Section: A

1. A manufacturing company has determined from an analysis of its accounting and production data for a certain part that its demand is 9,000 units per annum and is uniformly distributed over the year, its cost price is ₹2 per unit, its ordering cost is ₹40 per order, the inventory carrying charge is 9% of the inventory value. Further, it is known that the lead time is uniform and equals 8 working days, and that the total working days in a year are 300.

Determine:

1. The Economic Order Quantity, EOQ (1 mark)
2. The optimum number of order per annum (1 mark)
3. The ordering and holding costs associated with the policy of ordering an amount equal to EOQ (1 mark)
4. The re-order level (1 mark)
5. The number of days' stock at re-order level (1 mark)
6. The length of the inventory cycle (1 mark)
7. The amount of savings that would be possible by switching to the policy of ordering EOQ determined as above from the present policy of ordering the requirement of this part thrice a year (2 marks)
8. The increase in the total cost associated with ordering (i) 20% more, and (ii) 40% less than the EOQ. (2 marks)

2. Answer any one of the following.

a) Mr. Ramesh is interested in developing and marketing a new drug. The cost of extensive research to develop the drug would be ₹1,00,000. The manager of the research programme said that there is 60% chance that the drug will be developed successfully. The market potential is assessed as follows with the present value of profits.

<table>
<thead>
<tr>
<th>Market Conditions</th>
<th>Probability</th>
<th>Present Value of profits (₹)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Market Potential</td>
<td>0.1</td>
<td>5,50,000</td>
</tr>
<tr>
<td>Moderate Market Potential</td>
<td>0.5</td>
<td>2,40,000</td>
</tr>
<tr>
<td>Low Market Potential</td>
<td>0.4</td>
<td>80,000</td>
</tr>
</tbody>
</table>
The present value figures do not include the cost of research. While Mr. Ramesh considering this proposal, another similar proposal came up which also had required the investment of ₹1,00,000. The present value of profits for the second proposal was ₹1,20,000. The return on the investment in the second proposal is almost certain.

i. Draw a decision tree for Mr. Ramesh indicating all choices and events.

ii. What decision Mr. Ramesh should take regarding the investment of ₹1,00,000?

b) Read the case given below and answer the question that follows: (2.5x4 = 10 marks)

A retail store desires to determine the optimal daily order size for a perishable item. The store buys the perishable item at the rate of ₹60 per kg & sells at the rate of ₹90 per kg. If the order size is more than the demand, the excess quantity can be sold at ₹75 per kg in a secondary market; otherwise, the opportunity cost for the store is ₹10 per kg for the unsatisfied portion of the demand. Based on the past experience, it is found that the demand varies from 50 kg to 200 kg in steps of 50 kg. The possible values of the order size are from 100 kg to 300 kg in steps of 100 kg. Determine the optimal order size which will maximize the daily profit of the store using:

a) Maximax criterion,
b) Maximin criterion,
c) Laplace criterion, and
d) Minimax regret criterion.

Section: B

1. What are the assumptions underlying Linear Programming?
   Explain in brief (2 Marks)

2. Explain the benefits of simplex method over graphical and algebraic methods in solving LPPs (3 Marks)

3. Obtain initial basic feasible solution for following LPP using simplex algorithm in tabular form. (do not solve) (5 Marks)

   Maximise \[ Z = 8X_1 - 6X_2 + 7X_3 + 2X_4 \]

   Subject to
   \[ 4X_1 + 3X_2 + 6X_3 + X_4 \leq 40 \]
   \[ -X_1 + 2X_2 + 3X_3 + X_4 \leq 05 \]
   \[ 9X_1 - 5X_2 + 7X_3 - X_4 \geq 60 \]
   \[ 6X_2 + 2X_3 + 4X_4 = 47 \]
Section A

1. Differentiate between the following: (4x3=12 Marks)
   a) Early Start Time (ES) & Late Start Time (LS)
   b) PERT & CPM
   c) AOA network & AON network

2. Answer the following: (4x2=8 Marks)
   a) Describe the different stages a project passes through during its life cycle.
   b) Discuss the various feasibility studies required to be conducted for a proposed project.

3. Fill in the Blanks (1x6=6 Marks)
   a) An activity that has zero slack/float is said to be ________ activity.
   b) ___________ are the smallest elements in a schedule, which cannot be further subdivided.
   c) An AOA network is constructed by first drawing an ____________.
   d) Free slack refers to the amount of time an activity can be delayed without affecting the ______ time of ________ activities.
   e) CPM gives more emphasis to project ________

4. Draw an AOA diagram for the following project: (4x1= 4 Marks)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Immediate Predecessor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>-</td>
</tr>
<tr>
<td>B</td>
<td>-</td>
</tr>
<tr>
<td>C</td>
<td>-</td>
</tr>
<tr>
<td>D</td>
<td>C</td>
</tr>
<tr>
<td>E</td>
<td>A</td>
</tr>
<tr>
<td>F</td>
<td>B</td>
</tr>
<tr>
<td>G</td>
<td>E</td>
</tr>
<tr>
<td>H</td>
<td>F,G,J</td>
</tr>
<tr>
<td>I</td>
<td>A</td>
</tr>
<tr>
<td>J</td>
<td>D,I</td>
</tr>
</tbody>
</table>
5. The following project network & associated costs are given (T in days, C in Rs.). What is the earliest the project can be completed & what is the least costly way of doing this. 

