

64 Agricultural Chemicals 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 2_PHD

1) The maximum permissible limit of biuret in urea as per FCO for foliar application is

[Question ID = 16353][Question Description = 101_152_NRM2_SEP22_Q01]

1. <0.25
[Option ID = 35409]
2. >1.00%
[Option ID = 35410]
3. <2.5%
[Option ID = 35411]
4. <0.5%
[Option ID = 35412]

2) Following are the statements about Molybdenum (Mo)

- A. It comes under the category of beneficial elements
- B. It is absorbed by plants as Mo O_4^{2-}
- C. It moves to plant roots largely through diffusion
- D. Deficiency of Mo increase with a decrease in soil pH
- E. Deficiency of Mo can be prevented or overcome through seed treatment prior to planting or by spraying it on crop foliage

Choose the *correct* answer from the options given below

[Question ID = 16354][Question Description = 102_152_NRM2_SEP22_Q02]

1. A, C and D
[Option ID = 35413]
2. B, C and E
[Option ID = 35414]
3. B, D and E
[Option ID = 35415]
4. A, C and E
[Option ID = 35416]

3) Given below are two statements

Statement I: Generally, a large fraction of the carbon fixed prior to the seed filling is remobilized towards seed

Statement II: A small amount of photosynthates currently assimilated are utilized by the tissues that are currently growing actively, prior to seed filling

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

[Question ID = 16355][Question Description = 103_152_NRM2_SEP22_Q03]

1. Both Statement I and Statement II are correct [Option ID = 35417]
2. Both Statement I and Statement II are incorrect [Option ID = 35418]

3. Statement I is correct but Statement II is incorrect [Option ID = 35419]
4. Statement I is incorrect but Statement II is correct [Option ID = 35420]

4) Frost-stress tolerant rapeseed-mustard varieties are

[Question ID = 16356][Question Description = 104_152_NRM2_SEP22_Q04]

1. Pusa Mustard 26 and Navgold [Option ID = 35421]
2. RGN 145 and Vardan [Option ID = 35422]
3. Pusa Gold and Geeta [Option ID = 35423]
4. RH 819 and RGN 48 [Option ID = 35424]

5) Which type of cotton provides the highest ginning percentage?

[Question ID = 16357][Question Description = 105_152_NRM2_SEP22_Q05]

1. *Gossypium barbadense* [Option ID = 35425]
2. *Gossypium hirsutum* [Option ID = 35426]
3. *Gossypium arboreum* [Option ID = 35427]
4. No variation of ginning percentage among different types of cotton [Option ID = 35428]

6) Which among the following experimental designs is the least accurate one?

[Question ID = 16358][Question Description = 106_152_NRM2_SEP22_Q06]

1. CRD [Option ID = 35429]
2. RCBD [Option ID = 35430]
3. Split-plot Design [Option ID = 35431]
4. Strip-plot Design [Option ID = 35432]

7) When the yellow sarson should be harvested to obtain the highest oil content in seeds?[Question ID = 16359][Question Description = 107_152_NRM2_SEP22_Q07]

1. 27 days after flowering [Option ID = 35433]
2. 37 days after flowering [Option ID = 35434]
3. 47 days after flowering [Option ID = 35435]
4. 67 days after flowering [Option ID = 35436]

8) A wetland wooden plough ordinarily covers about _____ ha area in eight hours for the first puddling.[Question ID = 16360][Question Description = 108_152_NRM2_SEP22_Q08]

1. 0.28 [Option ID = 35437]
2. 0.24 [Option ID = 35438]
3. 0.16 [Option ID = 35439]
4. 0.10 [Option ID = 35440]

9) Maize and pigeonpea are sown in 250 m² in 1:1 ratio in replacement series of intercropping. The production of maize and pigeonpea from this intercropping is 150 and 25 kg, respectively. What is the intercrop yield of pigeonpea in q/ha?

[Question ID = 16361][Question Description = 109_152_NRM2_SEP22_Q09]

1. 2000 [Option ID = 35441]
2. 20 [Option ID = 35442]
3. 1000 [Option ID = 35443]
4. 10 [Option ID = 35444]

10) For a given level of soil fertility, decrease in soil moisture supply is associated with a definite increase in concentration of which nutrient in plant tissue?[Question ID = 16362][Question Description = 110_152_NRM2_SEP22_Q10]

1. Nitrogen [Option ID = 35445]
2. Phosphorus [Option ID = 35446]
3. Potassium [Option ID = 35447]
4. Calcium [Option ID = 35448]

11) Which anti-nutritional factor present in lentil reacts with lysine and methionine and reduces their availability during digestion process in human body?

