

8th Science Lesson 21 Questions in English

21] Crop Production And Management

1. Assertion(A): Humans and animals are directly or indirectly dependent on plants

Reason(R): Animals and humans cannot make their own food

- a) Both (A) and (R) are correct, but (R) does not explain (A)
- b) Both (A) and (R) are wrong
- c) **Both (A) and (R) are correct and (R) explains (A)**
- d) (A) is Correct and (R) is wrong

Explanation

Green plants make their own food using a process called photosynthesis. **Animals and humans cannot make their own food.** Thus, humans and animals are directly or indirectly dependent on plants

2. Which of the following statement is correct?

- 1) Energy from the food is used by the organisms for carrying out their various body functions.
 - 2) Plants and animals are the main source of food for all the organisms
 - 3) In order to provide food for a larger population production, proper planning, management and distribution is needed.
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) **All the above**

Explanation

Energy from the food is used by the organisms for carrying out their various body functions. Plants and animals are the main source of food for all the organisms. In order to provide **food for a larger population production, proper planning, management and distribution is needed.** Farmers are faced with the challenge of producing sufficient crops to meet the growing demand while maintaining the quality and quantity of resources for future generations.

3. Which of the following statement is incorrect?

- 1) Agriculture has always been the backbone of our country's economy
 - 2) Ever since the Green Revolution, we have been cultivating different types of crops to cater the increasing demand.
- a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) **None**

Explanation

Agriculture has always been the **backbone** of our country's economy. Ever since the **Green Revolution**, we have been **cultivating different types of crops** to cater the increasing demand. In our country the following three categories of crops are grown.

4. Which of the following is not a Kharif crop?

- a) Paddy
- b) Maize
- c) **Pea**
- d) Cotton

Explanation

Kharif Crops which are sown in the rainy season (i.e., from June to September) are called kharif crops. **Paddy, maize, soya bean, groundnut, cotton** etc., are kharif crops.

5. During which time Rabi crops are grown?

- a) June to September
- b) **October to march**
- c) Summer season
- d) January to march

Explanation

Rabi Crops grown in winter season (i.e., from **October to March**) are called rabi crops. Examples of rabi crops are wheat, gram, pea, mustard, linseed.

6. Which of the following is not a Zaid crop?

- a) Muskmelon
- b) Watermelon
- c) **Groundnut**
- d) Cucumber

Explanation

Zaid Crops (Summer Crops) which are grown in summer season are called Zaid crops. **Muskmelon, watermelon and cucumber** are examples for Zaid crops.

7. Which of the following are food crops?

- 1) Paddy
- 2) Maize
- 3) Sorghum
- a) **1, 2**
- b) 1, 3
- c) 2, 3
- d) All the above

Explanation

According to utility, crops are classified as below:

Food crops – Paddy and maize are cultivated for human consumption.

8. Match the following

- | | |
|----------------------|------------|
| I. Fodder crops | 1. Croton |
| II. Fabre crops | 2. Cotton |
| III. Oil crops | 3. Sesame |
| IV. Ornamental crops | 4. Millets |
- a) 3, 1, 2, 4
b) 4, 1, 2, 3
c) **4, 2, 3, 1**
d) 4, 3, 2, 1

Explanation

- **Fodder crops** – These are useful for livestock consumption. E.g. **Sorghum, millets**
- **Fabre crops** - These crops are used for cordage and textile. E.g. **Cotton, hemp**
- **Oil crops** - Oil crops are useful in a large scale for consumption or industrial uses. E.g. **Ground nut, sesame.**
- **Ornamental crops** - These are utilized for landscape gardening. E.g- **Croton, Euphorbia.**

9. _____ is the largest producer of bananas and mangoes in the world

- a) China
b) Bangladesh
c) **India**
d) Brazil

Explanation

Our country is the largest producer of bananas and mangoes in the world. It is also the second largest producer of wheat and rice.

10. Which of the following statement is correct?

- 1) Growing crops in the field is a skilful job.
2) Physical and mental skills are involved in this practice
3) Different activities in crop production are ploughing, sowing, applying fertilizers, harvesting and seed storage
a) 1, 2
b) 1, 3
c) 2, 3
d) **All the above**

Explanation

Growing crops in the field is a skilful job. Physical and mental skills are involved in this practice. Different activities in crop production are **ploughing, sowing, applying fertilizers, harvesting and seed storage.** All these activities collectively have an effect on the yield of crops.

11. Which of the following statement is correct?

- 1) Soil preparation is the first step in the crop production practice.
 - 2) The most important aspect in agricultural process is to loosen the bottom soil.
 - 3) The loosened soil helps in the growth of earthworm and soil microbes.
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

Soil preparation is the first step in the crop production practice. The most important aspect in agricultural process is to loosen the topsoil. The **loosened soil helps in the growth of earthworm and soil microbes**.

