

Total Marks: 54.5

15.02.2022

SCMPE TEST 5

Your overall performance is good. Revise all your previous topics at least once in a week rather allocate a day in a week for revision and evaluating your performance. This will help you memorize topics and bind out shortcomings in your preparation.

i) Computation of Variances:-

$$BP = 50 \text{ p.u}$$

10 marks

$$\begin{aligned} 1. \text{ Gross Margin Sales } \\ \text{Volume Variable } \end{aligned} \Rightarrow (ASQ \times - BSQ) \times BP$$
$$\Rightarrow (6,400 - 6,000) \times 50$$
$$\Rightarrow 20,000 (\text{F})$$

$$2. \text{ Market Size Variance } \Rightarrow (\text{Budgeted Market share} - \text{Actual Market share}) \times B_{\text{Contribution}} \text{ p.u}$$

you have correctly solved all the parts of this question.

$$\Rightarrow [60,000 \times 12.1] - 6,000 \times 50$$

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$$3. \text{ Market Share Variance } \Rightarrow [\text{Actual sales} - \text{Budgeted sales for Actual market share}] \times B_{\text{Contribution}}$$

$$\Rightarrow [6,400 - 60,000 \times 12.1] \times 50$$
$$= 40,000 (\text{A})$$

$$4. \text{ Sales Price Variance} = (ASP - BSP) \times ASQ$$

$$= \left[\frac{16,96,000}{6,400} - \frac{15,00,000}{6,000} \right] \times 6,400$$
$$= 36,000 (\text{F})$$

5. Direct Material Variance:

$$\text{Budgeted Quantity} = \frac{2,40,000}{8} = 30,000 \text{ kgs}$$

$$\text{Actual Quantity} = \frac{2,70,000}{7.5} = 36,000 \text{ kgs}$$

$$\text{Standard Quantity} = \frac{6,400 \times 30,000 \text{ kgs}}{6,000} = 32,000 \text{ kgs}$$

$$\begin{aligned} \text{Direct Material Price Variance} &\rightarrow (AP - SP) \times AR \\ &\rightarrow (SP - AR) \times AQ \\ &\rightarrow (8 - 7.5) \times 36,000 \\ &\rightarrow 18,000 \text{ F} \end{aligned}$$

$$\begin{aligned} \text{Direct Material Usage Variance} &\rightarrow (AQ - SQ) \times SR \\ 2019 November &\rightarrow (32,000 - 36,000) \times 8 \\ &\rightarrow 32,000 \text{ A} \end{aligned}$$

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6. Direct Labour Variance:

$$\text{Budgeted Hours} = \frac{3,60,000}{6} = 60,000 \text{ hrs}$$

$$\text{Actual Hours} = \frac{4,16,000}{6.4} = 65,000 \text{ hrs}$$

$$\text{Standard Hours} = \frac{6,400 \times 6,000 \text{ hrs}}{6,000} = 64,000 \text{ hrs}$$

$$\begin{aligned} \text{Direct Labour Rate Variance} &= (SP - AR) \times AH \\ &= (6 - 6.4) \times 65,000 \\ &= 26,000 \text{ A} \end{aligned}$$

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$$\begin{aligned} \text{Direct Labour Efficiency Variance} &= (\text{SH} - \text{AH}) \times \text{SR} \\ &= (60,000 - 65,000) \times 6 \\ &= 6,000 \text{ (A)} \end{aligned}$$

7. Variable Overhead Variance

$$\text{Variable Overhead Rate} = \frac{80,000}{60,000} = \text{£ } 1.33/\text{hr}$$

$$\text{Variable OH Actual Rate} = \frac{6,487,000}{65,000} = \text{£ } 9.91/\text{hr}$$

$$\begin{aligned} \text{Variable OH Expenditure Variance} &= (\text{SR} - \text{AR}) \times \text{AH} \\ &= \text{SR} \times \text{AH} - \text{AR} \times \text{AH} \\ &= 10 \times 65,000 - 6,487,000 \\ &= 2,000 \text{ (F)} \end{aligned}$$