[Question ID = 16363][Question Description = 111_152_NRM2_SEP22_Q11]

1. Phytic acid [Option ID = 35449]
2. Condensed tannins [Option ID = 35450]
3. Saponins [Option ID = 35451]
4. Phytolcithins [Option ID = 35452]

12) Which of the nitrogenous fertilizers has the highest salt index value

[Question ID = 16364][Question Description = 112_152_NRM2_SEP22_Q12]

1. Ammonium sulphate [Option ID = 35453]
2. Ammonium chloride [Option ID = 35454]
3. Ammonium nitrate [Option ID = 35455]
4. Calcium ammonium nitrate [Option ID = 35456]

13) Soil most suitable for corrugation irrigation

[Question ID = 16365][Question Description = 113_152_NRM2_SEP22_Q13]

1. Saline soil [Option ID = 35457]
2. Clay soil [Option ID = 35458]
3. Loam soil [Option ID = 35459]
4. Sandy soil [Option ID = 35460]

14) Equipment that provides a direct measure of the tenacity with which water is held by the soils

[Question ID = 16366][Question Description = 114_152_NRM2_SEP22_Q14]

1. Tensiometer [Option ID = 35461]
2. Pressure plate equipment [Option ID = 35462]
3. Neutron moisture meter [Option ID = 35463]
4. Gypsum block [Option ID = 35464]

15) In the “stability series” of weatherability of minerals, the least stable mineral which has independent tetrahedron is:

[Question ID = 16367][Question Description = 115_152_NRM2_SEP22_Q15]

1. Olivine [Option ID = 35465]
2. Biotite [Option ID = 35466]
3. Amphiboles [Option ID = 35467]
4. Mg-pyroxenes [Option ID = 35468]

16) The Universal Soil Loss Equation (USLE) as presented by expression

($A = R \times K \times L \times S \times C \times P$) is proposed by:

[Question ID = 16368][Question Description = 116_152_NRM2_SEP22_Q16]

1. Wischmeier and Smith (1978) [Option ID = 35469]
2. Wischmeier (1959) [Option ID = 35470]
3. Zingg (1940) [Option ID = 35471]
4. Smith (1941) [Option ID = 35472]

17) As per International Union of Soil Sciences (IUSS), the size (diameter) of silt is:

[Question ID = 16369][Question Description = 117_152_NRM2_SEP22_Q17]

1. 0.002 mm [Option ID = 35473]
2. 0.02 mm [Option ID = 35474]
3. 0.2 mm [Option ID = 35475]
4. 2.0 mm [Option ID = 35476]

18) Given below are two statements

Statement I: The configuration of land surface is known as ‘topography’ or relief.

Statement II: Topography influences soil formation primarily through its effects on modifying water and temperature relations.

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

[Question ID = 16370][Question Description = 118_152_NRM2_SEP22_Q18]

1. Both Statement I and Statement II are true [Option ID = 35477]
2. Both Statement I and Statement II are false [Option ID = 35478]
3. Statement I is true but Statement II is false [Option ID = 35479]
4. Statement I is false but Statement II is true [Option ID = 35480]

19) The pedogenic process involving removal of silica from soil and accumulation of sesquioxides (goethite, gibbsite, etc.) with or without the formation of iron stone and concretions is known as:

[Question ID = 16371][Question Description = 119_152_NRM2_SEP22_Q19]

1. Ferruginisation [Option ID = 35481]
2. Podzolization [Option ID = 35482]
3. Laterization [Option ID = 35483]
4. Baunification [Option ID = 35484]

20) *Kaolinite group* of minerals includes a number of clay minerals such as:

- A. Kaolinite
- B. Halloysite
- C. Dickite
- D. Phlogopite

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

[Question ID = 16372][Question Description = 120_152_NRM2_SEP22_Q20]

- 1. A, B and C only [Option ID = 35485]
- 2. A, B and D only [Option ID = 35486]
- 3. A, C and D only [Option ID = 35487]
- 4. B, C and D only [Option ID = 35488]

21) Adsorption process involves accumulation of the substance adsorbed[Question ID = 16373][Question Description = 121_152_NRM2_SEP22_Q21]

- 1. Throughout the body of the substance adsorbing it. [Option ID = 35489]
- 2. On the surface of the adsorbing substance. [Option ID = 35490]
- 3. In a solution in contact with the adsorbing substance. [Option ID = 35491]
- 4. Below the adsorbing substance. [Option ID = 35492]

22) Micronutrient cations are extracted with DTPA extractant which consisted of:[Question ID = 16374][Question Description = 122_152_NRM2_SEP22_Q22]

- 1. 0.05 M DTPA + 0.1 M TEA + 0.01 M CaCl₂ [Option ID = 35493]
- 2. 0.05 M DTPA + 0.1 M TEA + 0.1 M CaCl₂ [Option ID = 35494]
- 3. 0.005 M DTPA + 0.1 M TEA + 0.01 M CaCl₂ [Option ID = 35495]
- 4. 0.05 M DTPA + 0.1 M TEA + 0.1 M CaCl₂ [Option ID = 35496]

23) A number of temporary yet dramatic changes occur in the NH₃ retention zone after application of anhydrous NH₃ in soil. These are:

- A. A retention zone of both ammonia (NH₃) and ammonium (NH₄⁺) having circular to oval shape (3-13 cm diameter) is formed.
- B. The concentrations of both NH₃ and NH₄⁺ are increased in the range of 1000-3000 ppm.
- C. Concentration of NO₂⁻ (nitrite) is increased to toxic levels (100-300 ppm) because *Nitrobacter* is much more sensitive to high pH (9.0-9.5) than *Nitrosomonas*.
- D. Population of microorganisms increased tremendously because free NH₃ (non-ionized NH₄) is less toxic to plants, animals, microorganisms.

