Total Number of Pages: 02

Course: IMBA
Sub_Code: IMQT3001

3rd Semester Regular Examination: 2025-26
SUBJECT: QUANTITATIVE METHODS - II
BRANCH(S): IMBA
Time: 3 Hours
Max Marks: 100
Q.Code: U387
Answer Q1 (Part-I) which is compulsory, any eight from Part-II, and any two from Part-III.
The figures in the right hand margin indicate marks.

Part-I

Q1   Answer the following questions: (2 x 10)
a)   What do you mean by minimax Criterion?
b)   What is two-person zero sum game?
c)   Write two assumptions of Game?
d)   What do you mean by optimal strategy?
e)   What is random number? Why is it used in simulation?
f)   What do you mean by calling population?
g)   Explain the term Reneging and Jockeying.
h)   Find out traffic intensity, where arrival rate is 20 per hour and service rate is 35 per hour.
i)   Write the characteristics of a Markov chain.
j)   Witte two applications of Markov analysis.

Part-II

Q2   Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)   (6 x 8)
a)   What is a game in game theory? What are the properties of a game?
b)   How do you solve the game when (I) saddle point exit and (II) saddle point does not exit.
c)   Explain how games can be solved using the dominance property.
d)   Find the value of game using dominance rule:

Player B → Player A ↓	1	2	3
1	6	12	7
2	11	7	12
3	10	6	11

e)   A particular shop sells the confectionery items, past data of demand per week in hundred kilograms with frequency is as given below:

Demand/Week	0	5	10	15	20	25
frequency	2	10	9	20	6	3

Using following sequence of random number generate the demand for the next 10 weeks and also find out the average demand per week. Random numbers are 40, 42, 56, 89, 87, 24, 35, 38, 11, and 60.

f) Explain why simulation is used?

g) Explain different types of simulation.

h) What are the steps involved in simulation process?

i) Explain the structure of a Queuing System.

j) The arrival rate of customers at a banking counter follows a Poisson distribution with a mean of 30 per hours. The service rate of the counter clerk also follows Poisson distribution with mean of 45 per hour. a) What is the probability of having zero customer in the system? (b) Find Ls, Lq, Ws, and Wq

k) Explain with suitable examples about the queue. Why do you consider the study of waiting line as an important aspect?

l) Explain how a decision tree helps to understand the problem of Markov chain.

Part-III
Only Long Answer Type Questions (Answer Any Two out of Four)

Q3   Find the value of game using graphical method.   (16)

Player B → Player A ↓	B1	B2	B3	B4	B5
A1	−5	5	0	−1	0
A2	8	−4	−1	6	−5

Q4   A company manufactures around 199 mopeds. Depending upon the availability of raw   (16)
materials and other conditions, the daily production has been varying from 197 mopeds to
205 mopeds, whose probability distribution is as given below:
Production/day: 197 198 199 200 201 202 203 204 205
Probability   : 0.05 0.09 0.12 0.14 0.20 0.15 0.11 0.08 0.06
The finished mopeds are transported in a specially designed three-storied lorry that can
accommodate only 200 mopeds. Using the following 15 random numbers: 85, 89, 78, 25,
53, 61, 29, 45, 23, 50, 77, 27, 54, and 12, simulate the mopeds waiting in the factory.
(I) What will be the average number of mopeds waiting in the factory?
(II) What will be the number of empty spaces in the lorry?

Q5   What is simulation? Explains its advantages, disadvantages and uses.   (16)

Q6   Two manufacturers A and B are competing with each other in a restricted market. Over   (16)
the year, A's customers have exhibited a high degree of loyalty as measured by the fact
that customers are using A's product 70 % of the time. Also former customers
purchasing the product from B have switch back to A's product 60% of the time
   a) construct and interpret the state transition matrix in terms of
      (i) retention and loss and (ii) retention and gain.
   b) calculate the probability of customer purchasing A's product at end of the second
      period.

Registration No.: ☐☐☐☐☐☐☐☐☐☐

Total Number of Pages: 02

Course: IMBA
Sub_Code: IMPC3001

3rd Semester Regular Examination: 2025-26
SUBJECT: Principles of Management
BRANCH(S): IMBA
Time: 3 Hours
Max Marks: 100
Q.Code: U176

Answer Q1 (Part-I) which is compulsory, any eight from Part-II and any two from Part-III.
The figures in the right-hand margin indicate marks.

