CC/M/EXAM.
2020

MANAGEMENT

PAPER—II

Time : 3 hours]   [Full Marks : 250

Note :   Question Nos. 1 and 5 are compulsory and out of the remaining, any **three** are to be attempted choosing at least ONE question from each Section. The number of marks carried by a question/part is indicated against it.

SECTION—A

1. Answer *any* **five** of the following questions in about *150* words each :

   (a) Draw the trend line and the actual line for the following data using moving average method :   10

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Production in Tons	42	44	46	50	48	44	50	52	54	52

   (b) What are the various techniques of random sampling?

   An advertising agency wants to find out if there is any difference in the loyalty for a given brand of clothes between men and women. A random sample of 200 men and 200 women was taken and it was decided that 52 percent women and 62 percent of the men showed brand loyalty. At $\infty = 0.05$, test the null hypothesis that there is no significant difference between the population proportion of men and women who are brand loyal. (Use p-value approach)   5+5=10

   (c) What are the advantages of Value Driven Approach over Transformation Approach? How can the Value Chain model contribute in the customer satisfaction process?   5+5=10

   (d) Explain the components of Management Triangle as used in management information framework.   10

   (e) What are the elements of Supply Chain Management? Explain the potential benefits of managing supply chain.   10

/79

(f) What is project management? Distinguish between Scrum and Lean project management procedures. 2+8=10

(g) Discuss how e-governance enhances trust between the Governments and the Citizens. What are the differentiating characteristics of Government-to-Citizen (G2C) and Government-to-Government (G2G)? 5+5=10

2. Answer the following questions :

(a) What is sensitivity analysis? Solve the following linear programming problem using simplex method : 5+15=20

$$
\begin{array}{llll}
\text{Max} & 3x_1 & +2x_2 & -5x_3 \\
\text{s.t.} & 4x_1 & -2x_2 & +2x_3 & \leq 4 \\
& -2x_1 & +x_2 & -x_3 & \geq -1 \\
& x_1, & x_2, & x_3 & \geq 0
\end{array}
$$

(b) *(i)* From the data given in the following table, calculate the first four moments about assumed mean 25 and convert them into central moments. Comment on the nature of the distribution : 5

Class Interval	Frequency
0–10	1
10–20	3
20–30	4
30–40	2

(ii) From the data given in the following table, calculate price index by applying weighted average of price relatives method using arithmetic mean and geometric mean : 10

Commodities	Price in the base year (in ₹)	Quantity in the base year (in kg)	Price in the current year (in ₹)
X	3·0	20	4·0
Y	1·5	40	1·6
Z	1·0	10	1·5

(c) Demand for heart transplant surgery at S.S. Nursing Home has increased steadily in the past few years, as shown in the following table :

Year	Time Code (X)	Number of surgery (Y)
2011	–3	45
2012	–2	50
2013	–1	52
2014	0	55
2015	1	58
2016	2	60
2017	3	55

(i) S.S. Nursing Home decides to use linear regression to predict the number of surgeries for the year 2018. What is the regression equation for S.S. Nursing Home's surgery data?

(ii) How should you determine whether or not regression is a good forecasting model for S.S. Nursing Home?

(iii) Using exponential smoothing with $a = 0 \cdot 2$ and 1998 forecast of 65, find the number of surgeries for the year 2018.   15

3. Answer the following questions :

(a) (i) Describe the various steps followed under the Six-sigma methodology. What are the differences between Total Quality Management (TQM) and Six-sigma?   5+5=10

(ii) What is inventory control? Explain the considerations which determine the maximum and the minimum levels of inventory.   5+5=10

(b) (i) Explain how a Control Chart is different from a Run Chart.   5

(ii) A Quality Control Inspector has taken ten samples of size four packets each from a potato chips company. The contents of the sample are given below. Calculate the control limits for mean and range chart :

Sample Units	Observations			
	1	2	3	4
1	12·5	12·3	12·6	12·7
2	12·8	12·4	12·4	12·8
3	12·1	12·6	12·5	12·4
4	12·2	12·6	12·5	12·3
5	12·4	12·5	12·5	12·5
6	12·3	12·4	12·6	12·6
7	12·6	12·7	12·5	12·8
8	12·4	12·3	12·6	12·5
9	12·3	12·5	12·3	12·6
10	12·1	12·7	12·5	12·8

(Given for $n = 5$, $A2 = 0 \cdot 58$, $D3 = 0$ and $D4 = 2 \cdot 115$)   10

(c) What are the system flexibilities in a manufacturing process? Discuss how the strategies under cost leadership, differentiation and focus help in bringing benefits from flexibility.   5+10=15

4. Answer the following questions :

(a) What are different categories of Management Information System? How is the transaction processing system different from the Management Information System? Explain the decision-making process under the Management Information System.   5+5+10=20

(b) What is meant by Business Process Re-Engineering (BPR)? Discuss the role of enterprise resource planning in enterprise modelling. 5+10=15

(c) What are the different types of information system development methodology? Compare the strengths of System Development Life Cycle (SDLC) over Rapid Action Development (RAD). 5+10=15

SECTION—B

5. Answer *any* **five** of the following questions within *150* words each :

(a) What is target costing? Explain the steps involved in implementing a target costing system. 2+8=10

(b) Discuss the role of the State in business activities. 10

(c) Explain the explanatory forces in modelling economic transition shaped Indian process of new economic order. 10

(d) Discuss the role of voluntary organizations in consumer rights in India. 10

(e) What are the differences between Foreign Direct Investment and Foreign Institutional Investment? Of these two, which is more important for internal growth of a nation? Elucidate. 4+6=10

(f) What do you mean by the multicultural management? Why is it increasing in popularity in the recent years? 5+5=10

(g) Explain the different variants of the Bill of Lading as used in international transactions. 10

6. Answer the following questions :

(a) What is a learning organization? Discuss the role of Systems Thinking and Personal Mastery in the expansion of a learning organization. 5+15=20

(b) "Cost-cutting moves sometimes destroy the ability to build core competencies". What is meant by core competence? Analyze how the Just-in Time (JIT) approach helps in maintaining the core competence. 5+10=15

(c) "A growth strategy is one that an enterprise pursues when it increases its level of objectives upward in a significant increment, much higher than an extrapolation of its past achievement level". Discuss how the General Electric Nine Cell Matrix tries to overcome the limitations of Boston Consulting Group's Growth Share Matrix in allocating resources amongst its business units in some rational ways. 15

7. Answer the following questions :

(a) What is the new classification of MSMEs in India? Critically examine the role of Udyog Adhaar in strengthening the growth of micro, small and medium enterprises in India.

5+15=20

(b) Give a brief genesis of the information technology legislation in India. Analyze the critical changes under the subsequent amendments in the Information Technology Act of 2000.

5+10=15

(c) The series of reform programmes in Indian public sector enterprises have tremendously affected the process of economic reconstruction since 1991. Point out the major shifts in the public sector enterprises in India since 2010.

15

8. Answer the following questions :

(a) What is Perlmutter's trio on international state of mind? What are its components? Explain the 'technological complexity phenomenon' of the industrial lease agreements.

5+5+10=20

(b) What do you mean by survival strategy? What are different types of survival strategy? Why is it said that the aggressive marketing and advertisement policies create the foundation of MNC operation?

5+5+5=15

(c) What is the composition of the Raymond Vernon's technology-based propositions? Explain how these propositions help in understanding the five stages of the new product development.

5+10=15