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$$\begin{aligned} \text{Variable OH efficiency Variance} &= (\text{SH} - \text{AH}) \times \text{SIR} \\ &= (60,000 - 65,000) \times 1.0 \\ &= -5,000 \text{ (A)} \end{aligned}$$

(ii) Reconciliation statement:

Budgeted Contribution	= 3,00,000	[15,00,000 - 12,00,000]
- Gross Margin Sales Volume Variance	= 20,000	
Sales price Variance	= 96,000	
Direct Material Variance	= (4,000)	[18,000 - 32,000]
Direct Labour Variance	= (32,000)	[26,000 + 6,000]
Variable OH Variance	= (8,000)	[10,000 - 2,000]

Actual Contribution: 3,62,000

$$\begin{aligned} \text{Actual Contribution} &= 16,16,000 - 13,34,000 \\ &\approx 3,62,000 \end{aligned}$$

Q-3:-

10 marks

Factor	Original Standards	Revised Standard	Actual Standard
Material	2,120,000 kgs @ £30/kg	2,47,500 kgs @ £31/kg	2,50,000 kgs @ £31.2/kg
Labour	27,500 hrs @ £300/hr	22,000 hrs @ £300/hr	23,000 hrs @ £300/hr

(i)

Direct Material Variances:-

Traditional:-

$$SQ \times SR - AQ \times AR = \\ = 66,00,000 - 78,00,000 \\ \text{Total Material Variance} = 12,00,000 \text{ (A)}$$

you did this question accurately.

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Price Variance

$$\downarrow \\ (SR - AR) \times AQ \\ (30 - 31.2) \times 2,50,000 \\ = 9,00,000 \text{ (A)}$$

Usage Variance

$$\downarrow \\ (SQ - AQ) \times SR \\ (2,20,000 - 2,50,000) \times 30 \\ = 9,00,000 \text{ (A)}$$

Planning Variance \Rightarrow

$$\text{Total Variance} = (SQ - RSQ) \times SR \\ = 10,72,500 \text{ (A)}$$

Price Variance

$$= (SR - RR) \times RSQ \\ = (30 - 31) \times 2,47,500 \\ = 2,47,500 \text{ (A)}$$

Usage Variance

$$= (SQ - RSQ) \times SR \\ = (2,20,000 - 2,47,500) \times 30 \\ = 8,25,000 \text{ (A)}$$

Operational Variance :-

avoid cutting.

~~Total Variance $\Rightarrow SHT \times SP - RSH \times RSR$
 $= 82,50,000 -$~~

~~Total Variance $\Rightarrow RSQ \times RSR - ASQ \times AR$
 $= 1,27,500 (A)$~~

↓

Price Variance

~~$= (RSR - AR) \times AQ$
 $= (31.2 - 31) \times 2,50,000$
 $= 50,000 (A)$~~

Usage Variance

~~$= (RSR - AR) \times PCR$
 $= (24.7,500 - 25,000) \times 31$
 $= -1,500 (A)$~~

Labour Variances :-

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Planning Variance-

~~Total Variance $= SHT \times SP - RSH \times RSR$
 $= 82,50,000 - 66,00,000$
 $= 16,50,000 (F)$~~

↓

Rate Variance

~~$= (SP - RSR) \times RSH$
 $= (300 - 275) \times 22,000$
 $= 50,000 (F)$~~

↓

Efficiency Variance

~~$= (RSH - R\Delta H) \times SP$
 $= (27,500 - 22,000) \times 300$
 $= 16,50,000 (F)$~~

(Operational) Variance \Rightarrow

$$\begin{aligned}\text{Total Variance} &= \text{RSH} \times \text{RSR} - \text{AH} \times \text{AR} \\ &= 66,000,000 - 69,00,000 \\ &= -3,00,000 (\text{A})\end{aligned}$$