12. Which of the following are absorbed by plants through root from soil?

- 1) Water
 - 2) Minerals
 - 3) Air
 - 4) Nutrients
- a) 1, 2, 4
 - b) 1, 3, 4
 - c) 2, 3, 4
 - d) All the above

Explanation

Earthworm and soil microbes add humus to the soil and are friendly to farmers. Plants absorb **water, minerals, nutrients and air** from the **soil through their roots**

13. By which of the following methods soil is prepared?

- 1) Ploughing
 - 2) Levelling
 - 3) Basal manuring
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

The soil is prepared by the following methods:

- Ploughing
- Levelling
- Basal manuring

14. Which of the following facilitate the availability of nutrients in the root zone of cultivating crops?

- a) **Ploughing**
- b) Levelling
- c) Basal manuring
- d) All the above

Explanation

Ploughing or tilling is the process of loosening and turning the soil up and down to **facilitate the availability of nutrients in the root zone of the cultivating crop**.

15. Assertion(A): A plough is made of wood and is drawn by a pair of bulls or horses used for levelling of soil

Reason(R): Plough is mainly used for tilling the soil, to add fertilisers to the crop, remove weeds and other waste materials from the field and also to turn the soil

- a) Both (A) and (R) are correct, but (R) does not explain (A)
- b) Both (A) and (R) are wrong
- c) **Both (A) and (R) are correct and (R) explains (A)**
- d) (A) is Correct and (R) is wrong

Explanation

Plough is mainly used for tilling the soil, to add fertilisers to the crop, remove weeds and other waste materials from the field and also to turn the soil. A plough is made of wood and is drawn by a pair of bulls or horses.

16. The main part of the plough is called as_____

- a) **Plough shaft**
- b) Plough share
- c) Plougher
- d) Leveller

Explanation

A plough contains a strong and a sharp triangular iron strip known as ploughshare. The **main part of the plough** is a long log of wood which is called **plough shaft**. The other end is attached to a beam which is placed on the bull's neck.

17. Which of the following statement about hoe is correct?

- 1) It is a simple agricultural tool which is used to till the land, remove weeds and dig up soil
 - 2) It has a long wooden rod with a bent iron plate at both the ends
- a) **1 alone**
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

Hoe is a simple agricultural tool which is used to till the land, remove weeds and dig up soil. It has a long wooden rod with a bent iron plate at one end. The other end may be attached to an animal.

18. Which of the following statement is correct?

- 1) Cultivator involves the use of a tractor to drive the cultivator
 - 2) Cultivators also kill weeds and dig up unwanted vegetation available in the field
 - 3) Cultivators takes much more time
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

Cultivator involves the use of a tractor to drive the cultivator. Cultivators also kill weeds and dig up unwanted vegetation available in the field. Nowadays ploughing is done by tractor-driven cultivator. **The use of cultivator saves labour and time**

19. Which of the following statement is incorrect?

- 1) The levelling of soil is done with an implement called the leveller, which is a heavy wooden or iron plank.
 - 2) Levelling the field also helps in uniform distribution of water during irrigation.
- a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

Once the field is ploughed, the topsoil is quite loose. The levelling of soil is done with an implement called the leveller, which is a heavy wooden or iron plank. Levelling the field also helps in uniform distribution of water during irrigation.

20. Assertion(A): To increase the fertility of the soil, we add manure to the soil even before we begin the sowing

Reason(R): Application of green manure and farm yard manure will not enhance the growth

- a) Both (A) and (R) are correct, but (R) does not explain (A)
- b) Both (A) and (R) are wrong
- c) Both (A) and (R) are correct and (R) explains (A)
- d) (A) is Correct and (R) is wrong

Explanation

Manuring means adding manure to the soil. Manure contains many nutrients required for the growth of crop plants. To increase the fertility of the soil, we add manure to the soil even before we begin the sowing because it gets properly incorporated into the soil. **Application of green manure and farm yard manure will always enhance the growth and yield of the crops.**

21. _____ is the second step in crop production

- a) Levelling
- b) Manuring
- c) **Sowing**
- d) None

Explanation

Sowing of Seeds is the **second step in crop production**. Once the soil preparation is over, sowing of the seeds can be done.

22. Assertion(A): Sowing is the actual process of planting the seeds in the soil.

Reason(R): The seeds that are sown have to be selected very carefully to have high quality.

- a) **Both (A) and (R) are correct, but (R) does not explain (A)**
- b) Both (A) and (R) are wrong
- c) Both (A) and (R) are correct and (R) explains (A)
- d) (A) is Correct and (R) is wrong

Explanation

Sowing is the actual process of planting the seeds in the soil. The seeds that are sown have to be selected very carefully to have high quality. Various methods are followed for sowing the seeds.

23. _____ method is also called broadcasting

- a) **Sowing by hand**
- b) Seed Drill
- c) Dibbling
- d) All the above

Explanation

The **scattering of seeds by hand** is the simplest method of sowing seeds. This method is also called **broadcasting**. This is the most economical method of sowing seed.