Part-I

Q1   **Answer the following questions:**   (2 x 10)
   a) Define planning as a managerial function.
   b) State two features of controlling.
   c) What is liaison role of manager and how it differs from negotiator role?
   d) Write two differences between technical and conceptual skills.
   e) Why is coordination between line and staff necessary?
   f) What happens when the chain of command is violated?
   g) Define coordination. Is coordination a function or essence of management?
   h) What is meant by reciprocal relationship principle?
   i) State two benefits of cultural diversity.
   j) How does organizational culture affect employee behavior?

Part-II

Q2   **Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)**   (6 x 8)
   a) Explain the five functions of management according to Henry Fayol.
   b) Describe any six specific managerial roles with examples.
   c) Explain the relative importance of managerial skills at different level of management.
   d) Explain the system approach to management.
   e) Define span of management and explain the factors influencing it.
   f) Discus the barriers to effective delegation and suggest remedies.
   g) Explain the importance of managing a multi-ethnic workforce in organizations.
   h) Explain the benefits of cultural diversity in enhancing organizational performance.
   i) Describe the rational model of planning.
   j) Explain how risk and uncertainty affect managerial decision making.
   k) "Planning is meaningless without controlling". Analyze the statement with suitable example.
   l) Why controlling considered both backward-looking and forward-looking? Justify with suitable examples.

Part-III
Only Long Answer Type Questions (Answer Any Two out of Four)

Q3   Explain the evolution of management thought from the pre-scientific era to the modern   **(16)**
approach

Q4   Define planning and explain its nature and importance. Elaborate the process of planning   **(16)**
in details.

Q5   Define span of management and explain its importance. Discuss the factors determining   **(16)**
the span of management.

Q6   "Delegation improves efficiency ad motivation but increases the risk of errors". Explain the   **(16)**
statement.

Total Number of Pages: 02

Course: IMBA
Sub_Code: IMEV3001

3rd Semester Regular Examination: 2025-26
SUBJECT: LAW OF CONTRACT
BRANCH(S): IMBA
Time: 3 Hours
Max Marks: 100
Q.Code: U051

Answer Question No.1 (Part-I) which is compulsory, any eight from Part-II and any two from Part-III.
The figures in the right-hand margin indicate marks.

Part-I

Q1	**Answer the following questions:**	(2 x 10)
a)	Define a contract according to the Indian Contract Act, 1872.	
b)	What is an offer?	
c)	Classify the contract on the basis of execution.	
d)	What is meant by "Free Consent"?	
e)	Define "Contract of Sale."	
f)	What is a counter offer?	
g)	Who is an unpaid seller?	
h)	Define a contract of agency.	
i)	What is meant by Bailment?	
j)	Define Partnership under the Indian Partnership Act, 1932.	

Part-II

Q2	**Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)**	(6 x 8)
a)	Explain the essential elements of a valid contract.	
b)	Do you agree that there cannot be a contract without consideration? Justify your answer.	
c)	State the remedies available for breach of contract.	
d)	Explain the difference between a "Condition" and a "Warranty."	
e)	Distinguish between Coercion and Undue influence.	
f)	What are the rights and duties of an agent?	
g)	Describe the rights and duties of a bailee.	
h)	Explain how and when ownership of goods is transferred in a contract of sale.	
i)	Explain the modes of creation of an agency	
j)	State the essential elements of a partnership firm.	
k)	Describe the circumstances under which a partnership firm is dissolved	
l)	Who is a finder of lost goods? What are his rights?	

Part-III
Only Long Answer Type Questions (Answer Any Two out of Four)

Q3   What are the rights and duties of partners in a partnership firm? Explain the various   **(16)**
modes of dissolution of partnership.

Q4   What are the various modes of discharge of a contract?   **(16)**

Q5   What are the rights of an unpaid seller under the Sale of Goods Act?   **(16)**

Q6   Discuss the rights of a consumer under Consumer Protection Act, 2019.   **(16)**

Registration No.:

Answer Question No.1 (Part-I) which is compulsory, any eight from Part-II and any two from Part-III.
The figures in the right hand margin indicate marks.

Part-I

Q1 Answer the following questions: (2 x 10)
  a) Define economics in terms of scarcity and choice.
  b) What do you mean by market equilibrium?
  c) What is an indifference map?
  d) Explain the factors of production.
  e) State the law of demand and illustrate with a diagram.
  f) Write two differences between fixed cost and variable cost.
  g) What are returns to scale?
  h) Explain the fallacy of composition.
  i) Explain accounting versus economic costs.
  j) What is marginal utility?

