

# Unit 1 (Crop Production and Management)

## Multiple Choice Questions

**Question . 1 Which one of the following conditions is not essential to grow maize?**

- (a) High temperature (b) Humidity
- (c) Low temperature (d) Rainfall

**Answer.** (c) Maize is a kharif crop, which requires high temperature, rainfall and humidity to grow, while rabi crops require low temperature for their growth,

**Question. 2 Propagation of ginger is generally done using**

- (a) seed (b) stem (rhizome)
- (c) root (d) leaf

**Answer.** (b) The ginger is a modified underground stem, which is propagated vegetatively by stem (rhizome) cultivation. It does not propagate by roots, leaves or seeds.

**Question. 3 Which of the following statements is not true for organic manure?**

- (a) It enhances water holding capacity of soil
- (b) It has a balance of all plant nutrients
- (c) It provides humus to soil
- (d) It improves texture of soil

**Answer.** (b) Organic manures are obtained from decomposition of plant and animal wastes that are rich in nutrients and humus.

But all nutrients might not be present in a proportionate amount in it, thus will not solve : the problem if soil is particularly deficient in one or more specific nutrient.

**Question. 4 The term used for the process of separation of grains from chaff is**

- (a) sieving (b) winnowing
- (c) threshing (d) hand picking

**Ans.** (c) The process of separating the edible part of the harvested grains (crop) by loosening and removing the scaly, inedible chaff surrounding the grain.

The process utilises a machine called 'combine' which is a combination of harvester and a thresher.

**Question. 5** Read the statements given below.

1. **Seeds require moisture for germination.**
2. **Plants can absorb nutrients mostly in dissolved form.**
3. **Irrigation protects crops from both frost and hot air currents.**
4. **Irrigation improves soil texture.**

**Choose combination of statements which indicate need to irrigate crops.**

**(a) (1) and (2) (b) (1), (2) and (3)**

**(c) (1), (2), (3) and (4) (d) (1) and (3)**

**Answer.** (a) The combination of statements (1) and (2) indicate need for irrigation.

Irrigation is the supply of water to crops at regular intervals as water or moisture is necessary for seed germination, growth and other physiological processes. Moreover, the plants readily absorb nutrients in dissolved form along with water through root hairs of roots.

It does not protect crops from frost and hot air currents and manure not irrigation improves soil texture.

**Question. 6** Which of the following tools would a farmer use to remove weeds from the field?

**(a) Hoe (b) Plough (c) Axe (d) Cultivator**

**Answer.** (a) Hoe is a simple tool used for removing weeds from the field and loosening of soil, it works like a blade, pulled by the animals in the field. Plough is used for tilling of soil, axe is used for cutting trees and cultivator is another tool implemented for ploughing,

**Question. 7** Which of the following is not true for fertilisers?

**(a) They increase the yield**

**(b) Their excessive use disturbs the balance of nutrients in soil**

**(c) They are generally used in small quantity**

**(d) They are environment friendly**

**Answer.** (d) Fertilisers are not environment friendly as they are chemical substances rich in particular nutrient, Though, they increase the crop yield, the repeated and excessive use of fertilisers in the same field reduces the soil fertility, It also pollutes water bodies as they get dissolved and washed away by rain and also seeps in the water table posing threats to humans.

**Question. 8** Given below are statements about the harmful effects of weeds on crop plants.

1. They interfere in harvesting.
2. They help crop plants to grow healthily.
3. They compete with crop plants for water, nutrients, space and light.
4. They affect the plant growth.

(a) (1), (3) and (4)

(b) Only (3)

(c) (3) and (4)

(d) (1), (2), (3) and (4)

**Answer.** (a) Statements (1), (3) and (4) are correctly suggesting the harmful effects of weeds. Weeds are the undesirable plants that grow along the main crops.

Removal of weeds is necessary because they interfere and affect the major crop's growth, by competing for light, water, nutrients and space. They also interfere during harvesting procedure.

Weeds do not help in healthy growth of crop plants.

