USES OF HONEY

1. Honey is an energy rich food. For eg. 1 Kg of honey contains 3200 calories of energy.
2. Honey contains sugars, minerals, vitamins, enzymes and pollen.
3. Honey is an antiseptic and contains formic acid as the preservative.
4. Honey is a blood purifier, a cure against cough, cold,sore throat, ulcers of tongue, stomach and intestine.
5. Honey is helpful in building up the haemoglobin content of the blood.
6. Honey is used in the preparation of bread, cakes and biscuits.

BEE WAX

It is utilized in the manufacture of cosmetics, lubricants, cold creams, shaving creams, polishes, candles, ointments and in medical preparations.

INTEXT QUESTIONS PAGE NO. 213

Q1. How are fish obtained?
Answer:
Fish can be obtained by two ways:
(i) Capture fishing: It is the process of obtaining fish from natural resources.
(ii) Culture fishery: It is the practice of farming fishes. Farming can be done in both freshwater ecosystem (which includes river water, pond water) and marine ecosystem.

Q2. What are the advantages of composite fish culture?
Answer:
An advantage of composite fish culture is that it increases the yield of fish. In a composite fish culture, five or six different species are grown together in a single fish pond. Fishes with different food habitats are chosen so that they do not compete for food among themselves. Also, this ensures a complete utilization of food resources in the pond. As a result, the survival rate of fish increases and their yield also increases.

Q1. What are the desirable characters of bee varieties suitable for honey production?
Answer:
Bee varieties having the following desirable characters are suitable for honey production:
(i) They should yield high quantity of honey.
(ii) They should not sting much.
(iii) They should stay in the beehive for long durations.
(iv) They should breed very well.

Q2. What is pasturage and how is it related to honey production?
Answer:
Pasturage is the availability of flowers from which bees collect nectar and pollen. It is related to the production of honey as it determines the taste and quantity of honey.

EXERCISE QUESTIONS PAGE NO. 12

Q1. Explain any one method of crop production which ensures high yield.
Answer:
Crop rotationis one of the methods of crop production that ensures high yield. It is the method of growing two or more varieties of crops on the same land in sequential seasons. A crop utilises some particular nutrients in larger quantities from the soil. Then, if the same crop is grown in subsequent seasons those nutrients will get depleted in the soil. Therefore, crops having different nutrient requirements are rotated. For example, legumes which have nitrogen-fixing bacteria in their root nodules supply the soil with nitrogen. Therefore, these legumes are

rotated with nitrogen requiring cereals such as wheat and maize. This method reduces the need of fertilizers, thereby increasing the overall yield of crops.

Q2. Why are manure and fertilizers used in fields?
Answer:
Manures and fertilizers are used in fields to enrich the soil with the required nutrients. Manure helps in enriching the soil with organic matter and nutrients. This improves the fertility and structure of the soil. On the other hand, fertilizers ensure a healthy growth and development in plants. They are a good source of nitrogen, phosphorus, and potassium. To get an optimum yield, it is instructed to use a balanced combination of manures and fertilizers in the soil.

Q3. What are the advantages of inter-cropping and crop rotation?
Answer:
Inter-cropping and crop rotation both play an important role in increasing the yield of crops. Inter-cropping helps in preventing pests and diseases to spread throughout the field. It also increases soil fertility, whereas crop rotation prevents soil depletion, increases soil fertility, and reduces soil erosion. Both these methods reduce the need for fertilizers. It also helps in controlling weeds and controls the growth of pathogens and pests in crops.

Q4. What is genetic manipulation? How is it useful in agricultural practices?
Answer:
Genetic manipulationis a process where the gene for a particular character is introduced inside the chromosome of a cell. When the gene for a particular character is introduced in a plant cell, a transgenic plant is produced. These transgenic plants exhibit characters governed by the newly introduced gene.

For example, let us assume there is a wild plant that produces small fruits. If the gene responsible for a larger fruit size is introduced in this plant, this plant becomes transgenic, and starts producing larger fruits. Similarly, genes for higher yield, disease resistance, etc. can be introduced in any desired plant.

Therefore, gene manipulation plays an important role in agricultural practices. It helps in improving crop variety. It ensures food security and insect resistant crops. It also improves the quality and yield of crops.

