

Improvement in Food Resources

1. Which of the following statements is incorrect?
 (a) Fertilisers contain much higher amount of nutrients in comparison to the manures.
 (b) Manures add a great amount of organic matter in the form of humus in the soil.
 (c) Both fertilisers and manures are nutrient specific.
 (d) Fertilisers give short-term benefits whereas manures give long-term benefits.

2. Which of the following conditions will give the most benefits to the farmers?
 (a) Use of high quality seeds, fertilisers and no irrigation
 (b) Use of high quality seeds, irrigation, use of fertilisers and crop protection measures
 (c) Use of ordinary seeds, irrigation and use of fertilisers
 (d) Use of high quality seeds, irrigation, excessive use of chemical fertilisers and crop protection measures

3. Blue revolution refers to the drastic increase in the production of _____.
 (a) Milk (b) Cereals
 (c) Water (d) Fish

4. The poultry bird groomed for obtaining meat is called _____ while that groomed for obtaining eggs is called _____.
 (a) Broiler, Chicken (b) Chicken, Layer
 (c) Layer, Broiler (d) Broiler, Layer

5. Select the correct match.

	Affected organism	Disease	Causal organism
(a)	Cattle	Anthrax	Bacteria
(b)	Poultry	Rinderpest	Virus
(c)	Cattle	Ranikhet	Virus
(d)	Poultry	Haemorrhagic septicaemia	Bacteria

6. Select the group that contains only the micronutrients.
 (a) Sulphur, Molybdenum, Nitrogen
 (b) Zinc, Copper, Manganese
 (c) Oxygen, Iron, Potassium
 (d) Carbon, Chlorine, Nickel

7. Crop improvement by crossing two plants with different desired characters in order to combine these characters is called _____.
 (a) Natural selection (b) Intercropping
 (c) Hybridisation (d) Mixedcropping

8. Complete the given statements by selecting the correct words from the options given below.
 (A) (i) is a kind of manure which is prepared in the field itself to enrich soil with nitrogen and phosphorus.
 (B) (ii) is a draught breed of cattle.
 (C) In (iii) water escapes from revolving nozzle and falls like rain on the crops.
 (D) (iv) is the process of crossing individuals of two different species to produce hybrid.

(i)	(ii)	(iii)	(iv)
(a) Vermi-compost	Malvi	Drip irrigation	Intravarietal hybridisation
(b) Farm yard manure	Sahiwal	Chain pump	Intervarietal hybridisation
(c) Compost	Gir	Moat	Intraspecific hybridisation
(d) Green manure	Nageri	Sprinkler system	Interspecific hybridisation

9. Read the given statements.
 (i) Bee wax obtained from beehive is deposition of excretory products of honeybee.
 (ii) Fish culture is sometimes done in combination with rice crop so that fish are grown in the water accumulated in the paddy field.
 (iii) Fish feed in different zones of pond to make most efficient use of available food.
 (iv) Sahiwal and Murrah are exotic breeds used extensively in cattle farming.
 (v) Intercropping is growing two or more crops simultaneously on the same field in a definite pattern.

Which of the given statements are incorrect?

- (a) (i), (ii) and (iii) only
 (b) (ii) and (iv) only
 (c) (i) and (iv) only
 (d) (i), (iv) and (v) only

10. Read the following statements (A - C) and select the option which correctly fills up the blanks in any two statements.

(A) (i) nutrients are required in large quantity and called as (ii).

(B) Kharif crops are cultivated from (iii) to (iv).

(C) Berseem is an important (v) crop.

(a) (i) - 17, (ii) - Micronutrients, (iii) - June, (iv) - October

(b) (iii) - June, (iv) - October, (v) - Fodder

(c) (i) - 17, (ii) - Macronutrients, (v) - Field

(d) (iii) - November, (iv) - April, (v) - Rabi

11. The steps in the preparation of green manure are given below in a random order. Select the option that represents these steps in the correct sequence.

(A) Green plants are decomposed in soil.

(B) Quick growing green plants are cultivated.