Part-II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)   (6 x 8)
  a) Differentiate between movement and shift along the supply curve.
  b) Explain consumer equilibrium using the indifference curve approach.
  c) Discuss the role of opportunity cost in production decisions.
  d) Define price effect, substitution effect, and income effect. How are they related?
  e) Distinguish between positive and normative economics.
  f) What are the determinants of the elasticity of demand?
  g) Explain Price elasticity of supply and its types.
  h) Explain long-run production function.
  i) Explain marginal productivity theory using MPP, MRP, and VMP.
  j) What is break-even revenue? Explain with an example.
  k) Show the relationship between AR and MR incase of both perfect and imperfect competition with diagrams.
  l) Explain substitute and complement goods with an example.

Part-III
Only Long Answer Type Questions (Answer Any Two out of Four)

Q3   Discuss the law of diminishing marginal utility and its importance in consumer choice theory.   **(16)**

Q4   Write about producer's equilibrium using Isoquant and Isocost line.   **(16)**

Q5   Explain the law of variable proportions with a diagram and an example.   **(16)**

Q6   Explain Ricardian theory of Rent. Include an example.   **(16)**

Registration No.: ☐☐☐☐☐☐☐☐☐☐

Answer Q1 (Part-I) which is compulsory, any eight from Part-II and any two from Part-III.
The figures in the right-hand margin indicate marks.

Part-I

Q1   Answer the following questions: (2 x 10)
- **a)** Define Cost Accounting.
- **b)** What is Cost Centre?
- **c)** What is stores ledger?
- **d)** What do you mean by activity-based costing?
- **e)** What is abnormal loss?
- **f)** What is job costing?
- **g)** What is marginal cost?
- **h)** What is budgetary control?
- **i)** What is labour idle variance?
- **j)** What is labour turnover method as per separation method

Part-II

Q2   Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)   (6 x 8)
- **a)** Distinguish between cost centre and Profit centre with a suitable example.
- **b)** From the following information prepare a cost sheet and determine the cost per unit and profit per unit?
  Direct Materials Rs. 15,000
  Direct Labour Rs. 9,000
  Factory overheads are 50 % of Direct Labour
  Office overhead is 20 % of work cost.
  Units produced is 17,100 units
  Units sold is 16,000 units
  Selling expenses is Rs. 0.50 per unit sold
  Selling price is Rs. 4 per unit sold.
- **c)** Distinguish between FIFO and LIFO.
- **d)** Discuss the purposes of time keeping and time booking records of a factory.
- **e)** Give the methods of segregation of semi variable cost into fixed and variable cost.
- **f)** In process B, 75 units of a commodity were transferred from process A at a cost of Rs. 1,310. The additional expenses incurred by the process were Rs. 190.20 % of the units entered are normally lost and sold @ Rs. 4 per unit. The output of the process was 70 units. Prepare process B account and abnormal gain account?

g) A transport service company is running four buses between two towns which are 50 km apart. Sitting capacity of each bus is 40 passengers. Actual passenger carried were 75 % of the sitting capacity. All the four buses ran on all the days of the month April, 2025. Each bus made one round trip per day. Calculate total kilometres and total passenger kilometres for the month?

h) Fixed cost is Rs. 2,00,000. Selling price is Rs. 50 per unit and variable cost is Rs. 30 per unit. Find out the % of increase or decrease in selling price for an increase of 10 % in existing Break-Even Sales? Fixed cost and variable cost per unit remains unchanged.

i) Annual consumption of material is 10,000 units ordering cost is Rs. 10 per order. Carrying cost is 10 % of cost of material per unit. Material cost per unit is Rs. 50 per unit. Determine the Economic ordering quantity and find out the number of orders to be placed.

j) Discuss any three methods of costing and any three techniques of costing.

k) Explain about application of marginal costing for managerial decision making.

l) What is material control? Discuss material levels to be calculated for an effective material control.

Part-III
Only Long Answer Type Questions (Answer Any Two out of Four)

Q3   Discuss how the limitations of financial accounting are overcome by Cost accounting and management accounting together.   (16)

Q4   The sales and profit for two years are as follows: (16)

	Sales (Rs.)	Profits (Rs.)
Year 2004	1,50,000	2,000
Year 2005	1,70,000	25,000

Calculate:
 a) P/V ratio,
 b) B.E.P.
 c) Sales required to earn a profit of Rs. 40,000.
 d) Margin of safety at a profit of Rs. 1,25,000
 e) Profit made when sales are Rs. 1,00,000
 f) Variable costs of the two years.

Q5   From the following compute –   (16)
  a) Material price variance
  b) Material quantity variance
  c) Material mix variance, and
  d) Material cost variance.