Q5. How do storage grain losses occur?
Answer:
There are various biotic and abiotic factors that act on stored grains and result in degradation, poor germinability, discolouration, etc. Biotic factors include insects or pests that cause direct damage by feeding on seeds. They also deteriorate and contaminate the grain, making it unfit for further consumption. Abiotic factors such as temperature, light, moisture, etc., also affect the seed. They decrease the germinating ability of the seeds and make them unfit for future use by farmers. Unpredictable occurrence of natural calamities such as droughts and floods also causes destruction of crops.

Q6. How do good animal husbandry practices benefit farmers?
Answer:
Cattle farming is one of the methods of animal husbandry that is most beneficial for farmers. Using this method, better breeds of draught animals can be produced. Such draught animals are engaged in agricultural fields for labour work such as carting, irrigation, tilling, etc.

Q7. What are the benefits of cattle farming?
Answer:
Benefits of cattle farming:
(i) Good quality and quantity of milk can be produced.
(ii) Draught labour animals can be produced for agricultural work.
(iii) New variety that are resistant to diseases can be produced by crossing two varieties with the desired traits.

Q8. For increasing production, what is common in poultry, fisheries and bee-keeping?
Answer:
The common factor for increasing production in poultry, fisheries, and bee keeping is the proper management techniques that are to be followed. Regular cleaning of farms is of utmost importance. Maintenance of temperature and prevention and cure of diseases is also required to increase the number of animals.

Q9. How do you differentiate between capture fishing, mariculture and aquaculture?
Answer:
Capture fishing: It is the method of obtaining fishes from natural resources.
Mariculture: It is the culture of marine fishes for commercial use.
Aquaculture: It involves the production of aquatic animals that are of high economic value such as prawns, lobsters, fishes, crabs, etc.

ASSIGNMENT QUESTIONS SET – 1
CHAPTER – 15
IMPROVEMENT IN FOOD RESOURCES

Fill In the Blanks

1. _____and _____are the main sources of nutrient supply to crops.

2. _____and _____provide us with all our animal and plant food.

3. The science of growing vegetables, fruits and ornamental plants is called _____.

4. Composting done using earthworms is called _____.

5. Cereals provide us _____ (carbohydrates/proteins/fats).

6. Pulses give us _____(carbohydrates/proteins/fats).

7. _____and _____ are a rich source of vitamins and minerals.

8. Pests, nematodes etc. are _____ (biotic/abiotic) factors that affect crop production.

9. In order to get maximum returns, different crop combinations are grown on the same field in a pre-planned succession. This process is called _____.

10. Apis dorsata and Apis florae are varieties of _____(Indian/Italian) bee.

11. Apis mellifera is an _____ (India/Italian) variety of honey bee used for commercial production of honey.

12. Crossing between genetically dissimilar plants is called _____.

13. Nutrients required by plants in large quantities are called _____.

14. Organic substances of animal or plant origin that is added to the soil to increase its fertility and structure are called _____.

15. The practice of growing two or more crops simultaneously on the same field is called _____.

16. Unwanted plants in the cultivated field are called _____.

17. Cattle used for farm labour is called _____.

18. Vitamin _____ and ____ (A, B, C, D , K) levels are kept high in the poultry feeds.

19. Bos indicus are the species of _____.

20. Pomphret, mackerel, tuna, sardines, and Bombay duck are examples of _____(marine/river) fish.

21. Marine fish capture is done by fishing nets guided by _____ and _____.

22. Micro-nutrients or Food additives strengthen _____ system of the cattle and improve their _____ and stimulate digestion.