24. Which of the following statement is correct?

- 1) Seed Drill is an old method of sowing seeds
 - 2) Seed drills ensure that the seeds are planted at equal intervals and at the correct depth in the soil
 - 3) It is usually done by attaching iron drills to a tractor
- a) 1, 2
 - b) 1, 3
 - c) **2, 3**
 - d) All the above

Explanation

Seed Drill is a modern method of sowing seeds. It is a better and more efficient method than sowing by hand. It is usually done by attaching iron drills to a tractor. Seed drills ensure that the seeds are planted at equal intervals and at the correct depth in the soil.

25. Dibbling is a done with the help of_____

- a) Cultivator
- b) Levellor
- c) **Hand**
- d) All the above

Explanation

Dibbling is the placement of seed material in a furrow, pit or hole at predetermined spacing with a dibble, **more commonly by hand**. Soil around the hole is pressed with hand or leg for moist soil contact.

26. Assertion(A): Transplanting is removal of an actively growing seedling from one place and planting it in the main field for further growth till harvest

Reason(R): Transplanting makes use of pre grown plants, seedlings or vegetative propagated Clones

- a) Both (A) and (R) are correct, but (R) does not explain (A)
- b) Both (A) and (R) are wrong
- c) **Both (A) and (R) are correct and (R) explains (A)**
- d) (A) is Correct and (R) is wrong

Explanation

Transplanting is removal of an actively growing seedling from one place (usually nursery bed) and **planting it in the main field for further growth till harvest**. Transplanting makes use of pre grown plants, seedlings or vegetative propagated clones.

27. Which of the following statement is correct?

- 1) If seeds are simply scattered on top they are likely to be blown away or eaten by animals or birds
 - 2) If we sow them too deep into the ground, they will not germinate due to lack of air
 - 3) The seeds must be sown at the correct depth in the soil
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) **All the above**

Explanation

If **seeds are simply scattered on top** they are likely to be **blown away or eaten by animals or birds**. At the same time, if **we sow them too deep into the ground**, they will **not germinate due to lack of air**. So, seeds **must be sown at the correct depth** in the soil.

28. Assertion(A): The seeds that are sown should be of the highest quality

Reason(R): Planting seeds at equidistance have been proved to increase the yield of the farm.

- a) **Both (A) and (R) are correct, but (R) does not explain (A)**
- b) Both (A) and (R) are wrong
- c) Both (A) and (R) are correct and (R) explains (A)
- d) (A) is Correct and (R) is wrong

Explanation

Seeds must be sown in proper distance and the distance is varied from one crop to other crop. Planting seeds at equidistance have been proved to increase the yield of the farm. The **seeds that are sown should be of the highest quality**. They should be free from all diseases.

29. The substances which are added to the soil, that enhance nutrients of soil are called as_____

- a) Manure
- b) Fertilizers
- c) **Both a and b**
- d) None

Explanation

The **substances which are added to the soil in the form of nutrients to enhance the growth of plants are called manure and fertilisers**. The term fertility refers to the inherent capacity of a soil to supply nutrients to crop plants in adequate amounts and in suitable proportions.

30._____ is an organic substance obtained from the decomposition of plants or animal wastes

- a) Urea
- b) Fertilizer
- c) **Manure**
- d) All the above

Explanation

Manure is an organic substance obtained from the decomposition of plants or animal wastes. Farmers dump plant and animal waste in pits at open places and allow it to decompose.

31. Which of the following can be increased by manure?

- 1) Water-holding capacity
 - 2) Soil aggregation
 - 3) Soil aeration
 - 4) Permeability
- a) 1, 3, 4
 - b) 2, 3, 4
 - c) 1, 2, 3
 - d) **All the above**

Explanation

Regular addition of organic manures helps to maintain the soil fertility, protecting them from wind and water erosion and preventing nutrient losses through runoff and leaching. This also increases **water-holding capacity, soil aggregation, soil aeration and permeability**.

32. Fertilizers are mainly composed of_____

- 1) Urea
- 2) Ammonium sulphate
- 3) NPK
- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) **All the above**

Explanation

Fertilizer is a substance which is added to the soil to improve plants' growth and yield. Fertilizers are composed mainly of urea, ammonium sulphate, super phosphate, potash, NPK (Nitrogen, Phosphorus, Potassium).

33. Which of the following statement is correct?

- 1) Water alone is important for the proper growth and development of plants
- 2) Plants absorb water from their surrounding with the help of the root system.
- 3) The time and frequency of irrigation varies from crop to crop, soil to soil and season to season.
- a) 1, 2
- b) 1, 3
- c) **2, 3**
- d) All the above

Explanation

Water is important for the proper growth and development of plants. Plants absorb water from their surrounding with the help of the root system. The supply of water to crops at regular intervals is called irrigation.

34. Which of the following is not a source of irrigation?

- a) Pond
- b) Lake
- c) **Sea**
- d) Dam

Explanation

Fertilizers can also be applied through the irrigation. The various **sources of irrigation are wells, tube wells, ponds, lakes, rivers, dams and canal**.