Rate \downarrow

Price Variance

↑

Efficiency Variance

$$= (\text{RSR} - \text{AR}) \times \text{AH}$$

$$= (300 - 300) \times 23,000$$

$$= 0$$

$$= (\text{RSH} - \text{AH}) \times \text{RSR}$$

$$= (22,000 - 23,000) \times 300$$

$$= 3,00,000 (\text{A})$$

(ii)

Material Handling :-

$$\begin{aligned}2019 \text{ November Expenditure variance} &= \frac{\text{Actual Cost} - \text{Standard Cost}}{\text{for Actual Production}} \\ &= \frac{8,800 \times \frac{96,000}{8,000}}{8,000} - 1,24,000 \\ &= 22,000 (\text{A})\end{aligned}$$

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$$\text{Efficiency Variance} = (8,800 - 8,000) \times 12$$

$$= 3,600 (\text{F})$$

Set up :-

$$\begin{aligned}\text{Expenditure Variance} &= 2,100 \times 12 - 2,36,000 \\ &= -500 (\text{A})\end{aligned}$$

$$\begin{aligned}\text{Efficiency Variance} &= (2,200 - 2,100) \times 12 \\ &= 11,200 (\text{F})\end{aligned}$$

10 marks

Q-4:-

<u>Particulars</u>	<u>Total Fixed Cost</u>	<u>Variable Cost pu</u>
Direct materials	-	6
A	-	10
B	-	9
Production Labour	90,000	3
Manufacturing OH	72,000	-
Depreciation	20,000	-
Administration Expenses	25,000	2
Selling & Distribution Expenses	24,000	-

you have understanding of this question.

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Working Notes :-

1 Direct Material Cost :-

$$\text{Quarter 1} \Rightarrow A \Rightarrow \frac{60,000}{10,000} = 6 \text{ pu}$$

$$B \Rightarrow \frac{120,000}{10,000} = 12 \text{ pu}$$

~~It is constant same for all quarters.~~

2. Overtime Production Labour :-

	Q1	Q3	Change
Production	10,000	15,000	
Cost	£1,80,000	2,70,000	£90,000
Variable Cost	p.u = £10,000 / 5,000		
		= £ 10. p.u	

2019 November Variable } = 10,000 x £10 p.u Thursday 14
 Cost in Q1 } = £1,00,000

Fixed Cost = £1,80,000 - £1,00,000
 = £80,000

Quarter II :- 20,000 units

Variable Cost $\Rightarrow 20,000 \times 10 = 2,00,000$
 FC = 80,000 [280,000 - 200,000]
 TPC = 2,80,000
 Overtime Cost = £ 5,000 [280,000 - 200,000]
 Overtime units = 1,000 units $\left[\frac{£ 5,000}{£ 10 \times 50} \right]$
 $\Rightarrow 10 \times 50 = 500$

Quarter - IV \Rightarrow (18,000 units)

$$\text{Variable Cost of } 18,000 \text{ units} = 1,62,000$$

$$Q_E [10 \times 1125 + 80.1] = 1,62,000$$

$$\text{Fixed Cost } [80,000 + 12.5] = \underline{\underline{90,000}}$$

$$2,52,000$$

3. Manufacturing OH:-

	Q ₁	Q ₂	Change
Units	10,000	20,000	10,000
Cost	90,000	1,20,000	30,000

$$\text{Variable Cost p.u} = \frac{30,000}{10,000}$$

$$= \text{₹} 3 \text{ p.u}$$

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$$\text{Fixed Component} = 90,000 - 30,000$$

$$= \text{₹} 60,000$$

For Q-IV:-

~~$$\text{Fixed Cost} = 60,000$$~~
~~$$+ 20.1 \% \text{ Increase} = \underline{\underline{12,000}}$$~~
~~$$72,000$$~~