23. The basic advantages of inter-cropping are that it maintains soil _____and controls _____.

24. Red Sindhi and Sahiwal are breeds of _____.

25. Xanthium, Cyperinus rotundus and Parthenium plants generally grow along paddy plants. Such plants are called _____.

26. What is domestication?

27. What are the major sources of food? Name the commercial practices we perform to obtain the food.

28. Name the revolution which led to better and efficient production and availability of milk.

29. Define animal husbandry.

30. Name the programmes executed in India to increase food production.

31. What are the various crops seasons in India?

32. Name the approaches used to enhance crop yield.

33. What are milch animals?

34. What are draught animals?

35. What is broiler?

36. Give examples of cereals that give us carbohydrates.

37. Name some pulses that give us proteins.

38. Give examples of oilseeds that provide us fats.

39. Give examples of fodder crops.

40. Name the biotic factors that affect on crop production.

41. Name the nutrients that plants take from air?

42. From where do plants acquire the following nutrients?

(i) Nitrogen

(ii) Hydrogen

43. List the nutrients that plants absorb from soil.

44. What are manures?

45. What is the full form of IARI?

46. What are the desirable agronomic characteristics for crop improvement?

47. What are Macro-nutrients?

48. List examples of Macro-nutrients for plants?

49. List the seven micro-nutrients taken by plants?

50. Based on kinds of biological material used, how many types of manures are there?

51. What are fertilizers? Give two examples.

52. Out of manures and fertilizers, which one is nutrient specific?

53. What is the most common source of irrigation in India?

54. Give examples of commonly used irrigation systems in our country?

55. What is vermicompost?

56. Manures are useful for short term benefits or long-term benefits?

57. Fertilizers are useful for short term benefits or long-term benefits?

58. What is organic farming?

59. What is the full form of NPK?

60. What is lodging?

61. What is mixed cropping?

62. Give examples of mixed cropping?

63. Define inter-cropping.

64. Give examples of inter-cropping.

65. Name the two common weeds of wheat and rice crop.

66. What are weeds?

67. Give examples of Pesticides

68. Give examples of fumigants.

69. Give examples of two major weeds that grow during Kharif season.

70. Cereals largely fulfill which of the following energy requirement?

(a) Proteins

(b) Carbohydrates

(c) Fats

(d) Minerals

71. Which one is not a source of carbohydrate?

(a) Rice

(b) Millets

(c) Sorghum

(d) Gram

72. Which of the following is not included in 'organic farming'?

(a) compost and vermi-compost

(b) chemical fertilizers

(c) green manures

(d) crop rotation

73. Which one of the following species of honey bee is an Italian species?

(a) Apis dorsata

(b) Apis florae

(c) Apis cerana indica

(d) Apis mellifera

74. Which of the following is an incorrect statement regarding improvement in crop production?

(a) Tallness is desired in cereals.

(b) Profuse branching is good for fodder crops

(c) Variety resistance to biotic stress is a good factor to improve crops.

(d) Shorter duration of crop from sowing to harvesting is better option.