35. How many methods of irrigation are carried out?

- a) 3

- b) 2
- c) 4
- d) 5

Explanation

Irrigation can be carried out by two different methods.

- Traditional Methods
- Modern Methods

36. Which of the following statement about manual irrigation is correct?

- 1) In these methods, irrigation is done manually
 - 2) Pumps are also commonly used for lifting water from various sources
 - 3) Diesel, biogas, electricity and solar energy are the few important sources of energy needed to run these pumps.
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

In traditional methods, irrigation is done manually. Here, a farmer pulls out water from wells or canals by himself or using cattle and carries to farming fields. Pumps are also commonly used for lifting water from various sources. Diesel, biogas, electricity and solar energy are the few important sources of energy needed to run these pumps.

37. The main advantage of traditional method is_____

- a) Easy to operate
- b) Cheaper
- c) Even distribution of water
- d) All the above

Explanation

The **main advantage of traditional method is that it is cheaper**. But its efficiency is poor because of the uneven distribution of water. It also leads to heavy water loss.

38. Which of the following statement is incorrect?

- 1) The modern irrigation methods help to overcome the problems exist in the traditional methods
 - 2) It also facilitates the even distribution of moisture in the field
- a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

The **modern irrigation methods help to overcome the problems exist in the traditional methods**. It also facilitates the **even distribution of moisture in the field**.

39. Which of the following statement about Sprinkler System is correct?

- 1) This method is much advisable in areas where water scarcity does not exist
- 2) Here a pump is connected to pipes which generate pressure and water is sprinkled through the fine nozzles of pipes.
 - a) 1 alone
 - b) 2 alone**
 - c) 1, 2
 - d) None

Explanation

A sprinkler system, as its name suggests, sprinkles water over the crop and helps in an even distribution of water. This **method is much advisable in areas facing water scarcity**. Here a pump is connected to pipes which generate pressure and water is sprinkled through the fine nozzles of pipes.

40. Which of the following statement about drip irrigation is correct?

- 1) In drip system, water is released drop by drop exactly at the root zone using a hose or pipe
- 2) This method is considered as the effective one in regions where the availability of water is less
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2**
 - d) None

Explanation

In drip system, water is released drop by drop exactly at the root zone using a hose or pipe. This method is considered as the effective one in regions where the availability of water is less.

41. The global population is expected to be 9 billion by the year_____

- a) 2030
- b) 2040
- c) 2025
- d) 2050**

Explanation

The **global population** is expected to be **9 billion by the year 2050**. So, efficient and sustainable water use is needed for our own generation and future generations

42. Agriculture activities alone utilize_____ % of the available fresh water resources

- a) 40
- b) 70**

- c) 50
- d) 65

Explanation

Agriculture activities alone utilize 70% of the available fresh water resources. So, drip irrigation is a better solution for economical use of water.

43. The undesirable plants grown along with the main crops are called_____

- a) **Weed**
- b) Ferns
- c) Tilers
- d) All the above

Explanation

In an agriculture field many other undesirable plants may grow naturally along with the main crop. **These undesirable plants are called weeds.** The removal of weeds is called weeding.

44. Which of the following statement is correct?

- 1) Weeding is an important process because weeds compete with the crop plants for the nutrients, sunlight, water, space and other resources
- 2) Farmers adopt many ways to remove weeds and control their growth
 - a) 1 alone
 - b) 2 alone
 - c) **1, 2**
 - d) None

Explanation

Weeding is an important process because weeds compete with the crop plants for the nutrients, sunlight, water, space and other resources. It results in the undernourishment of crops and leads to low yield. It is mandatory to remove seeds from the field to achieve the expected yield. **Farmers adopt many ways to remove weeds and control their growth. Some of them are explained below.**

45. _____ is the oldest and most efficient method for controlling weeds

- a) Tillage methods
- b) **Mechanical methods**
- c) Summer tillage
- d) All the above

Explanation

Mechanical method is the most common method in which weeds are destroyed physically. Hand pulling or weeding with the help of weeding hole is the **oldest and most efficient method** for controlling weeds.

46. _____ is one of the practical methods of destroying weeds of all categories.

- a) **Tillage methods**

- b) Mechanical methods
- c) Summer tillage
- d) All the above

Explanation

Tillage methods is one of the **practical methods of destroying weeds** of all categories. Weeds are buried in the soil and also exposed to sun heat by deep ploughing.

47. Deep ploughing after harvest of ___ crop is useful for destroying annual and perennial weeds

- a) Rabi
- b) Zaid
- c) Kharif
- d) All the above

Explanation

Deep ploughing after harvest of Rabi crop and exposing underground parts of weeds to strong sunlight during summer months is **useful for destroying many annual and perennial weeds**.