**Question. 9 The process of loosening and turning of soil is called**

(a) irrigation and manuring

(b) digging and winnowing

(c) tilling and ploughing

(d) harvesting and storage

**Answer.** (c) The process of loosening and turning of soil is called tilling and ploughing. It is the first step in preparation of soil for cultivation of crop. Ploughing is done using a plough, made of wood or iron.

**Question. 10 The monsoon season in our country is during the months**

(a) April-December

(b) June-September

(c) November-March

(d) January-May

**Answer.** (b) The monsoon season in India is during the months June to September, The crops grown in this season are called kharif crop, e.g. paddy, maize, cotton, etc.

The kharif crops sown in June are harvested towards the end of rainy season (October-November).

**Question. 11 The system of irrigation where water is supplied drop by drop near the roots of plants, is called**

(a) pulley system

(b) drip system

(c) sprinkler system

(d) lever system

**Answer.** (b) Drip system is the method of irrigation which conserves water and avoids wastage as water is made to fall drop by drop at the position of roots. It is best technique for watering fruit plants, trees and gardens.

Sprinkler system is also a modern method of irrigation that efficiently uses water in the form of sprinklers. It is useful for uneven lands, while pulley and lever system are traditional methods of irrigation where a lot of water is wasted.

### Very Short Answer Type Questions

**Question.12 Pick out the odd one from the following words given in the box and give reason for it. Plough, Seed drill, Hoe, Chain pump, Sickle**

**Answer.** Seed drill is the odd one in the above given set of tools as it is a modern agricultural tool used to sow seeds at uniform distances and to properly cover them with soil.

Rest of the tools, i.e. plough (used for tilling), hoe (for removal of weeds and loosening of soil), chain pump (irrigation method) and sickle (tool for removing weeds) are all traditional implements used in agriculture.

**Question. 13 If you are given a dry piece of land for cultivation, what will you do before sowing the seeds?**

**Answer.** If the field is dry for cultivation of crops, the soil preparation is done accordingly before sowing of crops. Preparation of dry soil includes adequate watering to restore the moisture content and then tilled and ploughed to allow growth of microbes and aeration, Finally, the soil is turned and its crumbs are levelled and manures are mixed. The soil is ready for sowing of crops in the field.

**Question. 14 State whether the following statements are True/False**

1. **Using good quality seed is the only criterion to get high yield.**
2. **Growing different crops in different seasons in the same field will deplete the soil of nutrients.**
3. **All crop plants are sown as seeds in the field.**
4. **Cells of root nodules of leguminous plants fix nitrogen.**
5. **Freshly harvested grains must be dried before shoring.**

**Answer.**

1. False, apart from good quality seeds, using appropriate agricultural practices are important for getting higher yield.
2. False, it actually enriches the soil. Different crops utilise different nutrients which permits the replenishment of used nutrients. This method is also called as crop rotation.
3. False, some crop plants need transplantation.
4. False, Rhizobium (bacteria) present in the cells of root nodules of leguminous plants fix nitrogen.
5. True, the freshly harvested grains must be dried. The moisture content in them can spoil the grains or microbial infection may occur.  
Drying reduces the moisture content in grains, thus preventing the attack of different organisms.

**Question. 15 During which months do farmers grow mustard in India?**

**Answer.** Farmers grow mustard during the months from October-March. Mustard is a rabi crop that is sown in beginning of winters (October-November) as they need low temperature and harvested at the end of winter (April-May).

**Question. 16 Which activity of the farmer can promote growth of earthworms and microbes in the field?**

**Answer.** Ploughing of the soil during soil preparation creates spaces in the soil thus, leading to aeration and the soil also loosens which promotes the growth and survival of earthworms and microbes and release of nutrients in the soil

### **Short Answer Type Questions**

**Question. 17 Beera wants to practice crop rotation in his field. Suggest a rabi crop and a kharif crop which will replenish his field with nitrogen. Which crop replenishes nitrogen and why?**

**Answer.** Rabi crops are wheat, pea, mustard while kharif crops are maize, paddy (rice) or soyabean, These are grown in different seasons and therefore, can very well be rotated alternatively. Pea and soyabean are leguminous plants which harbour bacteria, i.e, Rhizobium in their nodules, thus help in fixing nitrogen.