75. Which is the oldest breeding method?

(a) introduction

(b) hybridization

(c) mutation

(d) selection

76. Which of the following is not a type of biotic stress?

(a) diseases

(b) insect

(c) frost

(d) nematodes

77. Apiculture deals with

(a) Bee Keeping

(b) Rearing Pigs

(c) Rearing Cows and Buffaloes

(d) Rearing Silk Moths

78. Red Sindhi, Sahilwal, Jersey, Brown Swiss are breeds of

(a) Pigs

(b) Buffaloes

(c) Cows

(d) Fowl

79. Which of the following is not a marine fish?

(a) pomphret

(b) mackerel

(c) catla

(d) sardines

ASSIGNMENT QUESTIONS SET – 2
CHAPTER – 15
IMPROVEMENT IN FOOD RESOURCES

1. State one demerit with composite fish culture system.

2. State one importance of photoperiod in agriculture.

3. Name one micronutrient and one macronutrient which plants take from the soil.

4. List two desirable traits for fodder crops.

5. Distinguish between a mullet and a prawn.

6. Name two breeds of cows selected for long lactation period.

7. How does Bombay duck differ from common carp ?

8. How does catla differ from mrigal?

9. Name the two vitamins which are added in the poultry feed.

10. From where do plants acquire the following nutrients?

(a) Nitrogen

(b) Hydrogen

11. State the reason of introducing Italian bee variety in bee farms.

12. Mention any two activities for the improvement of crop yield.

13. Which nutrients are supplied by cereals and pulses ?

14. Name two fresh initiatives taken to increase the water availability for agriculture.

15. Mention any two advantages of using Italian bee variety in honey production.

16. Name any two weeds of crop field.

17. Define animal husbandry.

18. What are genetically modified crop?

19. Mention the components of food present in vegetable and fruits.

20. Name the cereals which provide us carbohydrate for energy requirement.

21. Give technical term for milk producing females and farm labour animals.

22. Why do we eat pea and groundnut?

23. Name two types of animal feed.

24. Give the full form of FYM.

25. Name two main factors responsible for loss during storage of grain.

26. How much damage to crops can be caused by insects, pests and diseases?

27. Name four macro nutients important for plants.

28. What is green revolution?

29. What was the aim of white revolution?

30. Name a marine fish.

31. Name the technique of culturing marine fish.

32. Which vitamins are found high in broilers?

33. Which Indian scientist is considered as the father of green revolution?

34. Name a fibres yielding crop.

35. Name four types of irrigation systems adopted in our country.

36. Name the members of a honey-bee family.

37. Give two hazards of using fertilizers.

38. Mention two examples of mixed cropping.

39. Name two factors responsible for losses of grains during storage?

40. Name an exotic variety of honey bee grown in India.

41. What is called the rearing of fish on a large scale?

42. List any two methods adopted in farming for the health of the cattle.

43. List the two types of food requirements of dairy animals.

44. What are rabi crops? State any two examples.

45. List two demerits of the continuous use of fertilizers.

46. List any two advantages of crop rotation.

47. List two characteristics each of roughage and concentrate in relation to animal feed.

48. Mention the two types of food requirements of dairy animals.

49. "Removal of weeds from cultivated fields during the early stages of growth of crops is essential for a good harvest". Justify the statement.

50. Farmers use bee-keeping as an additional income generating activity. Give two reasons.

51. Name any one bottom feeder that can be grown in composite fish culture.

52. What are the problems faced in such a culture ? How are they overcome?

53. The shorter the duration of the crop the more economical is the variety. Justify this statement.

54. What are the long term benefits of using manure in crop production?

55. What is the major problem is fish farming? How is this problem overcome?

56. How can insect/pests in crop plants and stored grains be controlled?

57. What is meant by the term 'green manure'? State its role in agriculture.

58. How is green manuring done? How is it useful for the soil?

59. What is pasturage and has how is it related to honey production?

60. What are Rabi and Kharif crops? Give two examples each.

61. Name two biotic and two abiotic factors that affects crop production.

62. What is meant by organic farming?

63. Compare the use of manure and fertilizers in maintaining soil fertility.

64. What is meant by sustainable agriculture?

65. What are macronutrients and why are they named so? Give examples also.

66. Which component of food is present in pulses ? Also mention its function in the body.

67. Define-green manure and vermicompost.

68. Differentiate between bee keeping and poultry farming.

69. Give two merits and two demerits of fish culture.

70. Suggest two preventive measures for the diseases of poultry birds.

71. List out four useful traits in improved crop?

72. What is a GM crop? Name any one such crop which is grown in India.

73. Define the term photoperiod.

74. Group the following and tabulate them as energy yielding, protein yielding, oil yielding and fodder crop.

75. What type of crops are generally raised in green fields?

76. Write four points on human dependence on plants and animals for food.

77. Distinguish between intercropping and mixed cropping. List any two advantages of intercropping over mixed cropping.

78. State three management practices that are common in dairy and poultry farming.

79. List any three desirable characters of bee varieties suitable for honey production?

80. List any three ways by which the insect/pests attack the plants.

81. List any three desirable characters of bee varieties suitable for honey production?

82. List any six factors for which variety improvement in crops is done.

ASSIGNMENT QUESTIONS SET – 3
CHAPTER – 15
IMPROVEMENT IN FOOD RESOURCES

1. Which one is an oil yielding plant among the following?

(a) Lentil

(b) Sunflower

(c) Cauliflower

(d) Hibiscus

2. Which one is not a source of carbohydrate?

(a) Rice

(b) Millets

(c) Sorghum

(d) Gram

3. Find out the wrong statement from the following

(a) White revolution is meant for increase in milk production

(b) Blue revolution is meant for increase in fish production

(c) Increasing food production without compromising with environmental quality is called as sustainable agriculture