48. Assertion(A): In Biological weed control method bio agents like insects and pathogens are used to control weeds

Reason(R): The objectives of biological control are not eradication, but reduction and regulation of the weed population

- a) Both (A) and (R) are correct, but (R) does not explain (A)
- b) Both (A) and (R) are wrong
- c) **Both (A) and (R) are correct and (R) explains (A)**
- d) (A) is Correct and (R) is wrong

Explanation

In Biological weed control method, **bio agents like insects and pathogens** are used to control weeds. The **objectives of biological control are not eradication, but reduction and regulation of the weed population**.

49. Which of the following statement is correct?

- 1) Chemical methods are very effective in certain cases and have great scope in weed control
 - 2) These chemicals are mixed with water and sprayed over the crops.
- a) 1 alone
 - b) 2 alone
 - c) **1, 2**
 - d) None

Explanation

Chemical methods are **very effective in certain cases** and have great scope in weed control. The chemicals used for killing the weeds or inhibiting their growth are called herbicides. These chemicals are **mixed with water and sprayed over the crops**.

50. There are over_____ species of weeds around the world.

- a) 30000
- b) 3000
- c) 1800
- d) 18000

Explanation

Integrated weed management combines different agronomic practices and herbicides use to manage weeds, so that the reliance on any one weed control technique is reduced. **There are over 30000 species of weeds around the world.**

51. How weed species around the world causes serious losses to crops?

- a) 1800
- b) 18000
- c) 30000
- d) 2800

Explanation

Out of 30000 species around the world, **18000 species cause serious losses to crops**. The continuous use of the same method leads to building up of tolerant species. Therefore, a suitable combination of different methods of weed control should be practiced for minimizing the losses caused by weeds in different crops and also for preventing `environmental pollution.

52. Which of the following crops are harvested using Manual harvesting?

- a) Green gram
- b) Black gram
- c) Horse gram
- d) **All the above**

Explanation

Certain crops are harvested without using tools. Ground nut crop can be harvested by uprooting with hand, provided soil moisture is adequate for hand pulling. The same method is used in the case of **green gram, black gram and horse gram**.

53._____ is the process of separating the grains from their chaffs or pods

- a) **Threshing**
- b) Winnowing
- c) Kneeing
- d) All the above

Explanation

The **process of separating the grains from their chaffs or pods is threshing**. After threshing, we must separate the grains from the chaffs. Winnowing is the process of separating the grains.

54. Which of the following statement is correct?

- 1) The crops need close examination to ensure that harvesting is not premature.
- 2) Premature harvesting leads to shedding of seeds and loss of crop
- 3) If the crops are over ripened, they lose their value in the market and it becomes inconsumable in certain cases
 - a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

There are various factors to be considered before harvesting the crops. The crops need close examination to ensure that harvesting is not premature. **Premature harvesting leads to shedding of seeds and loss of crop.** And if the crops are over ripened, they lose their value in the market and it becomes inconsumable in certain cases.

55. Assertion(A): Storage is an important aspect of postharvest technology, because the crop is seasonally produced but consumed through-out the year

Reason(R): Before storing, harvested grains should be made free from moisture

- a) Both (A) and (R) are correct, but (R) does not explain (A)
- b) Both (A) and (R) are wrong
- c) Both (A) and (R) are correct and (R) explains (A)
- d) (A) is Correct and (R) is wrong

Explanation

Storage is an important aspect of postharvest technology, because the crop is seasonally produced but consumed through-out the year. Therefore, supply of the produce has to be maintained by proper storage. Before storing, harvested grains should be made free from moisture.

56. Spraying of Chemical vapors to minimize pest and insets is called as_____

- a) **Fumigation**
- b) Funigation
- c) Threshing
- d) Winnowing

Explanation

Any moisture in the stored grins will lead to the growth of microorganism. Silos and granaries are used for the storage of grains on large scale. **Chemical vapors are sprayed to minimize pest and insets in godowns.** This is called **fumigation**.

57. When was FCI set up in Chennai?

- a) **1965**
- b) 1969
- c) 1956
- d) 1967

Explanation

Food Corporation of India (FCI) was set up on **14th January 1965** at **Chennai** with the objective of distribution of food grains throughout the country for Public Distribution System (PDS) and maintaining a satisfactory level of operational and buffer stocks of food grains to ensure National Food Security.

58. Which of the following statement is incorrect?

- 1) The stored grains are inspected from time to time to make sure that they are free from diseases and pests.
- 2) The different categories of agricultural produce needing storage are food grains, oil seeds, seeds and folder.
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

The stored grains are inspected from time to time to make sure that they are free from diseases and pests. In our country, grains are stored on a large scale in government-owned godown. The different categories of agricultural produce needing storage are food grains, oil seeds, seeds and folder.