These nitrogen fixing plants can replenish nitrogen in the field and hence, Beera can easily practice crop rotation.

**Question.18 Match the agricultural implements given in column A with their use given in column B.**

Column A		Column B	
(a)	Sickle	(i)	Ploughing
(b)	Hoe	(ii)	Sowing
(c)	Seed drill	(iii)	Harvesting
(d)	Sprinkler	(iv)	Irrigation

**Answer.** The correct matching is as given :

(a) –(iii), (b)–(i), (c)–(ii), (d)–(iv)

(a) Harvesting is the process of cutting matured crops from close to the ground. It is done manually using a sickle.

(b) Ploughing is the process of loosening and turning of soil. It is done with hoe, made of wood or iron.

(c) Sowing is the process of adding seeds of the crop to be grown in field using the seed drill.

(d) Irrigation is the process of watering the fields which favours the germination and growth of seeds, A sprinkler is one method used to water the field.

**Question. 19 What are organic foods?**

**Answer.** The crops that are cultivated using organic substances like manures, etc and prohibit the use of harmful chemical substances like fertilisers, pesticides, weedicides, etc., are called organic foods.

**Question.20 Crossword Puzzle From the word puzzle given as figure. Find at least eight words which are 'farmer's friends'. Classify them into living and non-living.**

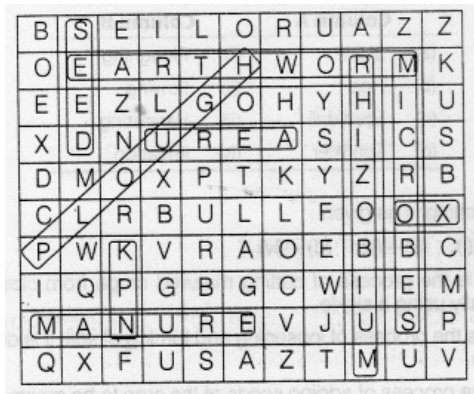
B	S	E	I	L	O	R	U	A	Z	Z
O	E	A	R	T	H	W	O	R	M	K
E	E	Z	L	G	O	H	Y	H	I	U
X	D	N	U	R	E	A	S	I	C	S
D	M	O	X	P	T	K	Y	Z	R	B
C	L	R	B	U	L	L	F	O	O	X
P	W	K	V	R	A	O	E	B	B	C
I	Q	P	G	B	G	C	W	I	E	M
M	A	N	U	R	E	V	J	U	S	P
Q	X	F	U	S	A	Z	T	M	U	V

**Answer.** From the given puzzle, the farmer's friends are:

Living Seed, Earthworm, Rhizobium, Microbes, Ox. Living components like seeds, microbes earthworm, etc., helps in growth of crops, enrichment of soil nutrients, etc., microbes like Rhizobium fix the nitrogen in soil, earthworms loosens the soil.

Non-living Plough, Urea, NPK, Manure, Hoe. Non-living components support the living components and help in better yield of crops. Plough and the hoe are instruments used in ploughing and harvesting.

Manure and urea are used for enrichment of soil in nutrients.



**Question. 21 (a) Name the tool used with a tractor for sowing seeds in a field.**

**(b) What are the advantages of using this tool?**

**Answer.** (a) The tool used with a tractor for sowing seeds in a field at uniform distances is seed drill. Before the introduction of seed drill, the process was manual.

(b) The advantages of seed drill are:

1. Seeds are sown at a uniform distance and depth to avoid over crowding.
2. After sowing, seeds are covered by soil which prevent them from being eaten by birds.
3. It saves time and labour.
4. Improves the ratio of crop yield by as much as nine times.

