

B.Tech Even Semester (CBCS) Exam., April—2017

AGRICULTURAL ENGINEERING

(8th Semester)

Course No. : AE-802 (C)

(Agricultural Business Management)

Full Marks : 75

Pass Marks : 30

Time : 3 hours

- Note :*
1. Attempt **one** question from each Unit.
 2. Begin each answer in a new page.
 3. Answer parts of a question at a place.
 4. Assume reasonable data wherever required.
 5. The figures in the margin indicate full marks for the questions.

UNIT—1

1. (a) List and explain the various forms of business organizations. 5
- (b) Given the forecast demand and actual demand for 10-foot fishing boats, compute the tracking signal of MAD.

5+5=10

Year	1	2	3	4	5	6
Forecast Demand	78	75	83	84	88	85
Actual Demand	71	80	101	84	60	73

2. (a) What do you understand by forecastability? What are the steps in building a model of forecastability? 2+4=6

- (b) The University Gift Shop purchases sweatshirts emblazoned with the university name and logo from a vendor in Guwahati. The vendor sells the sweatshirts to the Gift Shop for ₹ 200.00 a piece. Shipping from Guwahati to Silchar costs ₹ 500 per order. When an order arrives, it has been estimated that receiving and inspection tasks cost the Gift Shop ₹ 100. The annual holding cost for a sweatshirt is calculated as 11% of the purchase cost. The Gift Shop manager estimates that 3100 sweatshirts will be sold during the upcoming academic year.

(i) Determine the optimal order quantity using the basic EOQ model.

(ii) The vendor has recently offered a 3% discount on the purchase price if the Gift Shop orders 500 or more but less than 2000 at a time, and a 5% discount if the shop orders 2000 or more at a time. Would you take up one of these offers? If so, what is the new optimal order

(3)

quantity, and if not, why not? Use the same holding cost from part (i) throughout this question. 4+5=9

UNIT—2

3. Write short notes on the following : 3×5=15

- (a) Exchange orientation
- (b) Product management
- (c) Benefits of market segmentation
- (d) Marketing intermediaries
- (e) Advantages of cooperative marketing

4. (a) List the differences between industrial and consumer marketing. 8

(b) Explain the processes involved in the marketing process. 7

UNIT—3

5. (a) What do you understand by Financial Management? 5

(b) Discuss the probable impact that a sale and leaseback arrangement will have on the following : 2×5=10

- (i) Liquidity ratios
- (ii) Return on investment
- (iii) Return on equity

(4)

(iv) The risk class of the corporation's common stock

(v) The price of the corporation's common stock

6. (a) What is an annuity? Is an annuity worth more or less than a lump sum payment received now that would be equal to the sum of all the future annuity payments? 2+4=6

(b) The following cash-flow streams need to be analyzed :

Cash Flow Stream	End of Year				
	1	2	3	4	5
W	10000	20000	20000	30000	30000
X	60000	—	—	—	—
Y	—	—	—	—	120000
Z	20000	—	50000	—	30000

(i) Calculate the future (terminal) value of each stream at the end of year 5 with a compound annual interest rate of 10%.

(ii) Compute the present value of each stream if the discount rate is 14%. 5+4=9

UNIT—4

7. (a) Why is beta a measure of systematic risk? What is its meaning? 3+3=6

(5)

- (b) XYZ industries has a beta of 1.45. The risk-free rate is 8% and the expected return on the market portfolio is 13%. The company currently pays a dividend of ₹ 100 a share, and investors expect it to experience a growth in dividends of 10% per annum for many years to come.
- (i) What is the stock's required rate of return according to the CAPM?
- (ii) What is the stock's present market price per share, assuming this required return?
- (iii) What would happen to the required return and to market price per share if the beta were 0.80? (Assume that all else stay the same)
- 3×3=9
8. (a) Define the following terms : 3×3=9
- (i) Fixed asset turnover ratio
- (ii) Debt ratio
- (iii) Inventory turnover
- (b) Write short notes on the following : 3×2=6
- (i) Law of diminishing return
- (ii) Principle of product substitution

(6)

UNIT—5

9. (a) What do you understand by the basic concept of education? List the changes that are attributed to the process of education. 4+4=8
- (b) What is communication? Explain any one model used for communication. 3+4=7
10. (a) List and explain the key elements of a communication process. 7
- (b) List and explain the characteristics of a good message. 8