(C) Plants are ploughed and mixed into the soil.

(D) After decomposition it becomes green manure.

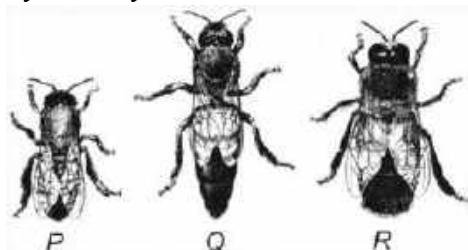
(a) (C) → (B) → (A) → (D)

(b) (A) → (C) → (B) → (D)

(c) (A) → (B) → (C) → (D)

(d) (B) → (C) → (A) → (D)

12. Given figures represent three different castes of a colony of honeybees.



Select the incorrect statement regarding these.

(a) P is the worker bee which is a sterile female.

(b) Q is the queen which lays both fertilised (2n) and unfertilised (n) eggs.

(c) R is the drone which is a fertile male.

(d) P and Q emerge from unfertilised eggs, while R emerges from fertilised eggs.

13. Some species of fish can be cultured in a single fish pond. These fish do not compete for food as they have different food habits. In the following options fish are paired with their food habits. Select the incorrect match.

(a) Labeo rohita - Column feeder

(b) Catia catia - Surface feeder

(c) Cirrhinus mrigala - Bottom feeder

(d) Common carp - Surface feeder

14. Match column I with column II and select the correct option from the given codes.

	Column I	Column II
(A)	IR-8	(i) Cow
(B)	Shakti	(ii) Maize
(C)	Gir	(iii) Fowl
(D)	IBL-80	(iv) Mustard
(E)	Kranti	(v) Rice

(a) (A)-(v), (B)-(ii), (C)-(i), (D)-(iii), (E)-(iv)

(b) (A)-(i), (B)-(ii), (C)-(v), (D)-(iii), (E)-(iv)

(c) (A)-(v), (B)-(iv), (C)-(ii), (D)-(i), (E)-(iii)

(d) (A)-(ii), (B)-(v), (C)-(iii), (D)-(i), (E)-(iv)

15. Read the following statements carefully and select which of them are true (T) and which of them are false (F).

(i) Exotic breed which is very popular for egg-laying but is not ideal for meat purposes is White Leghorn.

(ii) Karan-Swiss is a high yielding cross breed cattle variety while Jersey-Sindhi is an indigenous breed of India.

(iii) Milch breeds are milk-yielding while draught breeds are working animals.

(iv) Ayrshire is an Indian breed of cow.

	(i)	(ii)	(iii)	(iv)
(a)	F	F	T	T
(b)	T	F	T	F
(c)	T	T	T	F
(d)	F	F	T	F

Achievers Section (HOTS)

16. Read the given paragraph where few words have been italicised. Irrigation ensures that the crops get water whenever they need it during growing season. Tube wells are surface water source of irrigation. They get water from porous soil strata. Canal system of irrigation draws water from rivers and is also related to generation of hydroelectricity. River lift system is advantageous in those areas where river water is easily available. Both canals and river lifts are groundwater sources of irrigation.

Select the correct option regarding this.

(a) The positions of canal and river lift should be interchanged.

- (b) Rivers should be replaced by water table.
- (c) The positions of surface water and groundwater should be interchanged.
- (d) Canal should be replaced by tank.

- 17.** It has been found that major plant diseases and insect outbreaks are less likely to occur in a natural field than on a conventional farm because
- (a) In conventional farming practices, use of pesticides, kill both useful and harmful insects indiscriminately. Therefore, insect outbreaks are often seen in conventional farms
 - (b) Fertilisers are used in conventional farming to increase yield. The increase in crop yield will consequently increase the diversity of pests
 - (c) In natural field, the biodiversity sustains a complex system which checks and balances insects at a manageable levels
 - (d) Both (a) and (c).