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

[Question ID = 16375][Question Description = 123_152_NRM2_SEP22_Q23]

- 1. A, B and D only [Option ID = 35497]
- 2. A, B and C only [Option ID = 35498]
- 3. A, C and D only [Option ID = 35499]
- 4. B, C and D only [Option ID = 35500]

24) When a soil solution is concentrated four times, the activity ratio of potassium (K)-calcium (Ca) in solution will[Question ID = 16376][Question Description = 124_152_NRM2_SEP22_Q24]

- 1. Increase eight times [Option ID = 35501]
- 2. Decrease two times [Option ID = 35502]
- 3. Increase two times [Option ID = 35503]
- 4. Decrease four times [Option ID = 35504]

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

Assertion A: Nickel is associated with nitrogen metabolism by way of influencing urease activity.

Reason R: In systems where urea is used as the sole N fertilizer for foliar spray and nickel supply is poor, lower urease activity causes urea toxicity to the foliage and leads to severe necrosis of the root tips.

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

[Question ID = 16377][Question Description = 125_152_NRM2_SEP22_Q25]

1. Both A and R are true and R is the correct explanation of A [Option ID = 35505]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 35506]
3. A is true but R is false [Option ID = 35507]
4. A is false but R is true [Option ID = 35508]

26) Match List I with List II

List I	List II
A. Iron	I. Eriochrome Black T
B. Boron	II. Ferric alum
C. Chlorine	III. Orthophenanthroline
D. Calcium	IV. Azomethine-H

Choose the correct answer from the options given below:

[Question ID = 16378][Question Description = 126_152_NRM2_SEP22_Q26]

1. A-II, B-I, C-IV, D-III [Option ID = 35509]
2. A-IV, B-II, C-III, D-I [Option ID = 35510]
3. A-III, B-IV, C-II, D-I [Option ID = 35511]
4. A-I, B-III, C-II, D-IV [Option ID = 35512]

27) "Contaf" is a trade name of [Question ID = 16379][Question Description = 127_152_NRM2_SEP22_Q27]

1. Hexaconazole [Option ID = 35513]
2. Propiconazole [Option ID = 35514]
3. Imidacloprid [Option ID = 35515]
4. Cyhalothrin [Option ID = 35516]

28) Which of the following two pesticides should NOT be stored together?

[Question ID = 16380][Question Description = 128_152_NRM2_SEP22_Q28]

1. Insecticide and fungicide [Option ID = 35517]
2. Fungicide and rodenticide [Option ID = 35518]
3. Fungicide and plant growth regulator [Option ID = 35519]
4. Insecticide and herbicide [Option ID = 35520]

29) Diflubenzuron is an example of [Question ID = 16381][Question Description = 129_152_NRM2_SEP22_Q29]

1. Ecdysone inhibitor [Option ID = 35521]
2. Herbicide [Option ID = 35522]
3. Chitin synthesis inhibitor [Option ID = 35523]
4. Plant growth regulator [Option ID = 35524]

30) Rubber is an example of [Question ID = 16382][Question Description = 130_152_NRM2_SEP22_Q30]

1. Monoterpene [Option ID = 35525]
2. Diterpene [Option ID = 35526]
3. Triterpene [Option ID = 35527]
4. Polyterpene [Option ID = 35528]

31) Number of carbon present in monoterpene [Question ID = 16383][Question Description = 131_152_NRM2_SEP22_Q31]

1. 5 [Option ID = 35529]
2. 10 [Option ID = 35530]
3. 15 [Option ID = 35531]
4. 20 [Option ID = 35532]

32) Which crop can tolerate the exchangeable sodium percentage of 70 better than crops?

[Question ID = 16384][Question Description = 132_152_NRM2_SEP22_Q32]

1. Rice
[Option ID = 35533]
2. Barley
[Option ID = 35534]
3. Beets
[Option ID = 35535]
4. Mustard
[Option ID = 35536]

33) A 10 mg propiconazole in 1 L solvent makes solution concentration of

[Question ID = 16385][Question Description = 133_152_NRM2_SEP22_Q33]

1. 0.01 ppm [Option ID = 35537]
2. 0.001 ppm [Option ID = 35538]
3. 0.1 ppm [Option ID = 35539]
4. 1 ppm [Option ID = 35540]

34) Calculate the concentration of the solution (0.1gm/ml) when it is diluted 100 times

[Question ID = 16386][Question Description = 134_152_NRM2_SEP22_Q34]

1. 0.1 ppm [Option ID = 35541]
2. 1.0 ppm [Option ID = 35542]
3. 10.0 ppm [Option ID = 35543]
4. 0.01 ppm [Option ID = 35544]

35) Piperonyl butoxide is a [Question ID = 16387][Question Description = 135_152_NRM2_SEP22_Q35]

1. Fungicide [Option ID = 35545]
2. Insecticide [Option ID = 35546]
3. Herbicide safener [Option ID = 35547]
4. Insecticide synergist [Option ID = 35548]

36) Total number of pesticides registered in India till date range between

[Question ID = 16388][Question Description = 136_152_NRM2_SEP22_Q36]

1. 280-290 [Option ID = 35549]
2. 290-300 [Option ID = 35550]
3. 300-310 [Option ID = 35551]
4. 310-320 [Option ID = 35552]

37) According to recent data, which of the following groups of pesticides is being used maximum by farmers worldwide?