Material ↓	Standard		Actual	
	Quantity (Kg.)	Unit Price (Rs.)	Quantity (Kg.)	Unit Price (Rs.)
A	10	2	5	3
B	20	3	10	6
C	20	6	15	5
Total →	50		30	

Q6   Define budgetary control. State its objectives. Explain the process by which the various budgets are prepared?   (16)

Total Number of Pages: 02

Course: IMBA
Sub_Code: IMPC3003

3rd Semester Regular Examination: 2025-26
SUBJECT: Marketing Management - II
BRANCH(S): IMBA
Time: 3 Hours
Max Marks: 100
Q.Code: U320

Answer Question No.1 (Part-I) which is compulsory, any eight from Part-II and any two from Part-III.
The figures in the right hand margin indicate marks.

Part-I

Q1   **Answer the following questions:**   (2 x 10)

a) How do goods differ from services in their basic nature?
b) What distinguishes shopping goods from specialty goods?
c) Define length and depth of product mix
d) What is idea screening?
e) What are the key features of maturity stage of PLC?
f) What is descriptive labeling in product packaging?
g) What is meant by predatory pricing?
h) How agent middle men are different from merchant middlemen?
i) Define umbrella branding with real life example.
j) How advertising is different from personal selling?

Part-II

Q2   **Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)**   (6 x 8)

a) Discuss how business analysis helps in assessing the feasibility of a new product idea during the new product development process.
b) Explain different types of Product Mix Strategies with suitable examples.
c) Explain the different types of Vertical Marketing System with practical examples.
d) Analyze the impact of economic fluctuations on the pricing strategies adopted by firms.
e) Explain the different types of competition oriented pricing.
f) Describe the key functions performed by distribution channels in delivering products to consumers.
g) What is franchising? Explain its advantages over other medium of distribution.
h) Analyze various customer needs responsible for designing a marketing channel.
i) Discuss the reasons for the growth of e-commerce in India.

j) Explain the advantages of personal selling over advertising.

k) Discuss the methods available to resolve channel conflicts with practical example.

l) Define co-branding. Discuss the situations where individual branding is preferred over corporate branding.

Part-III
Only Long Answer Type Questions (Answer Any Two out of Four)

Q3   A company is going to launch an electric car in India, discuss how various stages of new   (16)
      product development help the company for successful launching.

Q4   You are going to design a customer oriented distribution channel, discuss the steps   (16)
      involved in the channel design decisions.

Q5   Critically examine the factors responsible for setting a suitable pricing policy for FMCG   (16)
      products.

Q6   You are going to open a restaurant in your city. Analyze various communication mix and   (16)
      suggest which communication mix will you apply to increase your brand visibility.

Total Number of Pages: 02

Course: IMBA
Sub_Code: IMQT3201

3rd Semester Regular Examination: 2025-26
SUBJECT: Introduction To AI
BRANCH(S): IMBA
Time: 3 Hours
Max Marks: 100
Q.Code: U424
Answer Question No.1 (Part-I) which is compulsory, any eight from Part-II and any two from Part-III.
The figures in the right-hand margin indicate marks.

Part-I

Q1   Answer the following questions: (2 x 10)
a)   What are the main goals of artificial intelligence?
b)   Explain the importance of data in AI.
c)   What machine learning cannot do?
d)   Explain deep learning in simple terms.
e)   What factors influence choosing an AI project?
f)   What is data collection and why is it important?
g)   What is model training in an AI workflow?
h)   What is a playbook in AI?
i)   Define smart speaker.
j)   What are the learnings from the self-driving car case study?

Part-II

Q2   Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)   (6 x 8)
a)   Discuss the terminology used in AI (agent, environment, model, features, labels, predictions).
b)   Explain what machine learning can and cannot do with suitable examples.
c)   Compare traditional programming with machine learning.
d)   Explain the complete workflow of a machine learning project with a diagram.
e)   Discuss the technical tools used by AI teams for development and deployment.
f)   Explain challenges faced while building real-world AI projects.
g)   Describe the role of cross-functional teams in successful AI projects.
h)   Why should every job role in a modern organization learn to use data?
i)   Explain deep learning using a non-technical explanation.
j)   Explain in detail the process of building AI capabilities in a company.
k)   Discuss the smart speaker case study and how AI is applied.
l)   What is the AI Transformation Playbook (Part 1)?

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

Q3   Explain different types of machine learning (supervised, unsupervised, reinforcement learning) in a simple way.   **(16)**

Q4   **a)**   Give real-life applications where machine learning works effectively.   **(8)**

     b)   What makes AI different from standard automation?   **(8)**

Q5   **a)**   Give an example of a complete machine learning project workflow.   **(8)**

     b)   Provide a use case of a real business problem solved by an AI project.   **(8)**

Q6   **a)**   Explain the steps for taking the first step in AI adoption.   **(8)**

     b)   Why is cross-department collaboration necessary for AI projects?   **(8)**