Direction (Q. No. 18 and 19): Read the given passage and answer the following questions. Three different cropping patterns, viz. X, Y and Z are applied to get the maximum benefits from a crop field. In X, two or more crops are grown together in the same field in different rows or strips. In Y also, two or more crops are grown together but not in definite rows. In Z, different crops are grown on a piece of land in a pre-planned succession. These cropping patterns maintain soil fertility and crop yield.

- 18.** Select the option that correctly identifies any two of these cropping patterns.
- (a) X- Mixed cropping, Y- Intercropping
 - (b) X- Intercropping, Z- Crop rotation
 - (c) V- Mixed cropping, Z- Intercropping

- (d) X- Mixed cropping, Z- Crop rotation

- 19.** Which of the following options is correct regarding criteria of crop selection for these cropping patterns?
- (a) In Z, the crops used must have different maturation times.
 - (b) In Y, the crops used must require the similar amount and type of nutrition.
 - (c) In X, the crops used should have different sowing and harvesting dates.
 - (d) In Z, the crops should not be of different growth habits, i.e., should be either both tall or both dwarf.
- 20.** Select the option showing the correct sequential steps to produce a new genetic variety of a crop.
- (a) Selection of parents → Hybridisation of selected parents → Germplasm collection → Selection of superior recombinants → Testing and release of new varieties
 - (b) Germplasm collection → Selection of parents → Hybridisation of selected parents → Selection of superior recombinants → Testing and release of new varieties
 - (c) Selection of superior recombinants → Germplasm collection → Hybridisation of selected parents → Selection of parents → Testing and release of new varieties
 - (d) Germplasm collection → Selection of parents → Hybridisation of selected parents → testing and release of new varieties → Selection of superior recombinants

Answer key

1. C	2. B	3. D	4. D	5. A
6. B	7. C	8. D	9. C	10. B
11. D	12. D	13. D	14. A	15. B
16. C	17. D	18. B	19. C	20. B

HINTS & EXPLANATIONS

1. (c) : Fertilisers are nutrient specific but manure contains all nutrients in small quantities.
2. (b) Not Available
3. (d) : Increase in the production of fish, shellfish, prawns, crabs, shrimps, etc., through culture fishery has brought a revolution. This revolution resulting in increased production of fish food is called blue revolution.
4. (d) : In poultry farming, emphasis is laid on developing improved poultry birds and to improve the production of good quality eggs in layers and chicken meat in broilers.
5. (a) : Rinderpest and haemorrhagic septicemia are diseases of cattle and ranikhet is a poultry disease.
6. (b) : Micronutrients are the nutrients that are required by plants in comparatively smaller quantities but are essential for their growth, e.g., zinc, copper, manganese, molybdenum, chlorine, etc.
7. (c) : Crop improvement through breeding better varieties of crop plants forms the backbone of modern agriculture. This technique, known as hybridisation, involves selecting and crossing two parents with desired characters to obtain a progeny that have characters of both the parents.
8. (d) Not Available
9. (c) : Bee wax is secretion of worker bees abdominal glands. Sahiwal cow and Murrah buffalo are indigenous breeds of cattle, not exotic.
10. (b) : Kharif crops are those crops that are grown in rainy season from June to October, e.g., paddy, : soybean, maize and cotton. Fodder crops are those crops that are grown as food for the livestock, e.g. berseem, sorghum, etc. Out of the seventeen nutrient elements required by plants, nine are required in larger amounts, these are called macronutrients e.g., carbon, hydrogen, oxygen, nitrogen, phosphorus, potassium, calcium, magnesium and sulphur.
11. (d) Not Available
12. (d) : Drones are produced by parthenogenesis, i.e., from unfertilised eggs whereas queen and worker bees develop from fertilised eggs.
13. (d) : Common carp is a bottom feeder, as it is detritivorous/omnivorous.
14. (a) Not Available
15. (b) : Both Karan-Swiss and Jersey-Sindhi are cross-breed variety of cattle. Ayrshire is an exotic breed of cow.
16. (c) Not Available
17. (d) Not Available
18. (b) : In the given passage X is intercropping, Y is mixed cropping and Z is crop rotation.
19. (c) Not Available
20. (b) Not Available