(10 marks)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Normal</th>
<th>Crash</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$T_n$</td>
<td>$C_n$</td>
</tr>
<tr>
<td>A</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>B</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>C</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>D</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>E</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>F</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>G</td>
<td>5</td>
<td>8</td>
</tr>
</tbody>
</table>

Section B

1. Explain entrepreneurship in the context of agri-business and enlist entrepreneurial traits (3 Marks)

2. State steps involved in business planning (3 Marks)

3. Briefly explain concept of intrapreneur (2 Marks)

4. Write a short note on below terms (any two) (1*2 = 2 Marks)
   a. Motivation for entrepreneurship
   b. Social entrepreneurship
   c. Leader v/s manager

***End***
Q-1. Tick correct option of the following questions

1. is concerned with the acquisition, financing, and management of assets with some overall goal in mind.
   a) Financial management  b) Profit maximization
   c) Agency theory  d) Social responsibility

2. What is the most appropriate goal of the firm?
   a) Shareholder wealth maximization  b) Profit maximization
   c) Stakeholder maximization  d) EPS maximization

3. Which of the following types of company will have the lowest level of investment in working capital to finance?
   a) Supermarkets  b) Ship builders
   c) Water suppliers  d) Chemical organization

4. What is the most important financial management decision?
   a) Asset management decision  b) Financing decision
   c) Investment decision  d) Accounting decision

5. Profitability index (PI) of .92 for a project means that ________.
   a) the project's costs (cash outlay) are (is) less than the present value of the project's benefits
   b) the project's NPV is greater than zero
   c) the project's NPV is greater than 1
   d) the project returns 92 cents in present value for each current investment

6. ________ Lease is a long-term lease that is not cancelable and its life often matches the useful life of the asset.
   a) A Financial  b) An Operating
   c) A Net  d) None of the above answers are correct

7. Which group of ratios shows the current liability payment capacity of the organization?
   a) Liquidity ratios.  b) Activity ratios.
   c) Coverage ratios.  d) Profitability ratios.

8. A firm has a DOL of 3.5 at Q units. What does this tell us about the firm?
   a) If sales rise by 3.5% at the firm, then EBIT will rise by 1%.
   b) If EBIT rises by 3.5% at the firm, then EPS will rise by 1%.
   c) If EBIT rises by 1% at the firm, then EPS will rise by 3.5%.
   d) If sales rise by 1% at the firm, then EBIT will rise by 3.5%.

9. For which of the following costs is it generally necessary to apply a tax adjustment to a yield measure?
   a) Cost of debt.  b) Cost of preferred stock.
   c) Cost of common equity.  d) Cost of retained earnings.
10. The acquisition of a firm whose business is not related to that of the purchaser is called a _____ acquisition.
   a) Conglomerate   b) Forward
   c) Backward       d) Horizontal.

11. Which is the hybrid finance source?
   a) Bank Loan
   b) Equity Share
   c) Public Deposit
   d) Convertible Debenture

12. A company that has more than half of its voting shares owned by another company is generally referred to as a _________ of the other firm.
   a) Joint-venture partner
   b) Proxy
   c) Subsidiary
   d) Division

13. Which is the discounted cash flow Method?
   a) Payback Period Method
   b) Mutually Exclusive Method
   c) Profitability Index Method
   d) Accounting Rate of Return

14. If HLL Ltd is purchase the business of SIL Ltd so it is known as
   a) Takeover
   b) Merger
   c) Amalgamation
   d) None of the above answer are correct

15. Which capital structure gives maximum profit to the organisation?
   a) Only Equity share
   b) Equity, Preference share
   c) Equity share, Preference share, Debenture
   d) None of the above answer are correct


Q-3. What is the meaning of Capitalization? Explain the types of it

Q-4. Define the term Working Capital. Explain the Working capital operating cycle with example

Q-5. What is the difference between Merger and Acquisition

Q-6. Explain the types of Cost in relation to cost of capital

Q-7. FRL Ltd is considering to issue ₹ 20 Lakh, 9% debentures, ₹ 500 each at a discount of 5%. The debentures are repayable after 10 years. However, the company will pay ₹ 7.50 per debenture as issue expenses. Assume a 50% corporate tax rate. Calculate the after tax cost of debentures issue. What would be the cost if these debentures are issued at 10% premium?