[Question ID = 16389][Question Description = 137_152_NRM2_SEP22_Q37]

1. Rodenticide [Option ID = 35553]
2. Herbicide [Option ID = 35554]
3. Fungicide [Option ID = 35555]
4. Insecticide [Option ID = 35556]

38) Jasmolin is linked to [Question ID = 16390][Question Description = 138_152_NRM2_SEP22_Q38]

1. *Tanacetum* sp [Option ID = 35557]
2. *Eucalyptus* sp [Option ID = 35558]
3. *Cynodon* sp [Option ID = 35559]
4. *Phalaris* sp [Option ID = 35560]

39) Kakrapara project was implemented on the river

[Question ID = 16391][Question Description = 139_152_NRM2_SEP22_Q39]

1. Chenab
[Option ID = 35561]
2. Tapi
[Option ID = 35562]
3. Godavari
[Option ID = 35563]
4. Koyana
[Option ID = 35564]

40) The founding Chairman of Central Water Commission

[Question ID = 16392][Question Description = 140_152_NRM2_SEP22_Q40]

1. Dr. B.R. Ambedkar [Option ID = 35565]
2. Dr. R. K. Gupta [Option ID = 35566]
3. Dr. A. N. Khosla [Option ID = 35567]
4. Dr. Rajendra Prasad [Option ID = 35568]

41) The ICAR was bestowed with 'the King Baudouin Development Prize International' in 1989 and 2004. The King Baudouin Foundation (KBF) was set up on the occasion of the 25th anniversary of King Baudouin's reign to sponsor the award is based in which country?

[Question ID = 16393][Question Description = 141_152_NRM2_SEP22_Q41]

1. Philippines

[Option ID = 35569]

2. Indonesia

[Option ID = 35570]

3. South Africa

[Option ID = 35571]

4. Belgium

[Option ID = 35572]

42) AMRUT 2.0 programme was launched on

[Question ID = 16394][Question Description = 142_152_NRM2_SEP22_Q42]

1. March 22, 2021 [Option ID = 35573]

2. March 12, 2021 [Option ID = 35574]

3. October 1, 2021 [Option ID = 35575]

4. April 24, 2022 [Option ID = 35576]

43) The foundation day of ICAR-Indian Institute of Water Management is [Question ID = 16395][Question Description = 143_152_NRM2_SEP22_Q43]

1. July 16 [Option ID = 35577]

2. February 22 [Option ID = 35578]

3. April 23 [Option ID = 35579]

4. May 12 [Option ID = 35580]

44) Publisher of 'Water Resources Management' journal [Question ID = 16396][Question Description = 144_152_NRM2_SEP22_Q44]

1. John Wiley and Sons [Option ID = 35581]

2. Elsevier [Option ID = 35582]

3. Springer [Option ID = 35583]

4. Taylor and Francis [Option ID = 35584]

45) The Brahmaputra river enters at which place of Arunachal Pradesh in India? [Question ID = 16397][Question Description = 145_152_NRM2_SEP22_Q45]

1. Tawang [Option ID = 35585]

2. Bhalukpong [Option ID = 35586]

3. Changlang [Option ID = 35587]

4. Dihang [Option ID = 35588]

46) 'AMRUT' scheme is implemented by which ministry

[Question ID = 16398][Question Description = 146_152_NRM2_SEP22_Q46]

1. Ministry of Jal Shakti [Option ID = 35589]

2. Ministry of Environment, Forest and Climate Change [Option ID = 35590]

3. Ministry of Housing and Urban Affairs [Option ID = 35591]

4. Ministry of Agriculture and Farmers' Welfare [Option ID = 35592]

47) Soil moisture deficiency level for scheduling irrigation in jute [Question ID = 16399][Question Description = 147_152_NRM2_SEP22_Q47]

1. 40 - 50 % [Option ID = 35593]

2. 50 - 60 % [Option ID = 35594]

3. 60 - 70 % [Option ID = 35595]

4. 30 - 40 % [Option ID = 35596]

48) Water man of India [Question ID = 16400][Question Description = 148_152_NRM2_SEP22_Q48]

1. Pavan Sukhdev [Option ID = 35597]

2. Rattan Lal [Option ID = 35598]

3. Anna Hazare [Option ID = 35599]

4. Rajendra Singh [Option ID = 35600]

49) 'Bunga' watershed is located in

[Question ID = 16401][Question Description = 149_152_NRM2_SEP22_Q49]

1. Uttarakhand [Option ID = 35601]

2. Chandigarh [Option ID = 35602]

3. Madhya Pradesh [Option ID = 35603]
4. Chhatisgarh [Option ID = 35604]

50) The state having highest water resources

[Question ID = 16402][Question Description = 150_152_NRM2_SEP22_Q50]

1. Odisha [Option ID = 35605]
2. Punjab [Option ID = 35606]
3. Tamilnadu [Option ID = 35607]
4. Uttar Pradesh [Option ID = 35608]

Topic:- 64 Agricultural Chemicals_PHD

1) Polynactins are miticidal compounds. It is produced by[Question ID = 16253][Question Description = 101_154_AGC_SEP22_Q01]

1. *Streptomyces aureus* [Option ID = 35009]
2. *Streptomyces avermitilis* [Option ID = 35010]
3. *Streptomyces hygroscopicus* [Option ID = 35011]
4. *Bacillus sphaericus* [Option ID = 35012]

2) Disparlure is which group of pest controlling agent?

[Question ID = 16254][Question Description = 102_154_AGC_SEP22_Q02]

1. Antifeedant [Option ID = 35013]
2. Pheromone [Option ID = 35014]
3. Moulting hormone [Option ID = 35015]
4. Chemosterilant [Option ID = 35016]

3) "Paper factor 8" is linked with which of the following compound?