59. How many methods of crop production are there?

- a) 4
- b) 2
- c) 3
- d) 5

Explanation

Crop rotation is planting a series of different crops in the same field following a defined order. **Mono cropping** and **mixed cropping** are the **two methods used in crop production**

60. Which of the following statement is correct?

- 1) Mono cropping is the repeated planting of the same crop in the same field year after year.
- 2) Mixed cropping is the cultivation of two or more than two crops simultaneously on the same land without any pattern
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

Mono cropping is the repeated planting of the same crop in the same field year after year. Mixed cropping is the cultivation of two or more than two crops simultaneously on the same land without any pattern.

61. Assertion(A): Crop rotation has many advantages

Reason(R): Many crops like legumes may have positive effects on succeeding crops in the rotation, leading to greater production over all

- a) Both (A) and (R) are correct, but (R) does not explain (A)
- b) Both (A) and (R) are wrong
- c) **Both (A) and (R) are correct and (R) explains (A)**
- d) (A) is Correct and (R) is wrong

Explanation

Crop rotation has many advantages. Many crops like **legumes may have positive effects on succeeding crops in the rotation**, leading to greater production over all. A shallow rooted grain crop, deep rooted cash crop and restorative crop (legume crop) should be included in the rotation for maintaining soil productivity.

62. The leguminous crops should follow non-leguminous to have atmospheric___ to succeeding crops

- a) Sulphur
- b) Oxygen
- c) **Nitrogen**
- d) Carbon

Explanation

The leguminous crops should follow non- leguminous crops to have **atmospheric nitrogen to succeeding crops**. It helps in maintaining a better balance of nutrients in the soil.

63. Which of the following crops can be intercropped?

- 1) Rice
 - 2) Maize
 - 3) Black gram
 - 4) Urad gram
- a) 1, 2
 - b) 1, 3
 - c) **2, 3**
 - d) 1, 4

Explanation

Weed problem is less in intercropping system compared to their sole crops. Maize and Black gram can be intercropped.

64. _____ plants have symbiotic relation with the Rhizobium bacteria found in their root

- a) Leguminous
- b) Non- leguminous
- c) Both a and b
- d) None

Explanation

Leguminous plants have **symbiotic relation with the Rhizobium bacteria** found in the **root nodules** of these plants. These plants have the ability to fix atmospheric nitrogen in their roots with the help of these bacteria.

65. Which of the following are included in legumes?

- 1) Beans
 - 2) Peanut
 - 3) Carrot
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

The fruits of leguminous plants are called legumes. Examples of legumes include **alfalfa, clover, peas, beans, lentils, lupins, mesquite, carob, soy, and peanuts**. These plants are used in crop rotation to multiply soil nitrogen.

66. Which of the following statement is correct?

- 1) Seed bank is a place where seeds are stored in order to preserve genetic diversity
 - 2) Seeds may be viable for only hundred years
 - 3) Seed banks are like seed libraries that contains valuable information about evolution strategies of plants
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

Seed bank is a place where seeds are stored in order to preserve genetic diversity. **Seeds may be viable for hundreds and even thousands of years**. Seed banks are like seed libraries that contains valuable information about evolution strategies of plants.

67. Royal botanical garden at_____ started collecting seeds formally as seed bank

- a) Bombay
- b) Kolkata
- c) Cochin
- d) Poona

Explanation

The **Royal Botanical Gardens located in Kolkata** first started collecting seeds formally as seed bank. Seed banks were created to store native varieties of seeds. With this initiative farmers have started preserving indigenous seeds and reducing their dependence on hybrid seeds from seed companies.

68. Navadanya seed bank, a non-governmental organization located in_____

- a) Kolkata
- b) Delhi
- c) Chennai
- d) Poona

Explanation

Navadanya seed bank, a non-governmental organization located in **New Delhi** conserve around **50,000 crop varieties**, with the primary focus on preservation of grain species.

69. Acharya Jagadish Chandra Bose Indian Botanic Garden located in_____

- a) Kolkata
- b) Delhi
- c) Chennai
- d) Poona

Explanation

Acharya Jagadish Chandra Bose Indian Botanic Garden located in Kolkata was earlier called **Royal Botanic Garden**. This garden exhibits a wide variety of rare plants and a total collection of over 12,000 specimens. The area of this garden spreads over 109 hectares.

70. Which of the following statement is correct?

- 1) Seed balls are a mixture of soil, compost and plant seeds.
 - 2) Seed balls are prepared by nongovernment organization and enthusiastic school children to grow tree for ecosystem restoration.
 - 3) The concept of seed ball has potential to increase tree cover and also to improve the awareness among the people about conserving plants
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

Seed balls are a mixture of soil, compost and plant seeds. These balls are thrown into land areas. With the monsoon set in, these planted seed balls will germinate into seedling. Seed balls are prepared by nongovernment organization and enthusiastic school children to grow tree for ecosystem restoration. The concept of **seed ball has potential to increase tree cover and also to improve the awareness among the people about conserving plants**.

71. _____ are also called organic seeds.

- a) Seed balls
- b) Heirloom seed
- c) Both a and b
- d) Either a or b

Explanation

Heirloom seeds are also called organic seeds. These seeds are generally produced from open-pollinated plants and they transfer their unique characteristics to the descendants.

