**Chapter 9**

**Crop Production and Management**

1. Rama had grown few chilli plants in her garden which were giving very good yield and after few weeks she observed the yield had gone down. She carefully examined the area where chilli plants were growing and found that some wild plants had grown between them. Suggest what are these wild plants known and why they have affected the yield of chillies?
2. Despite all favourable conditions, a farmer’s crop fails to give good yield. State the possible reasons for it.
3. Now a days there is lot of buzz for carrying on organic farming, write down what do you understand by it?
4. What was responsible for making man food producer from being just a food gatherer?
5. Define the following terms
6. Agriculture
7. Crop production
8. Transplantation
9. Irrigation
10. Hybridisation
11. Pesticides
12. Fill in the blanks
13. The unwanted plants that grow that grow along with crop plants are called \_\_\_\_\_\_\_\_\_\_\_\_.
14. Cutting and gathering of crops after maturation is known as \_\_\_\_\_\_\_.
15. The removal of weeds is known as \_\_\_\_\_\_\_\_\_\_.
16. Excessive supply of water can reduce air in the soil particles and can cause \_\_\_\_\_\_\_\_\_\_.
17. The process of separation of grains from the cut crop is known as \_\_\_\_\_\_\_\_\_\_\_.
18. The separation of the grains from the chaff is known as \_\_\_\_\_\_\_\_\_\_\_\_\_.
19. \_\_\_\_\_\_\_\_\_\_\_\_\_ is a method useful for areas having acute water shortage.
20. \_\_\_\_\_\_\_\_\_\_\_\_ adversely affects the quality and yield of grains.
21. \_\_\_\_\_\_\_\_\_\_\_\_ enhances the water retaining capacity of the soil.
22. State whether given statements are true/false
23. Paddy and maize are Rabi crop.
24. Seeds are scattered in the field manually by broadcasting.
25. Soil can be replenished by keeping the field fallow.
26. Weeds can be manually removed by spraying weedicide.
27. Hybridization helps in improving the variety of crop.
28. Multiple choice question
29. The process of separating grains the crop is known as
30. Winnowing b) harvesting c) threshing d) hybridization.
31. Large scale storage of grains is done in
32. Silos b) Farms c) Homes d) none
33. Which of this method is not used for weeding?
34. Manual removal b) tilling before sowing c) using weedicide d) irrigation
35. Which of these method cannot be used for soil replenishment
36. Field fallow b) Transplantation c) Crop rotation d) manures
37. Give reason for the following
38. A field is ploughed before sowing of seeds.
39. In case of paddy seedlings are planted in standing water at appropriate distance.
40. We should not give excessive supply of water in field with standing crop.
41. We should use drip irrigation in areas having acute water shortage.
42. Perishable food items are stored in large cold storage or deep freezer.
43. The use of pesticides should be kept to bare minimum.
44. Complete the flow chart showing the various agricultural practices required for growing crop

Preparation of soil

Storage

1. Name the following
2. 2 crops grown during June to October
3. 2 plants sown by transplantation
4. 2 methods used for sowing seeds
5. 2 methods of irrigation
6. In a given field a farmer after growing a crop of wheat, grows pulses before the next wheat crop.
7. What kind of method is the farmer practising?
8. Why is he doing so?
9. State the various methods used for soil replenishment.
10. What are the different advantages of ploughing?
11. Even though pesticide help to kill the pest in the field, it should be used sparingly, justify.
12. Differentiate between traditional system and modern system of irrigation.
13. What are weeds? How can crop be protected from weeds?
14. When and why was green revolution brought about in India?
15. How can a variety of crop be improved?
16. If a person is given a dry piece of land what should to land before sowing of seeds?
17. Many farmers are now using biological methods for pest control, explain.
18. i)How is harvesting done?

ii) After harvesting how does the farmer obtain grains?

1. Where do we normally use sprinkler system of irrigation and why?
2. Farmers grow quick growing plants like alfalfa, sunn hemp, millets etc in their farm, why?
3. How is transplantation done?

**Chapter 10**

**Refraction and Dispersion of Light**

1. Ravi dropped his pencil by mistake in a glass tumbler which was half filled with water. How will the pencil appear near the surface of water and why?
2. I took a hand lens and placed it over a black paper and focused sunlight on the paper .After some time I observed that black paper started burning at a point and a hole gets created

at that point. Suggest why the black paper burns? What kind of lens is present in the hand lens?

