INDIAN SCHOOL AL WADI AL KABIR		
Class: IX	**DEPARTMENT OF SCIENCE -2025-26** **SUBJECT: BIOLOGY**	**DATE: 31/01/2026**
WORKSHEET NO.6 WITH ANSWERS	**TOPIC: IMPROVEMENT IN FOOD RESOURCES- PART II**	**A4 FILE FORMAT**
CLASS & SEC:	**NAME OF THE STUDENT:**	**ROLL NO.**

I.OBJECTIVE TYPE QUESTIONS:

1. The table describes the characteristics of Italian bees.

Characteristics of Italian Bees	Description
A	They sting less.
B	They stay in beehives for long period.
C	They have high honey collection capacity.
D	They breed well.

Which characteristic feature of Italian bees makes them suitable for commercial honey production?
a) Characteristic A
b) Characteristic B
c) Characteristic C
d) Characteristic D

2. Catla, Rohu, Mrigal, and Grass Carp are often maintained together in a single fishpond (composite fish culture). The primary reason for this specific combination of species is to:
a) Ensure all species have a short life span for quick harvesting.
b) Achieve faster growth rates through competitive feeding.
c) Maximise the utilisation of all available food zones in the pond.
d) Reduce the need for oxygenation by keeping the total fish population low.
3. The most effective and proactive strategy for minimising the sudden loss of poultry fowl due to viral, bacterial, and parasitic infections is:
a) Providing a constant supply of high-protein feed.
b) Routinely mixing antibiotics into the drinking water.
c) Avoiding any contact between the birds and disinfectants.
d) Implementing a comprehensive vaccination schedule at regular intervals.
4. Which characteristic of the Italian bee (Apis mellifera) is the most crucial factor making it highly suitable for commercial, large-scale honey production by beekeepers?

a) Their ability to breed quickly and form large colonies.
b) Their tendency to sting less, making hive management easier.
c) Their ability to survive harsh winter conditions.
d) Their long life span compared to native varieties.

5. Which variety of bees is commonly used for producing honey commercially?
   a) Apis florae
   b) Apis dorsata
   c) Apis mellifera
   d) Apis cerana indica
6. The table lists four types of food for broiler chickens.

Type of Food	Nutritional Value
P	Rich in fats
Q	Rich in proteins
R	Rich in fats with low levels of vitamin A
S	Low levels of fats and vitamin K

Which type of food is desirable for broiler chickens?
a) Food P
b) Food Q
c) Food R
d) Food S

For questions 7to 11, two statements are given-one labelled Assertion (A) and the other labelled Reason(R). Select the correct answer to these questions from the options(i), (ii), (iii) and (iv)as given below:

i. Both A and R are true, and R is the correct explanation of the assertion.
ii. Both A and R are true, but R is not the correct explanation of the assertion.
iii. A is true but R is false.
iv. A is false but R is true.

7. **Assertion (A):** Cattle, goats, sheep, poultry etc. are called livestock.
   Reason (R): These are domesticated animals intentionally reared in agricultural settings to make produce.
8. **Assertion (A):** Sahiwal and Red Sindhi are examples of milch breeds of buffalo.
   Reason (R): These breeds are kept for obtaining milk.
9. **Assertion (A):** A healthy animal feeds regularly and has a normal posture.
   Reason (R): Parasites live only on the skin of cattle.
10. **Assertion (A):** Cross-breeding programmes are done to improve desirable traits in livestock.
    Reason (R): Cross-breeding increases genetic diversity and helps develop new varieties of animals for specific purposes.
11. **Assertion (A):** Fish farming can be done in ponds using hormonal stimulation.
    Reason (R): Hormonal stimulation helps to breed fish that would not breed

naturally in captivity**.**

II. SHORT ANSWER TYPE QUESTIONS (2M):

12. Differentiate between inland fisheries and marine fisheries.
13. Why are broilers provided with additional feed rich in vitamins?
14. Explain the term pasturage. How does it influence the yield and quality of honey?
15. Name the two categories of parasites commonly found in cattle.
16. In what ways does poultry farming contribute to increasing food supply?
17. Define animal husbandry.
18. Mention two benefits obtained from rearing honeybees.
19. List the key aspects that must be ensured while providing shelter for broiler birds.
20. State the two primary objectives of rearing cattle.

III . SHORT ANSWER TYPE QUESTIONS (3 M):

21. How does beekeeping support agriculture, and what essential conditions ensure good honey yield?
22. Describe the key distinctions between layer birds and broiler birds in poultry farming.
23. What major challenge arises in composite fish culture, and what measures are taken to overcome it?
24. What advantages are gained from cross-breeding cattle? Illustrate your answer with an example.
25. What important management practices are required to ensure efficiency and success in poultry farming?