72. Assertion(A): An heirloom seed is the seed of plant that has been carefully cultivated and passed down through many generations

Reason(A): Heirloom seed are harvested, dried and stored so that one can replant them in the following season

- a) Both (A) and (R) are correct, but (R) does not explain (A)
- b) Both (A) and (R) are wrong
- c) Both (A) and (R) are correct and (R) explains (A)
- d) (A) is Correct and (R) is wrong

Explanation

An heirloom seed is the seed of plant that has been carefully cultivated and passed down through many generations. Heirlooms are usually planted in small, isolated communities and they generally offer something of value to the grower. Heirloom seed are harvested, dried and stored so that one can replant them in the following season.

73. Which of the following statement is correct?

- 1) The goal of preserving heirloom seed is to prevent any type of change due to outside influence
 - 2) Synthetic fertilizers, herbicides or pesticides are used for organic seeds
- a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

The goal of preserving heirloom seed is to prevent any type of change due to outside influence. **Synthetic fertilizers, herbicides or pesticides are not used for organic seeds** but conventional fertilizer, herbicides and pesticides are used.

74. _____ is a species or group of species whose function reveals the qualitative status of environment.

- a) Bio- indicator
- b) Bio-degradant
- c) Bio-fertilizers

- d) All the above

Explanation

A **bioindicator or biological indicator** is any species or group of species whose **function or status reveals the qualitative status of the environment**.

75. Assertion(A): Biological indicators are used to document and understand changes in earth's living systems especially changes caused by the activities of an expanding human population

Reason(R): Bio-indicators of soil health give us information about soil structure, development, nutrient storage and biological activities.

- a) Both (A) and (R) are correct, but (R) does not explain (A)
- b) Both (A) and (R) are wrong
- c) **Both (A) and (R) are correct and (R) explains (A)**
- d) (A) is Correct and (R) is wrong

Explanation

Biological indicators are used to **document and understand changes in earth's living systems** especially changes caused by the activities of an expanding human population. **Bio-indicators of soil health give us information about soil structure, development, nutrient storage and biological activities**. Biological indicator characterises the state of an ecosystem and brings its modifications.

76. ____ is a natural bio-indicator of climate change and air pollution effect.

- a) Weed
- b) Cuscutta
- c) **Lichen**
- d) None

Explanation

Lichen is a **natural bio-indicator of climate change** and air pollution effect. It is a combination of an alga and a fungus which live together in symbiotic association.

77. Assertion(A): Lichen gives information about changes in climate, air quality and biological process.

Reason(R): Lichen is a sensitive environmental parameter like temperature humidity, wind and air pollutants.

- a) Both (A) and (R) are correct, but (R) does not explain (A)
- b) Both (A) and (R) are wrong
- c) **Both (A) and (R) are correct and (R) explains (A)**
- d) (A) is Correct and (R) is wrong

Explanation

Lichen is a **sensitive environmental parameter** like temperature humidity, wind and air pollutants. It **gives information about changes in climate, air quality and biological process**. It is a combination of an alga and a fungus which live together in symbiotic association.

78. ____ is a national institute for agricultural research, education and extension.

- a) ICAR
- b) IARI**
- c) DRDO
- d) FAO

Explanation

The **Indian Agricultural Research Institute (IARI)** is a national institute for agricultural research, education and extension.

79. Which of the following statement about IARI is correct?

- 1) It is commonly known as the Pusa Institute
 - 2) It is financed and administrated by the ICAR
 - 3) This was responsible for research leading to the green revolution in India during 1950s
- a) 1, 2**
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

Indian Agricultural Research Institute (IARI) commonly known as the Pusa Institute. It is financed and administrated by the ICAR (Indian Council of Agricultural Research). This was responsible for research leading to the green revolution in India during 1970s.

80. The Indian Council of Agricultural Research is an_____ body

- a) Constitutional
- b) Autonomous**
- c) Statutory
- d) NGO

Explanation

The Indian Council of Agricultural Research is an **autonomous body** responsible for co-ordinating agricultural education and research in India.

81. Who serves as the president of ICAR?

- a) Prime Minister
- b) Union minister of Agriculture**
- c) President of India
- d) Vice President

Explanation

The **union minister of agriculture serves as ICAR's president**. It functions under the Department of Agricultural Research and Education, Ministry of Agriculture. It is the largest network of agricultural research and education institutes in the world.

82. Which of the following statement is incorrect?

- 1) Plant shows quick response to the nutrients applied by foliar feedings.
 - 2) The efficiency of nutrients uptake is considered to be 18-19 folds higher when nutrients are applied to the leaves, when compared with nutrients applied to soil
- a) 1 alone
 - b) 2 alone**
 - c) 1, 2
 - d) None

Explanation

Plant shows quick response to the nutrients applied by foliar feedings. The efficiency of nutrients uptake is considered to be **8-9 folds higher when nutrients are applied to the leaves**, when compared with nutrients applied to soil. A foliar feeding is recommended when environmental conditions limit the uptake of nutrients by roots.