**Question. 22 (a) Name the practice followed for large scale rearing of farm animals.**

**(b) What facilities are provided to farm animals?**

**Answer.** (a) The science of rearing, caring, breeding and improvement of domesticated animals is known as animal husbandry. It is the practice of breeding and raising livestock like cows, buffaloes, pigs, horses and sheep, etc. This practice requires good care and management of livestock.

(b) The animals or livestock in animal husbandry practice should be provided with:

1. Appropriate shelter facilities
2. Food and water
3. Good hygienic practices
4. Medical facilities, etc.

**Question. 23 Classify the following crops into kharif and rabi crops and write in the tabular column given below: Maize, paddy, mustard, pea, gram, wheat, groundnut, cotton**

Kharif	Rabi
.....	.....
.....	.....

**Answer.** The crops which are sown in the rainy season, i.e. from June to September are classified as kharif crops.

The crops sown in the winter season, i.e generally from October to March are called as Rabi crops. From the above given crop list, the kharif and rabi crops can be grouped as

Kharif	Rabi
Maize	Mustard
Paddy	Pea
Groundnut	Wheat
Cotton	Gram

### Long Answer Type Questions

**Question. 24 Despite favourable climatic conditions, a farmer's crop failed to give**

**good yield. Give the possible reasons for this.**

**Answer.** If despite favourable climatic conditions, farmer's crop failed to give good yield, the possibilities may be

1. selection of crops was not done correctly.
2. he did not use good quality and healthy seeds.
3. his field was not well irrigated.
4. manures/fertilisers were not timely and properly applied.
5. weeds were not removed.
6. seeds were not sown at appropriate distance.
7. the soil was not ploughed and levelled properly.

**Question. 25** As a part of eco-club activity, students were asked to raise a kitchen garden in the school premises. They were provided with some materials given in the box. List the other materials you would require. How will you plan the garden? Write the steps.

**Khurpi, water-can, spade, shovel**

**Answer.** Besides the given tools, the other items required for raising a garden are seeds and seedling of vegetables, plants from nursery, kitchen waste, manure, water, soil.

**Steps for raising the garden:**

1. Kitchen waste will be collected and composted in a pit.
2. A patch of land will be identified for the garden, with adequate sunlight available.
3. Soil will be dug up and levelled with the help of a spade.
4. Sowing of seeds/ transplanting of seedlings will be done. Seeds should be uniformly placed with adequate spacing,
5. Select seeds/seedlings as per the season. Water the plants regularly with a water-can.
6. Compost will be applied.
7. Weeds will be removed periodically with the help of khurpi.

**Question. 26** Paddy is a major cereal crop in our country.

**(a) In which season is paddy cultivated?**

**(b) Discuss the method of sowing.**

**(c) What measures must be taken to prevent spoilage and insect attack of harvested grains?**

**Answer.** (a) Paddy is cultivated in rainy season as it is a kharif crop.

(b) For sowing paddy, seeds are first grown in a nursery and later after selecting healthy seed plant lets, they are transplanted in the field. This allows us to select seedling which can survive in harsher environmental conditions for cultivation.

(c) Measures taken to prevent spoilage or damage of harvested crops from insect attack are:

1. Exposing them in sunlight for drying as freshly harvested crops have moisture.
2. Dried neem leaves are added to stored grains, so as to prevent damage from pests.
3. Specific chemical treatments are also available for preventing crops from pest infestations.
4. Fumigation of the storage area to remove its insects.

**Question. 27** Unscramble the words related to crop production and its management and write in the boxes given beneath them.

(i) I L O S S □ ○ □ □ □	(ii) N G I R E H T S H □ ○ □ □ □ □ □ □ □
(iii) R I T I A G I R O N □ □ □ □ □ ○ ○ □ □ □	(iv) V E R I R □ □ □ □ □

Now, using the circled letters, form one word which is an activity carried out in fields, after maturation of crops.

**Answer.**

1. SILOS Used for storing of harvested grains.
2. THRESHING The process of harvested grains being separated from the chaff.
3. IRRIGATION The process of supplying water to a crop field at different intervals is called irrigation.
4. RIVER The source of water.