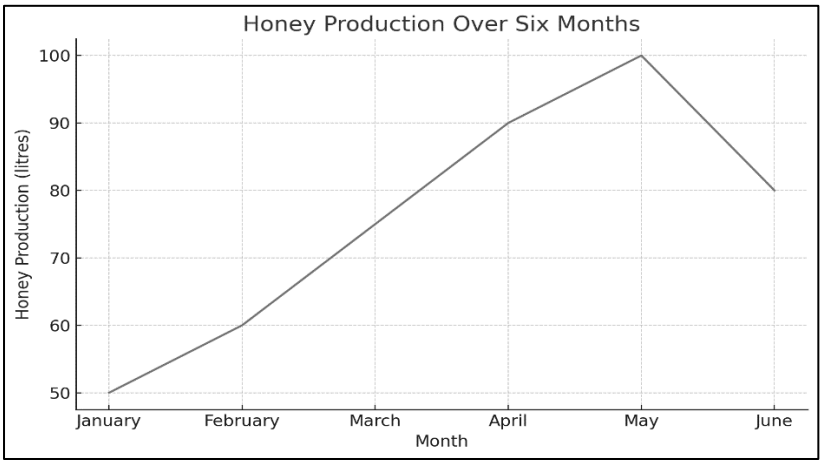
IV.LONG ANSWER TYPE QUESTIONS (5M):

26. What are the key goals of the cross-breeding programs between indigenous and exotic poultry breeds?
27. a. Differentiate between Capture fishery and culture fishery
    b. What is mariculture and why is it important?
28. Discuss the significance of beekeeping in agriculture, highlighting the types of bees used for honey production and their benefits.

V. SOURCE-BASED/CASE STUDY-BASED QUESTIONS:

29. The following graph shows the production of honey from a bee farm over six months.

Month	Honey Production (litres)
January	50
February	60
March	75
April	90
May	100
June	80



a) Based on the graph, describe how honey production changed from January to May.

b) According to the data, during which month was honey production at its maximum?

c) By how many litres did honey production decrease in June when compared to May?

d) Suggest two possible factors that might have led to the drop in honey production observed in June.

ANSWERS

I.OBJECTIVE TYPE QUESTIONS (1 MARK)	
1	c) Characteristic C
2	c) Maximise the utilisation of all available food zones in the pond.
3	d) Implementing a comprehensive vaccination schedule at regular intervals.
4	a) Their ability to breed quickly and form large colonies.
5	c) Apis mellifera
6	b) Food Q
7	i. Both A and R are true, and R is the correct explanation of the assertion.
8	iv. A is false but R is true.
9	iii. A is true but R is false.
10	i. Both A and R are true, and R is the correct explanation of the assertion.
11	i. Both A and R are true, and R is the correct explanation of the assertion.
II. SHORT ANSWER TYPE QUESTIONS (2 MARKS)	
12	Marine fisheries involve fishing in seawater, while inland fisheries occur in freshwater resources like ponds, rivers, and reservoirs.
13	Broiler chickens are fed vitamin-rich supplementary feed to ensure a good growth rate and better feed efficiency, promoting healthy development and optimal production.
14	Pasturage refers to the flowers available to the bees for nectar and pollen collection. The value or quality of honey depends upon the pasturage. Along with this, the kind of flowers available will determine the taste and quality of the honey.
15	The parasites of cattle may be both external parasites and internal parasites. The external parasites live on the skin and mainly cause skin diseases. The internal parasites like worms, affect the stomach and intestine, while flukes damage the liver. Infectious diseases are also caused by bacteria and viruses.
16	Poultry farming is beneficial as it provides a steady supply of eggs and meat, which are important sources of protein for human consumption. It is a highly productive and efficient form of farming.
17	Animal husbandry refers to the practice of breeding and raising animals for food, fibre, labour, and other products. It involves the care and management of livestock to improve productivity and health.