[Question ID = 16255][Question Description = 103_154_AGC_SEP22_Q03]

1. Methoprene [Option ID = 35017]
2. Pyriproxifen [Option ID = 35018]
3. Juvabione [Option ID = 35019]
4. Cyromazine [Option ID = 35020]

4) How many N is present in the structure of buprofezin?

[Question ID = 16256][Question Description = 104_154_AGC_SEP22_Q04]

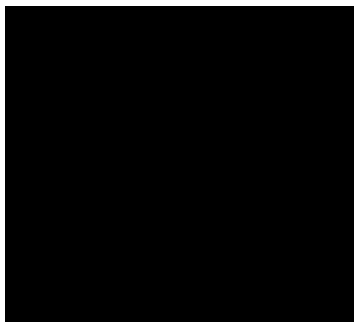
1. 1 [Option ID = 35021]
2. 2 [Option ID = 35022]
3. 3 [Option ID = 35023]
4. 4 [Option ID = 35024]

5) Structurally which of the following pyrethroid is different from others?

[Question ID = 16257][Question Description = 105_154_AGC_SEP22_Q05]

1. Fenvelarate [Option ID = 35025]
2. Etofenprox [Option ID = 35026]
3. Cyhalothrin [Option ID = 35027]
4. Jasmolin [Option ID = 35028]

6)



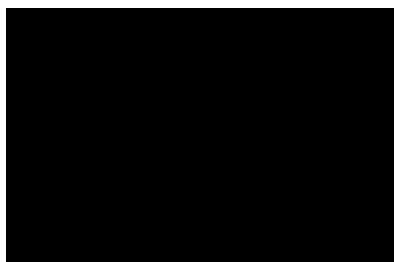
Above chemical structure is of a fungicide. Identify the compound

[Question ID = 16258][Question Description = 106_154_AGC_SEP22_Q06]

1. Tebuconazole [Option ID = 35029]

2. Hexaconazole [Option ID = 35030]
3. Etaconazole [Option ID = 35031]
4. Propiconazole [Option ID = 35032]

7)



Identify the compound

[Question ID = 16259][Question Description = 107_154_AGC_SEP22_Q07]

1. Chlorimuron-ethyl
[Option ID = 35033]
2. Rimsulfuron
[Option ID = 35034]
3. Imazosulfuron
[Option ID = 35035]
4. Pyrazosulfuron-ethyl
[Option ID = 35036]

8) Who am I: I am a fungicide with molecular weight of 373. I am effective against powdery mildew and *Pyricularia oryzae*. I do not belong to group thiocarbamate or organometallic class. I have three N in my structure. My chemical formula is $C_{14}H_{20}N_3O_5PS$ [Question ID = 16260][Question Description = 108_154_AGC_SEP22_Q08]

1. Edifenphos [Option ID = 35037]
2. Triazophos [Option ID = 35038]
3. Pyrazophos [Option ID = 35039]
4. Phosalone [Option ID = 35040]

9) Given below are two statements

Statement I: Chemical formula of Cinerin-I is $C_{20}H_{28}O_3$

Statement II: Chemical formula of Cinerin-II is $C_{21}H_{28}O_4$

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

[Question ID = 16261][Question Description = 109_154_AGC_SEP22_Q09]

1. Both Statement I and Statement II are correct [Option ID = 35041]
2. Both Statement I and Statement II are incorrect [Option ID = 35042]
3. Statement I is correct but Statement II is incorrect [Option ID = 35043]
4. Statement I is incorrect but Statement II is correct [Option ID = 35044]

10) Which of the following is incorrect about Cinerin-I?

[Question ID = 16262][Question Description = 110_154_AGC_SEP22_Q10]

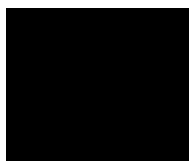
1. Synonym is chrysanthemummonocarboxylic acid
[Option ID = 35045]
2. Source is *Tanacetum cinerarifolium*
[Option ID = 35046]
3. Extracted by water from the plant material
[Option ID = 35047]
4. It has insect knock-down effect
[Option ID = 35048]

11) There are three chiral centres in a molecule. In comparison to the original molecule, how many stereoisomers of this compound will have different boiling points?[Question ID = 16263][Question Description = 111_154_AGC_SEP22_Q11]

1. Seven [Option ID = 35049]
2. Two [Option ID = 35050]
3. Eight [Option ID = 35051]

4. Six [Option ID = 35052]

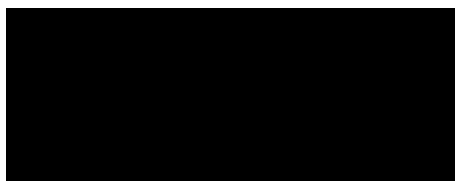
12) In the following molecule, what is the relationship between the two groups (cl, br)?



