission Climate Forecast System (MMCFS) model for preparing operational forecast of rainfall and temperature along with statistical models.

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

[Question ID = 16101][Question Description = 149_150_AGM_SEP22_Q49]

1. A, B, C and D [Option ID = 34401]
2. A, B and C only [Option ID = 34402]
3. A, B and D only [Option ID = 34403]
4. B, C and D only [Option ID = 34404]

50) Which of the following statements are correct for “monsoon trough”?

- A. Monsoon Trough is an elongated low-pressure area which extends from heat low over Pakistan to Head Arabian sea.
- B. This is one of semi-permanent feature of monsoon circulation.
- C. Southward migration results in active/vigorous monsoon over major part of India.
- D. Generally eastern side of monsoon trough oscillates, sometimes southwards and sometimes northwards.

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

[Question ID = 16102][Question Description = 150_150_AGM_SEP22_Q50]

1. B and D only [Option ID = 34405]
2. A, B and C only [Option ID = 34406]
3. A, B and D only [Option ID = 34407]
4. B, C and D only [Option ID = 34408]

