PRESIDENCY UNIVERSITY
BENGALURU

SET A

SCHOOL OF MANAGEMENT
END TERM EXAMINATION - JAN 2024

Semester : Semester III - 2022

Course Code : MBA3063

Course Name : Lean Supply Chain Management

Program : MBA

Date : 13-JAN-2024

Time : 10:00AM - 1:00 PM

Max Marks : 100

Weightage : 50%

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.
(iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE QUESTIONS   **10 X 3M = 30M**

1. In making a process lean, certain principles are adopted. List the 5 aspects of Lean process aligned with the lean principles.

    (CO1) [Knowledge]

2. Indicating the importance of each M our of 3M in quality system, state the 3M 's related to LSCM.

    (CO1) [Knowledge]

3. Just in Time is a policy adopted in Lean supply chain. State its definition.

    (CO1) [Knowledge]

4. Define the term Period Order Quantity (POQ) as relevant to Lean SCM..

    (CO2) [Knowledge]

5. In terms of items ordered for delivery, define a Lot size.

    (CO2) [Knowledge]

6. List the three cost drivers in warehousing management and indicate their importance.

    (CO3) [Knowledge]

7. List the four stages of evolution of Quality and state the meaning in one line.

    (CO4) [Knowledge]

8. Define the terms Keiretsu and how is it related to Zaibatsu.

    (CO4) [Knowledge]

9. Define Control Chart and illustrate the control lines .

    (CO4) [Knowledge]

10. List the proportional areas corresponding to upper control limit represented by $Z1=+1.55$, $Z2= -0.85$ and $Z3=+2.9$

    (CO4) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS   **6 X 7M = 42M**

11. Kaizen is one of the important approaches to achieve continuous improvement in process. Similarly, there are lean tools like Heijunka, Andon, Value stream mapping and Hoshin Kanri. Explain these tools with an example as relevant to LSCM.

(CO1) [Comprehension]

12. Flow of various types become very significant to maintain a smooth process in the production centre. To improve the productivity in the production centre, managers focus on the flow in the production process. There are 7 important flows that are considered in the production centre. Explain the seven flows and indicate the barriers to flow.

(CO2) [Comprehension]

13. A Manager of a small factory has implemented lean practices throughout the factory premise. The Manager has an anticipation of receiving huge orders to be fulfilled for the next 1 years. Manager refers to their MPS to make changes in their procurement and product mix. Explain the importance of BOM and MPS in LSCM.

(CO2) [Comprehension]

14. Explain in detail the differences between Lean warehousing and Lean logistics. Give suitable examples. Indicate the importance of Kanban and Heijunka in managing lean warehousing and logistics.

(CO3) [Comprehension]

15. In any production centre, there are large quantities of materials procured as raw materials. Logistics become an integral part of planning the orders. There are inbound and outbound flow in logistics. Explain in detail the Inbound and Outbound logistics. Give suitable examples and draw representative sample sketch to indicate the flow.

(CO3) [Comprehension]

16. Lean supply chain processes are being introduced to replace the traditional supply chain processes. Distinguish the traditional and lean processes and explain each with suitable example.

(CO4) [Comprehension]

PART C

ANSWER ALL THE QUESTIONS   **2 X 14M = 28M**

17. RK Consultant are known for their ability to forecast the demand patterns. Explain forecasting, forecasting methods and the demand patterns that RK Consultants would consider in analysing the demand for an automatic gear manufacturing company that supports automobile manufacturers. Draw sample representative sketches of the demand pattern with suitable scatter points .

(CO2) [Application]

18. A control chart is used for the purpose of setting a control line for monitoring the upper and lower limits of a process output. Illustrate the details of a control chart with an example. A range test was conducted on a sample set of 10 components for its failure. The results range readings at failure were 73, 65, 65, 68, 71, 66, 69, 70, 64 and 68. Apply the formula to compute the value of Z.

   1. Compute the value of Z if the upper control limit value of X=64. Determine the proportion corresponding to this value of Z using Z-table.
   2. If confidence interval for upper control limit is 90% then determine the value of X for upper limit.

   Sketch the control chart.

(CO4) [Application]