[Question ID = 16264][Question Description = 112_154_AGC_SEP22_Q12]

1. They are equatorial to one another [Option ID = 35053]
2. They are axial to one another [Option ID = 35054]
3. They are cis to one another [Option ID = 35055]
4. They are trans to one another [Option ID = 35056]

13) The molecules shown below are best described as



[Question ID = 16265][Question Description = 113_154_AGC_SEP22_Q13]

1. Diastereomers [Option ID = 35057]
2. Epimers [Option ID = 35058]
3. Isomers [Option ID = 35059]
4. Enantiomers [Option ID = 35060]

14) Which of the following compound, which is either pesticide of pesticide antidote, is not oxime chemically

[Question ID = 16266][Question Description = 114_154_AGC_SEP22_Q14]

1. Aldicarb [Option ID = 35061]
2. Oxamyl [Option ID = 35062]
3. Pinimicarb [Option ID = 35063]
4. 2 - PAM [Option ID = 35064]

15) Which of the following is an electrophile ?

[Question ID = 16267][Question Description = 115_154_AGC_SEP22_Q15]

1. $:\text{CCl}_2$ [Option ID = 35065]
2. CH_3^- [Option ID = 35066]
3. H_2O [Option ID = 35067]
4. NH_3 [Option ID = 35068]

16) Mark the odd one out [Question ID = 16268][Question Description = 116_154_AGC_SEP22_Q16]

1. Diflubenzuron [Option ID = 35069]
2. Novaluron [Option ID = 35070]
3. Buprofezin [Option ID = 35071]
4. Metoxuron [Option ID = 35072]

17) Which of the following compound acts as uncoupler of oxidative phosphorylation in mitochondria?

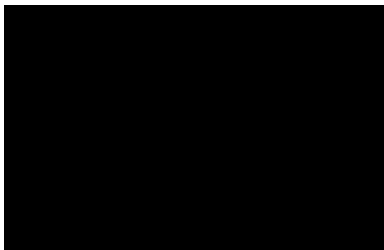
[Question ID = 16269][Question Description = 117_154_AGC_SEP22_Q17]

1. Milbemycin [Option ID = 35073]
2. Avermectin [Option ID = 35074]
3. Ivermectin [Option ID = 35075]
4. Polynactin [Option ID = 35076]

18) 0.01 picogram equivalent toterragram [Question ID = 16270][Question Description = 118_154_AGC_SEP22_Q18]

1. 1×10^{-22} [Option ID = 35077]
2. 1×10^{-25} [Option ID = 35078]
3. 1×10^{-23} [Option ID = 35079]
4. 1×10^{-26} [Option ID = 35080]

19)

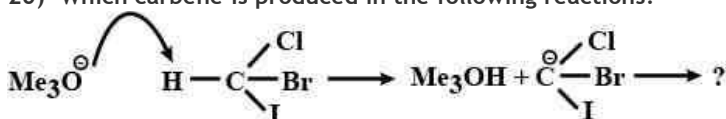


The compound is used to control weeds. Identify the molecule.

[Question ID = 16271][Question Description = 119_154_AGC_SEP22_Q19]

1. Sulfosulfuron [Option ID = 35081]
2. Diuron [Option ID = 35082]
3. Neburon [Option ID = 35083]
4. Isoproturon [Option ID = 35084]

20) Which carbene is produced in the following reactions?



[Question ID = 16272][Question Description = 120_154_AGC_SEP22_Q20]

1. CClBr [Option ID = 35085]
2. CBrI [Option ID = 35086]
3. CClI [Option ID = 35087]
4. All [Option ID = 35088]

21) Which of the following is the most sensitive of the spectral methods?[Question ID = 16273][Question Description = 121_154_AGC_SEP22_Q21]

1. Absorption spectroscopy [Option ID = 35089]
2. Mass spectroscopy [Option ID = 35090]
3. Flame emission spectroscopy [Option ID = 35091]
4. Atomic emission spectroscopy [Option ID = 35092]

22) Which of the following problems occur while combining gas chromatography and mass spectrometry?

[Question ID = 16274][Question Description = 122_154_AGC_SEP22_Q22]

1. Difference in operating pressures [Option ID = 35093]
2. Reduction in sensitivity [Option ID = 35094]
3. Direct identification is not possible [Option ID = 35095]
4. It does not permit direct introduction of the effluent [Option ID = 35096]

23) Given below are two statements

Statement I: Assuming a resolution of 1000, you can distinguish between m/z 10.00 and m/z 10.01.

Statement II: The higher the mass spectrometric resolution, the better the distinction between two only slightly differing m/z value

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

[Question ID = 16275][Question Description = 123_154_AGC_SEP22_Q23]

1. Both Statement I and Statement II are correct [Option ID = 35097]
2. Both Statement I and Statement II are incorrect [Option ID = 35098]
3. Statement I is correct but Statement II is incorrect [Option ID = 35099]
4. Statement I is incorrect but Statement II is correct [Option ID = 35100]

24) In gas chromatography, the concentration of a substance can be determined by ..

[Question ID = 16276][Question Description = 124_154_AGC_SEP22_Q24]

1. Comparison of the R_t of the substance with that of a standard. [Option ID = 35101]
2. Measurement of the height of the peak produced by the substance. [Option ID = 35102]
3. Comparison of the area under the peak produced by the substance with the areas under the peaks produced by standard solutions. [Option ID = 35103]
4. Calculation of the R_t value of the substance. [Option ID = 35104]

25) Which of the following pesticide is acetolactate syntase inhibitor?