Q-8. If Cost of goods sold is ₹ 40,000, Gross Profit ratio is 20% of sales, Calculate the Gross profit margin. And explain the utility of this ratio.

Q-9. Explain the positive and negative effect of Financial Leverage in the organization with suitable example

Q-10. Simton Ltd.’s management has One proposal costing ₹ 10,00,000 the following expected net cash inflow

<table>
<thead>
<tr>
<th>Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Flow</td>
<td>₹ 3,00,000</td>
<td>₹ 4,00,000</td>
<td>₹ 5,00,000</td>
<td>₹ 3,00,000</td>
<td>₹ 2,00,000</td>
<td>₹ 0</td>
</tr>
</tbody>
</table>

Evaluate this proposal on the basis of Payback period and Net Present Value method and advice the company about the proposal.
Q.1 The firm should estimate its competitors’ costs and performances (02Mks) as__________ against which to compare its own costs and performance.
   a) competition
   b) standards
   c) challenges
   d) benchmarks
   e) moveable standards

Q.2 We can say that a________ has three characteristics: (1) It is a source of competitive advantage in that it makes a significant contribution to perceived customer benefits, (2) it has applications in a wide variety of markets, and (3) it is difficult for competitors to imitate. (02Mks)
   a) core competency
   b) business strategy
   c) core technology
   d) strategic business unit
   e) winning strategy

Q.3 The task of any business is to deliver __________ at a profit. (02Mks)
   a) customer needs
   b) products
   c) customer value
   d) products and services
   e) improved quality

Q.4 In a hypercompetitive economy such as ours, a company can win only by (02Mks) fine-tuning the value delivery process and choosing, providing, and __________ superior value.
   a) communicating
   b) selecting target markets with
   c) composing
   d) developing
   e) researching
Q.5 Which of the following is not the part of the external marketing environment? (02Mks)
   a) Political  
   b) Legal  
   c) Product  
   d) Socio-Cultural

Q.6 The quadrant of the Boston Consulting Group (BCG) Matrix that represents both a high market share and a high rate of market of market growth includes the: (02Mks)
   a) Cash Cow  
   b) Achievers  
   c) Stars  
   d) Strivers

Q.7 What is Holistic marketing? (02Mks)

Q.8. What do you mean by internalization? (02Mks)

Q.9 Enlist the criteria for choosing the brand element? (02Mks)

Q.10 What do you mean by heuristic approach? (02Mks)

Q.11 A multinational FMCG company known for its Food products is planning to launch a new brand of ‘Fish pickles (Non-Veg)’ in Indian markets. Fish Pickles will be made from prawns. Design a suitable Marketing Plan for the above product. Assume your own brand name and clearly specify the target markets. (20Mks)

Q.12 Explain the concept of ‘Product Mix’ in detail. Also mention various product mix strategies. (10Mks)

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Note:
- Full marks of each question indicated in a bracket at the right end of each question.

1. How the Internet and e-commerce is changing the business activities in today’s world? Discuss. [5]

2. Explain the concept of Decision Making? Explain decision making in various conditions. [5]

3. Define System. What are the different types of Systems? Explain with examples. [5]

4. What is Control? Explain Control in context to information system. Explain with diagram feedback control loop. [5]


7. Discuss the recent developments in IT. [5]


9. What is the role played by a Management Information System and state its importance? [7]

10. Define Data and Information. What are the different attributes of information? Explain. [7]

11. What are the different levels of management? What is the information at each level? [8]

12. Write different applications of MIS? [8]
4. State true or false and correct the false statements (1 * 10 = 10 Marks)
   a. In a simplex algorithm, once a variable leaves the basis, it cannot come back in any of the next iterations.
   b. Once the initial basic feasible solution is obtained, optimality of the solution is tested using the value of theta.
   c. The optimum solution to profit maximization LPP always implies maximization of profit obtainable from the given resources and full utilization of all the resources.
   d. If constraint is of \( \leq \) type, then surplus variable is used to convert them to equation.
   e. If constraint is of \( \geq \) type, use of artificial variable is must
   f. Alternate optima indicate existence of only two alternate solutions to a LPP.
   g. Surplus variables cannot qualify to be basic variables.
   h. When the slope of objective function line is same as one of the constraint, the solution to LPP is said to be infeasible
   i. Value of \( C_j - Z_j \) for all basic variables will always be zero
   j. In LPP, an unbounded region always leads to unbounded solution.

5. How will you identify the following problems associated with LPP using simplex algorithm. (Explain in only one sentence) (1 * 5 = 5 Marks)
   a. Degeneracy
   b. Alternate Optima
   c. Infeasibility
   d. Unboundedness
   e. Cycling

6. Solve the following LPP using simplex method (5 Marks)

Maximise \( Z = 8X_1 - 4X_2 \)

Subject to \( 4X_1 + 5X_2 \leq 20 \)
\(-X_1 + 3X_2 \geq -23 \)
\( X_1, X_2 \geq 0 \)

***End***