83. Which of the following is not a effective microorganism?

- a) Lactic acid bacteria
- b) Yeast
- c) Vibrio Cholera**
- d) Actinomycetes

Explanation

Effective microorganisms are a culture of different effective microbes, commonly occurring in nature. **Nitrogen fixers, phosphate stabilizers, photosynthetic micro-organisms, lactic acid bacteria, yeast, Rhizo bacteria** and various fungi and **actinomycetes** are used as effective microorganisms.

84. Which of the following statement is correct?

- 1) Vermiwash is a liquid that is collected after the passage of water though a column of worm action
 - 2) Vermi-wash is used as a foliar spray for crops.
- a) 1 alone
 - b) 2 alone
 - c) 1, 2**
 - d) None

Explanation

Vermiwash is a liquid that is collected after the passage of water though a column of worm action. It is a collection of excretory product and mucus secretion of earthworms along with micronutrients from the soil organic molecules. **Vermiwash is used as a foliar spray for crops.**

85. Which of the following is not included in Panchgavya?

- a) Ghee

- b) Cow dung
- c) Cow urine
- d) **None**

Explanation

Panchgavya is a promoter with a combination of five products obtained from the cow, which includes **cow dung, cow's urine, milk, curd and ghee**. All the five products are collectively termed as panchgavya.

86. Which of the following statement is incorrect?

- 1) Panchgavya has the potential to play the role of promoting growth and providing immunity booster
- 2) It can be prepared by the farmers themselves with the materials available on the farm.
- 3) Pachgavya can be used for seed treatment also
 - a) 1, 3
 - b) 2 alone
 - c) 3 alone
 - d) **None**

Explanation

Panchgavya has the potential to play the role of promoting growth and providing immunity booster. It provides resistance to pests and increases the overall yield. It can be prepared by the farmers themselves with the materials available on the farm. **Pachgavya can be used for seed treatment also.**

87. Which of the following can be controlled by Biocontrol Methods?

- a) Insects
- b) Mites
- c) Weed
- d) **All the above**

Explanation

Bio-control or biological control is a **method of controlling pests such as insects, mites, weed and plant diseases using other organisms**. Bio predators, bio-pesticides, bio-repellents' and bio-fertilizers are used for controlling microorganisms which cause damage to the crops, pests and insects.

88. The black kneel capsid eats more than_____ fruits

- a) **1000**
- b) 100
- c) 500
- d) 300

Explanation

The black knee capsid is an insect found on fruit trees. It eats **more than 1000 fruit tree red spider mites per year.**

89. Which of the following statement is correct?

- 1) Bio-pesticides are non-living organism or their derived parts which are used as biocontrol agents to protect crops against insect pests.
 - 2) Bio-pesticides are of different types based on their origin
 - 3) Entomopathogenic viruses, bacteria insecticides, particularly bacillus thuringiensis, entomofungal pathogens, protozoans and insect parasitic nematodes have been found to control important pests which affect crops.
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

Bio-pesticides are living organism or their derived parts which are used as biocontrol agents to protect crops against insect pests. Entomopathogenic viruses, bacteria insecticides, particularly bacillus thuringiensis, entomofungal pathogens, protozoans and insect parasitic nematodes have been found to control important pests which affect crops. These bio-pesticides are commercially available but quite difficult to formulate in field conditions. Bio-pesticides are of different types based on their origin.

90. ____ is a fungus used as a biological pesticide.

- a) Bacillus thuringiensis
- b) **Trichoderma viride**
- c) Vibrio cholera
- d) None

Explanation

Trichoderma viride is a fungus used as a biological pesticide. It is useful to control various disease caused by fungi such as wilt, rusting of leaves and root disease.

91. ____ is effectively used to control the pest Lepidoptera that attack cotton, maize plants.

- a) **Bacillus thuringiensis**
- b) Trichoderma viride
- c) Vibrio cholera
- d) None

Explanation

A culture of **bacillus thuringiensis bacteria** is effectively used to control the pest **Lepidoptera** that attack cotton, maize plants. Panchagavya and leaves decoction of some plants are also used as biopesticides.

92. Compound Azadiractin obtained from seeds of_____ serves as a good insect-repellant

- a) Almond
- b) **Neem**
- c) Palm
- d) Mango

Explanation

Compound Azadiractin obtained from seeds of neem serves as a good insect-repellant. One of the earliest pesticides used by man was margosa leaves. The dried leaves repel the pests from stored grains.

93. _____ involves in nitrogen fixation along with photosynthesis.

- a) Anabeana
- b) Nostoc
- c) Azosprillum
- d) **Both a and b**

Explanation

Free living Cyano bacterium involves in nitrogen fixation along with photosynthesis. Eg. **Anabeana, Nostoc**. Symbiotic bacteria fix atmospheric nitrogen. eg. Rhizobium