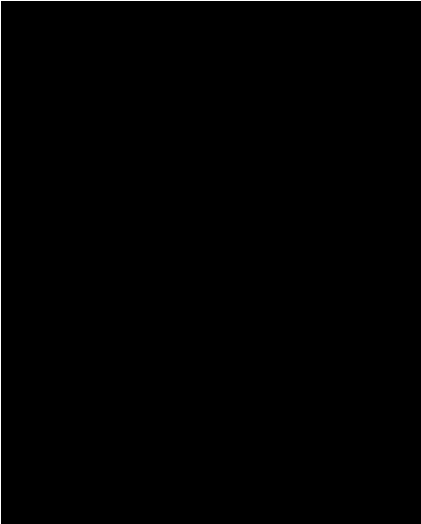
[Question ID = 16277][Question Description = 125_154_AGC_SEP22_Q25]

1. Isoproturon [Option ID = 35105]
2. Metsulfuron-methyl [Option ID = 35106]
3. Simazine [Option ID = 35107]
4. Glyphosate [Option ID = 35108]

26) These group of plant secondary metabolites are highly polar in nature, produces foam in the presence of water. These compounds are [Question ID = 16278][Question Description = 126_154_AGC_SEP22_Q26]

1. Phenolics [Option ID = 35109]
2. Alkaloids [Option ID = 35110]
3. Saponins [Option ID = 35111]
4. Tannins [Option ID = 35112]

27)



The compound is an insecticide. Name of the compound is

[Question ID = 16279][Question Description = 127_154_AGC_SEP22_Q27]

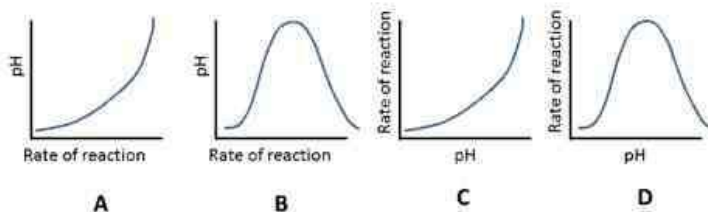
1. Permethrin [Option ID = 35113]
2. Cyhalothrin [Option ID = 35114]
3. Imiprothrin [Option ID = 35115]
4. Etofenprox [Option ID = 35116]

28) Which of the following is NOT an ion source?

[Question ID = 16280][Question Description = 128_154_AGC_SEP22_Q28]

1. ESI [Option ID = 35117]
2. APCI [Option ID = 35118]
3. EI [Option ID = 35119]
4. GCI [Option ID = 35120]

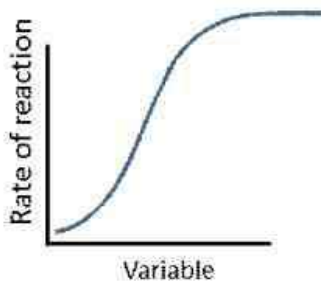
29) Which graph shows the effect of pH on enzyme activity?



[Question ID = 16281][Question Description = 129_154_AGC_SEP22_Q29]

1. D [Option ID = 35121]
2. C [Option ID = 35122]
3. A [Option ID = 35123]
4. B [Option ID = 35124]

30) Following graph shows the effect of which factor in enzyme activity?



[Question ID = 16282][Question Description = 130_154_AGC_SEP22_Q30]

1. Temperature [Option ID = 35125]
2. Substrate concentration [Option ID = 35126]
3. Activation energy [Option ID = 35127]
4. pH [Option ID = 35128]

31) Which indicator is used to test for the presence of proteins?[Question ID = 16283][Question Description = 131_154_AGC_SEP22_Q31]

1. Sudan IV [Option ID = 35129]
2. Benedict's Reagent [Option ID = 35130]
3. Biuret Reagent [Option ID = 35131]
4. Iodine [Option ID = 35132]

32) What is the relationship between glucose, mannose and galactose?[Question ID = 16284][Question Description = 132_154_AGC_SEP22_Q32]

1. They are isomers [Option ID = 35133]
2. They are epimers [Option ID = 35134]
3. They are ketoses [Option ID = 35135]
4. No relationship exists [Option ID = 35136]

33) What best describes amylopectin?[Question ID = 16285][Question Description = 133_154_AGC_SEP22_Q33]

1. Unbranched linear polymer with alpha 1-4 glycosidic linkages [Option ID = 35137]
2. Unbranched linear polymer with beta 1-4 glycosidic linkages [Option ID = 35138]
3. Highly branched, branched sites contain alpha 1-6 glycosidic linkages [Option ID = 35139]
4. Highly branched, branched sites contain beta 1-6 glycosidic linkages [Option ID = 35140]

34) Which of the following vitamin has sulfur[Question ID = 16286][Question Description = 134_154_AGC_SEP22_Q34]

1. Thiamin [Option ID = 35141]
2. Riboflavin [Option ID = 35142]
3. Niacin [Option ID = 35143]
4. Cyanocobalamin [Option ID = 35144]

35) Betaine is a natural colorant. It is a[Question ID = 16287][Question Description = 135_154_AGC_SEP22_Q35]

1. Modified sugar [Option ID = 35145]
2. Modified lipid [Option ID = 35146]
3. Modified amino acid [Option ID = 35147]
4. Modified fatty acid [Option ID = 35148]

36) Number of carbon atom in sesterterpene is[Question ID = 16288][Question Description = 136_154_AGC_SEP22_Q36]

1. 15 [Option ID = 35149]
2. 20 [Option ID = 35150]
3. 25 [Option ID = 35151]
4. 30 [Option ID = 35152]