(d) None of the above

4. To solve the food problem of the country, which among the following is necessary?

(a) Increased production and storage of food grains

(b) Easy access of people to the food grain

(c) People should have money to purchase the grains

(d) All of the above

5. Find out the correct sentence

(i) Hybridisation means crossing between genetically dissimilar plants

(ii) Cross between two varieties is called as inter specific hybridisation

(iii) Introducing genes of desired character into a plant gives genetically modified crop

(iv) Cross between plants of two species is called as inter varietal hybridisation

(a) (i) and (iii)

(b) (ii) and (iv)

(c) (ii) and (iii)

(d) (iii) and (iv)

6. Weeds affect the crop plants by

(a) killing of plants in field before they grow

(b) dominating the plants to grow

(c) competing for various resources of crops (plants) causing low availability of nutrients

(d) all of the above.

7. Which one of the following species of honey bee is an Italian species?

(a) *Apis dorsata*

(b) *Apis florae*

(c) *Apis cerana indica*

(d) *Apis mellifera*

8. Find out the correct sentence about manure

(i) Manure contains large quantities of organic matter and small quantities of nutrients.

(ii) It increases the water holding capacity of sandy soil.

(iii) It helps in draining out of excess of water from clayey soil.

(iv) Its excessive use pollutes environment because it is made of animal excretory waste.

(a) (i) and (iii)

(b) (i) and (ii)

(c) (ii) and (iii)

(d) (iii) and (iv)

9. Cattle husbandry is done for the following purposes

(i) Milk Production

(ii) Agricultural work

(iii) Meat production

(iv) Egg production

(a) (i), (ii) and (iii)

(b) (ii), (iii) and (iv)

(c) (iii) and (iv)

(d) (i) and (iv)

10. Which of the following are Indian cattle?

(i) *Bos indicus*

(ii) *Bos domestica*

(iii) *Bos bubalis*

(iv) *Bos vulgaris*

(a) (i) and (iii)

(b) (i) and (ii)

(c) (ii) and (iii)

(d) (iii) and (iv)

11. Which of the following are exotic breeds?

(i) Brawn

(ii) Jersey

(iii) Brown Swiss

(iv) Jersey Swiss

(a) (i) and (iii)

(b) (ii) and (iii)

(c) (i) and (iv)

(d) (ii) and (iv)

12. Poultry farming is undertaken to raise following

(i) Egg production

(ii) Feather production

(iii) Chicken meat

(iv) Milk production

(a) (i) and (iii)

(b) (i) and (ii)

(c) (ii) and (iii)

(d) (iii) and (iv)

13. Poultry fowl are susceptible to the following pathogens

(a) Viruses

(b) Bacteria

(c) Fungi

(d) All of the above

14. Which one of the following fishes is a surface feeder?

(a) Rohus

(b) Mrigals

(c) Common carps

(d) Catlas

15. Animal husbandry is the scientific management of

(i) animal breeding

(ii) culture of animals

(iii) animal livestock

(iv) rearing of animals

(a) (i), (ii) and (iii)

(b) (ii), (iii) and (iv)

(c) (i), (ii) and (iv)

(d) (i), (iii) and (iv)

16. Which one of the following nutrients is not available in fertilizers?

(a) Nitrogen

(b) Phosphorus

(c) Iron

(d) Potassium

17. Preventive and control measures adopted for the storage of grains include

(a) strict cleaning

(b) proper disjoining

(c) fumigation

(d) all of the above

18. Match the column A with the column B

(A)	(B)
(a) Catla	(i) Bottom feeders
(b) Rohu	(ii) Surface feeders
(c) Mrigal	(iii) Middle-zone feeders
(d) Fish farming	(iv) Culture fishery

19. Fill in the blanks

(a) Pigeon pea is a good source of ———.

(b) Berseem is an important———crop.

(c) The crops which are grown in rainy season are called———crops.

(d) ———are rich in vitamins.

(f) ——— crop grows in winter season.

20. What is a GM crop? Name any one such crop which is grown in India.

21. List out some useful traits in improved crop?

22. Why is organic matter important for crop production?

23. Why is excess use of fertilizers detrimental for environment?

24. Give one word for the following

(a) Farming without the use of chemicals as fertilizers, herbicides and pesticides is known as ———.

(b) Growing of wheat and groundnut on the same field is called as ———.

(c) Planting soyabean and maize in alternate rows in the same field is called as ———.