18	• **Honey production** – Honey is obtained from beehives and used as food and medicine. • **Beeswax production** – Beeswax is obtained from honeycombs and is used in making candles, cosmetics, and polishes.
19.	Important factors include controlling temperature, ensuring good ventilation, maintaining cleanliness, providing enough space for the birds, and preventing disease and pest infestations.
20.	Cattle husbandry is done for two purposes—milk and draught labour for agricultural works such as tilling, irrigation and carting. Indian cattle belong to two different species: Bos indicus, cows, and Bos bubalis, buffaloes. Milk-producing females are called milch animals (dairy animals), while the ones used for farm labour are called draught animals
III. SHORT ANSWER TYPE QUESTIONS (3MARKS)	
21	Bee-keeping contributes to agriculture by providing honey, a valuable agricultural product, and beeswax, which has various uses. Successful honey production depends on the use of good bee varieties (e.g., A. mellifera), which have high honey collection capacity and breed well in beehives. Additionally, the availability of good pasturage (flowers for nectar and pollen) determines the quality and quantity of honey produced.
22	Broilers are raised for meat production and require protein-rich food for growth, while layers are raised for egg production and require diets that support egg-laying. Broilers are managed to ensure good growth rates and minimal mortality, while layers require specific management to ensure high egg production.
23	The main problem in composite fish culture is the lack of availability of good-quality fish seed, as many fish species breed only during the monsoon, and wild-collected fish seeds can be mixed with those of other species. To address this issue, methods have been developed to breed these fish in ponds using hormonal stimulation, ensuring the supply of pure fish seed in desired quantities.
24	Cross-breeding combines the qualities of exotic and local breeds, such as long lactation periods and disease resistance. The milk production can be increased by increasing the lactation period. Exotic or foreign breeds (for example, Jersey, Brown Swiss) are selected for long lactation periods, while local breeds (for example, Red Sindhi, and Sahiwal) show excellent resistance to diseases. The two can be cross-bred to get animals with both the desired qualities.
25	Proper housing – Poultry birds should be provided with clean, dry, well-ventilated shelters to protect them from extreme weather and diseases. Balanced feeding – Birds must be given a balanced diet with adequate proteins, carbohydrates, fats, vitamins, and minerals to ensure good

	growth and egg production. Disease control and hygiene – Regular cleaning, vaccination, and protection from parasites and infections are essential to maintain the health of poultry birds.
LONG ANSWER TYPE QUESTIONS (5 MARKS)	
26	The main goals of the cross-breeding programs between Indigenous and exotic poultry breeds are: 1. To improve the number and quality of chicks. 2. To develop dwarf broiler parents for efficient commercial chick production. 3. To enhance summer adaptation capacity and tolerance to high temperatures. 4. To reduce maintenance requirements of the poultry. 5. To create smaller egg-laying birds that can utilize more fibrous, cheaper diets formulated from agricultural by-products.
27	a. **Capture Fishing:** Fish are caught from natural resources like oceans, rivers, and lakes using various types of fishing nets and boats. Marine fish are often located using advanced technologies like satellites and echo-sounders, which help in identifying large schools of fish in the open sea. **Fish Farming (Culture Fishery):** This method involves breeding and raising fish in controlled environments like freshwater ponds or seawater tanks. Some marine fish of high economic value, such as mullets, bhetki, pearl spots, prawns, mussels, and oysters, are farmed in seawater. The farming of oysters also includes the collection of pearls. b. **Mariculture** is the farming of marine fish in seawater, and it has become crucial due to the depletion of natural marine fish stocks. As demand for fish increases, mariculture helps meet this demand by farming high-value marine fish species like mullets, bhetki, pearl spots, prawns, mussels, and oysters, as well as cultivating seaweed. Mariculture is an essential practice to ensure sustainable fish production in the face of decreasing wild fish populations.
28	Beekeeping, also known as apiculture, has become an important agricultural enterprise due to its low investment requirements and potential for generating additional income. It not only provides honey, which is widely used, but also yields wax that has medicinal applications. Beekeeping is often used by farmers as a supplementary income-generating activity. The primary types of bees used for honey production include:

	Apis cerana indica (Indian bee) – A local variety found in India. A. dorsata (Rock bee) – Known for its large hives in the wild. A. florae (Little bee) – A smaller bee species. A. mellifera (Italian bee) – An introduced variety that is now widely used in commercial honey production due to its higher honey collection capacity. The Italian bee (A. mellifera) is particularly beneficial for commercial production because it: Collects honey in larger quantities. Stings less compared to other bee species. Remains in the beehive for longer periods, improving colony stability. Has excellent breeding capacity, ensuring the long-term success of the apiary. Thus, beekeeping serves both an economic and ecological role by supporting pollination and providing valuable products like honey and wax.
V. SOURCE-BASED/CASE STUDY-BASED QUESTIONS	
29	a) The trend in honey production is increasing from January (50 liters) to May (100 liters). The production grows steadily month by month. b) The highest honey production occurred in May, with 100 liters produced. c) In June, the honey production decreased to 80 liters, which is 20 liters less than in May (100 liters). d) Possible reasons for the decline in honey production in June could include: • Seasonal factors, such as a decrease in available nectar sources. • Environmental conditions such as high temperatures or rainfall affecting bee activity. • The bees may have undergone a natural reproductive cycle or faced health issues that reduced production.

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