Time allowed: 03 Hours   Answer ALL the Questions

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1) a. What are the objectives of **Farm Management**?

   b. Briefly discuss the role of Farm Management.

   c. Discuss the Decision-Making Process in Farm Management.

2) a. Explain the **Law of Diminishing Returns**.

   b. Given below is a Production Function for crop cultivation.

$$Y = 1990.95 + 41.0785N - 0.1322N^2$$

It is assumed that the output Y of a crop depends upon only the application of nitrogen. Input N use can be increased, while all other inputs such as seed, irrigation, pesticides, harvesting, threshing are held constant.

Output price $P_Y = 0.76$ per kg, and input price P_N = Rs. 2.75 per kg. Find out the most **profitable level** of Nitrogen usage.

3) a. What is **Linear Programming** and state reasons for using it in Farm Management?

   b. List the assumptions of Linear Programming.

   c. A farmer has 4 ha of land and 375 human labour days available with him. He is planning to grow two crops, maize and soy bean and he cannot grow maize in more than 2 ha, due to the physical condition of the soil. The following information is available from experimental farms with regard to the resource requirements per unit of crop land and net income per ha.

Resources/Income	Soy beans	Maize
Land (ha)	1	1
Labour days	100	112
Net Income (Rs)	20,000	40,000

Find out the **maximum Net Income** that can be obtained from these two crops.

4) a. Discuss briefly the importance of keeping Farm Records.

b. Differentiate the Agricultural Economy from the Industrial Economy.

c. What do you meant by the term "**Depreciation**" and state the causes of depreciation.

d. A new tractor is purchased on January 1st for Rs.1,200,000 with the useful life of 10 years, and the salvage value of Rs.200,000. What would be the **annual depreciation for the first four years** under each depreciation methods given below;

i.   **Straight line method**

ii.   **Sum–of–the–Year's digits method**

5) a. What are the steps involved in preparing **Enterprise Budget?**

b. How would you interpret and analyse an Enterprise Budget?

c. What is a **Partial Budget** and state the steps involved in preparing a Partial Budget.

6) Write **SHORT NOTES** on the following.

    a. Valuation Methods

    b. Investment Analysis

    c. Production Possibility Curve

    d. Farm Production Risks