37) In general, pH of biogas slurry ranged between[Question ID = 16289][Question Description = 137_154_AGC_SEP22_Q37]

1. 6.0-6.5 [Option ID = 35153]
2. 5.0-6.0 [Option ID = 35154]
3. 7.0-8.5 [Option ID = 35155]
4. None of the above [Option ID = 35156]

38) Anhydrous ammonia is being used as liquid fertilizer. It containsmass% N[Question ID = 16290][Question Description = 138_154_AGC_SEP22_Q38]

1. 78 [Option ID = 35157]
2. 82 [Option ID = 35158]

3. 85 [Option ID = 35159]
4. 76 [Option ID = 35160]

39) Phosphorus uptake in alkali soil in the form of[Question ID = 16291][Question Description = 139_154_AGC_SEP22_Q39]

1. H_2PO_4^- [Option ID = 35161]
2. HPO_4^{2-} [Option ID = 35162]
3. PO_4^{3-} [Option ID = 35163]
4. H_3PO_4 [Option ID = 35164]

40) The conversion factor for calculating P from P_2O_5 [Question ID = 16292][Question Description = 140_154_AGC_SEP22_Q40]

1. $\text{P}_2\text{O}_5 \times 2.29$ [Option ID = 35165]
2. $\text{P} \times 0.44$ [Option ID = 35166]
3. $\text{P} \times 2.29$ [Option ID = 35167]
4. $\text{P}_2\text{O}_5 \times 0.44$ [Option ID = 35168]

41) N content in thiourea is[Question ID = 16293][Question Description = 141_154_AGC_SEP22_Q41]

1. 46% [Option ID = 35169]
2. 36.8% [Option ID = 35170]
3. 22.5% [Option ID = 35171]
4. 33% [Option ID = 35172]

42) Saline soil also known as _____[Question ID = 16294][Question Description = 142_154_AGC_SEP22_Q42]

1. Solonchak [Option ID = 35173]
2. Solonetz [Option ID = 35174]
3. Sodochalk [Option ID = 35175]
4. None of the above [Option ID = 35176]

43) Given below are two statements

Statement I: Tween-80 is (polyoxyethylene sorbitan monooleate) and Tween-20 is (polyoxyethylene sorbitan monolaurate).

Statement II: Tween 80 has a longer aliphatic tail and therefore more lipophilic. Tween 20 is the more hydrophilic.

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

[Question ID = 16295][Question Description = 143_154_AGC_SEP22_Q43]

1. Both Statement I and Statement II are incorrect [Option ID = 35177]
2. Both Statement I and Statement II are correct [Option ID = 35178]
3. Statement I is correct but Statement II is incorrect [Option ID = 35179]
4. Statement I is incorrect but Statement II is correct [Option ID = 35180]

44) Resistivity of ultrapure water is[Question ID = 16296][Question Description = 144_154_AGC_SEP22_Q44]

1. 28.1 M Ω . cm [Option ID = 35181]
2. 12.8 M Ω . cm [Option ID = 35182]
3. 18.2 M Ω . cm [Option ID = 35183]
4. 21.8 M Ω . cm [Option ID = 35184]

45) Ultrasonicator uses which of the following type of energy?

[Question ID = 16297][Question Description = 145_154_AGC_SEP22_Q45]

1. Acoustic energy [Option ID = 35185]
2. Mechanical energy [Option ID = 35186]
3. Vibrational energy [Option ID = 35187]
4. Thermal energy [Option ID = 35188]

46) Extraction efficiency of bioactive compound from any plant material DOES NOT depend on

[Question ID = 16298][Question Description = 146_154_AGC_SEP22_Q46]

1. Moisture content in plant material [Option ID = 35189]
2. Particle size of plant material [Option ID = 35190]
3. Drying condition of plant material [Option ID = 35191]
4. Choice of solvent [Option ID = 35192]

47) Pumpkin is one of the source of which of the following antioxidant?

[Question ID = 16299][Question Description = 147_154_AGC_SEP22_Q47]

1. Anthocyanin [Option ID = 35193]

2. Carotenoids [Option ID = 35194]
3. Flavonoids [Option ID = 35195]
4. Tannins [Option ID = 35196]

- 48) A. Rubber is basically polyterpene
- B. Diterpenes are more volatile than sesquiterpene
- C. Terpenoids are made up of 2-methyl-3-butene
- D. Salannin is an example of triterpenoid

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

[Question ID = 16300][Question Description = 148_154_AGC_SEP22_Q48]

1. B and C only [Option ID = 35197]
2. A and B only [Option ID = 35198]
3. A and D only [Option ID = 35199]
4. B and D only [Option ID = 35200]

49) Median value of the experiment where values are 22, 24, 26, 28, 31, 34, 35[Question ID = 16301][Question Description = 149_154_AGC_SEP22_Q49]

1. 28 [Option ID = 35201]
2. 26 [Option ID = 35202]
3. 26.5 [Option ID = 35203]
4. 27 [Option ID = 35204]

50) In statistics, t-test is done to[Question ID = 16302][Question Description = 150_154_AGC_SEP22_Q50]

1. compare of two medians [Option ID = 35205]
2. compare of two means [Option ID = 35206]
3. compare of two mode [Option ID = 35207]
4. calculate the difference [Option ID = 35208]