1. Fill in the blanks
2. The formation of rainbow is a natural effect of \_\_\_\_\_\_\_\_\_\_\_.
3. The bending of light rays is due to a change in \_\_\_\_\_\_\_\_\_\_ of light when it goes from one medium to another.
4. \_\_\_\_\_\_\_ has the least optical density because the speed of light is maximum in \_\_\_\_\_\_.
5. The angle of \_\_\_\_\_\_\_\_\_\_\_ is the angle between the refracted ray and normal at the point of incidence.
6. A \_\_\_\_\_\_\_ is a piece of a transparent material bounded by two plane surfaces inclined at an angle.
7. A \_\_\_\_\_\_\_\_\_\_ always forms virtual, erect and diminished image.
8. The distance between the optical centre and principal focus of the lens is known as the------------------------------.
9. The image of very far off object is formed at \_\_\_\_\_\_\_\_\_\_\_\_ of the lens.
10. The red, blue and \_\_\_\_\_\_\_\_\_\_\_ are the three \_\_\_\_\_\_\_\_\_\_\_\_ colours.
11. Give one word answers for the following
12. The image formed through an apparent intersection of refracted rays
13. The central point of a spherical mirror
14. A spherical mirror that has reflecting surface which is curved inward.
15. The splitting of white light is.
16. Give reason for the following
17. A pond appears shallower than it actually is.
18. A coin is not visible in an empty cup but becomes visible after some water is poured in the cup.
19. We can see rainbow if the sun comes out after a rainfall.
20. The mirage in desert is due to total internal reflection.
21. We use convex lens as reading lens
22. Astronomers going well above the earth’s surface are not observe the twinkling of stars.
23. State whether given statements are true /false
24. The phenomenon of reflection of light is governed by laws of reflection.
25. When a ray of light propagates in a straight line when it moves from one medium to another medium.
26. The speed of light is different in different medium.
27. More is the refractive index of a substance, more is the optical density.
28. Formation of rainbow is associated with refraction of light.
29. Multiple choice question
30. The ray of light bends from its path when it is
31. Reflected b)refracted c) disperses d) none
32. The Spherical lens also known as converging lens is
33. Convex lens b) Concave lens c) Plain mirror d) none
34. Image of an object placed beyond 2F in case of converging lens is formed at
35. Focus b) 2F c) between F and 2F d) between O and F
36. When a ray of light goes from rarer to denser medium it
37. Bends towards normal b) bends away from normal c) it touches the surface of the medium d) none
38. Define the following terms
39. Refraction
40. Dispersion
41. Absolute refractive index
42. Optical centre
43. Concave lens
44. Differentiate between the following
45. Reflection and Refraction
46. Convex and Concave lens
47. How many times a ray of light gets reflected by 2 plain mirrors placed parallel and facing each other?
48. Draw a diagram to show the apparent position and actual position of pencil when it is partially immersed in water.
49. Draw a ray diagram showing the position of image of very far off building using a convex lens.
50. Geeta planned an activity to observe an object A through pipes as shown in the figure given below, so that she could see objects she could not see directly

A(Object)

Eye

1. How many mirrors should she use to see the object?
2. Indicate the position of the mirrors in the figure.
3. What must be angle with respect to the incident light at which she should place the mirrors?
4. Indicate the direction of rays in the figure.
5. If any of the mirrors is removed, will she be able to see the object.
6. How is the rainbow formed?
7. What causes refraction of light?
8. How are refractive index related to the optical density of a material?
9. Draw a ray diagram to show refraction of light through a glass slab
10. What is relative refractive index?
11. State the rules of refraction.
12. Complete the given table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.N | Position of the Object | Nature of Image | Size of Image | Position |
| 1 | At the 2F |  |  |  |
| 2 |  | Real and inverted | Smaller than the object |  |
| 3 | At the F |  | Larger than Object |  |
| 4 |  | Virtual and Erect |  | Beyond the F, on the same side of lens |

1. Concave lens is also known as diverging lens, justify with help of diagram.
2. State at least 3 uses and application of lens in our daily life.
3. Name 3 places where lens have been used in designing ‘Great refractors’
4. You have a convex lens with focal length 10cm. Draw a ray diagram to show the nature and position of image if an object is placed at a distance of 20 cm.
5. Instead of convex lens as mentioned in the above question if you have concave lens and all other conditions are same draw a ray diagram and write the position and nature of the image.
6. When a refracted ray bends so much as to just graze the boundary between two media, what happens? Where is this phenomena used?