The letters in circles are I S HR GATVE Which forms HARVESTING.

Harvesting is the activity carried out in fields after the maturation of crops, i.e. the cutting of matured crop from close to the ground.

**Question. 28 Given below is a conversation between two farmers Heera and Beera.**

**Heera Brother Beera, your maize crops look beautiful. They have grown pretty fast.**

**Beera Yes, I have sprayed urea this time. What about you?**

**Heera Well, I am still relying on good old cow dung. I am saving money for buying a tractor. Beera That's good. Tractor saves a Lot of time and labour.**

**Heera Yes, it's been very labour intensive for me and now these weeds have come up.**

**Beera Try weedicides, they are very effective.**

**Now, answer the following questions.**

1. **List the practices which are not environment friendly and why?**
2. **What is the advantage of modern agricultural implements over traditional ones?**
3. **Name one weedicide and the precaution, farmers must take during its application.**

**Answer.**

1. The practices used in field which are not environment friendly are use of fertilisers, pesticides, weedicides and other chemical substances that pose health hazards. Tractor though saves labour and time but contributes to air pollution.
2. Modern agricultural implements save both time and labour as compared to traditional equipments. They impart more efficiency and accuracy in different agricultural procedures like sowing of seed.
3. The example of weedicide is 2,4-D. The precaution taken by farmers, while spraying it on crops is they should properly cover their nose and mouth, so as to avoid inhaling of these chemicals. Excessive use is harmful, hence they should limit the application of such chemicals.

**Question. 29 For discussion**

**Despite being one of the growing economies, our country still has a large section of population going hungry and malnourished. Do you think an efficient crop production mechanism is the only solution to this? Discuss in the class what else needs to be done to root out hunger and malnutrition from our country.**

**Answer.** India, a growing economy with agriculture is a main contributor in its growth.

Agriculture is science of cultivating plants, animals and other life forms for food and other sources, Despite large production of crops by agricultural practices, people still go hungry and malnourished. This happens because of inefficient crop production and management.

In India, an increase in production of food grains has been observed from 1960 to 2004. With efficient management, the crop production can be enhanced and improved to feed the country's poor.

**A few steps in this direction can be:**

1. Selection of high field seeds for planting The seeds with increased yield and reduced growth period.
2. Management of crop production The financial aspects of agriculture should be made



more approachable to farmers at all levels.

3. Information regarding Use of chemicals, manures, cropping patterns, nutrient quality and irrigation facilities should be discussed and propagated among farmers.
4. Protection of crops The agricultural produce should be shared efficiently to reduce the microbial, pest or other organisms from infesting the produce. Pest and weed control measures should be adopted.

A large amount of crops get spoiled during storage by different living and non-living factors.

Living factors include rodents, microbes and insects.

Non-living factors are moisture, temperature and hygiene of storage place.

Keeping these factors in mind, we can reduce the economic losses, increase the marketability and feed the country's poor.

**Question. 30 Terms related to agricultural practices are given below. Rearrange them in the correct sequence, harvesting, sowing, manuring, tilling and ploughing, irrigation, weeding.**

**Answer.** The correct sequence in the series of agricultural practices is:

Tilling and ploughing ----> Sowing --> Manuring ----> Irrigation ----> Weeding --> Harvesting

1. Tilling and ploughing It is the turning and loosening of soil to encourage growth of earthworms and microbes. It is the first step in preparation of soil.
2. Sowing After soil preparation, good and healthy seeds are selected and sowed to considerable depths in soil by either traditional or modern methods.
3. Manuring It is done to add humus, improve texture of soil as well as to replenish nutrients in soil.
4. Irrigation Crop fields are watered at regular intervals to provide moisture for growth and germination of seeds.
5. Weeding Weeding is removal of weeds that grow naturally between crops and compete with them for sunlight, space, water and nutrients. They should be removed before weeds mature, i.e. produce flowers and seeds,
6. Harvesting It is the process of cutting and gathering mature crops. It can be done manually by sickle or by harvester machine.