4. Selling & Distribution Expenses:-

	Q ₁	Q ₂	Change
Units	9,000	17,000	8,000
Cost	38,000	51,000	13,000
Variable Cost p.u	$\frac{16,000}{8,000} = \text{₹} 2 \text{ p.u}$		

$$\text{Fixed Cost} = 38,000 - 18,000$$

$$= \text{₹} 20,000$$

Q-iv :-

$$\text{Units} = 18,000 \text{ u}$$

~~$$\text{Variable Cost} = \text{£ } 2 \text{ pu}$$~~

~~$$\begin{aligned}\text{Fixed Cost} &= 20,000 \\ (\text{P} + \text{Q}) \text{ per unit} &= \frac{4,000}{24,000}\end{aligned}$$~~

(ii) Flexible Budget of Production Costs for Q-IV

15,000u 16,000u 21,000u

Direct Material

A	90,000	108,000	126,000
B	75,000	90,000	105,000

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Production Labour	2,25,000	2,52,000	2,88,000
Manufacturing OH	1,17,000	1,26,000	1,35,000
Depreciation	20,000	20,000	20,000
TPC			
Total Production Cost	5,27,000	5,96,000	6,74,000

Q - 1:-

18 marks

1. Sun Electronics manufactures & sells electronic goods. It is process from involves production of goods as well as sale of goods. It operates in different parts of the country through 30 stores. Thus, the company needs to take care of the entire process from procurement of raw materials till delivery of goods to customer in efficient & effective way. For this, the company can implement supply chain management.

you have knowledge of this question.

2. Supply Chain management \Rightarrow It is activity management of flow of products, services & information, which begins from procurement of raw material & ends at product consumption at

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Consumer's end. SCM also involves movement of raw material, storage of finished goods & its storage.

3. An organisation follows certain activities to meet the requirements of customer which are as follows:-

- i) Inbound logistics
- ii) Operations
- iii) Outbound logistics
- iv) Sales & Marketing
- v) Service

SCM looks each of the above activities as integrated & interrelated to each other.

Problems faced in Sun - Electronics:-

1. A store can request only 1 requisition per month due to fear of stockouts. This may lead to higher stor acquisitions & which in turn may result in high inventory holding period.
2. The time taken to delivery the product from requisition from store takes about 30-40 days, while in industry the average is about only 15 days.
3. Inventory holding period is very high (i.e) 45 days against industry average of 15 days.

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5. The obsolete products are sold at discounted rate.

6. Time Taken for delivery of product is high.

7. The Company procures parts from more than 100 vendors as well as it faces severe quality issues lead to delay in production.

Thus, The Company can implement SCM as follows:-

1. Plan \Rightarrow The first step in SCM is to develop a plan to address the issues & requirement of the customer. The Sun Electronics should shift to focus on pre-determined Production.

23 Planning based on demand of product rather than ad-hoc basis.

2. Develop → In this step, the materials required (Procure) for production is sourced from various suppliers. Suppliers should be identified properly in order to get quality materials. In Sun Electronics, it procures parts from more 100 vendors which lead to severe quality issues & delay in production. The company can follow Just-in-purchase which will reduce inventory holding cost.

3. Make → The third step is to production of products as per the requirements of customer. In Sun Electronics, the store manager is allowed to make only 1 requisition for 1 month. This could mean that company is not considering the demand & tastes of customer.

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4. Deliver → The last step is logistics which is one of the important steps. If it is necessary to deliver the product to customer is a timely manner. In Sun Electronics, the time taken to deliver products from requisition is very high as the produced product is first delivered in warehouse & from there it is sent to stores. The company may create additional storage facilities.

Benefits of implementation of SCM

1. Better Customer service
2. Better delivery mechanism of goods
3. Improves productivity.
4. Improves supplier relationship.

6. Reduces ~~Inventory holding time & improves~~
~~Working Capital Cycle~~

E-commerce & SCM:-

- The SCM is the backbone of SCM-commerce
- In E-commerce market, customer wants the delivery of products at faster rate.
- Another feature of E-commerce is that the buyer shall be from another any state & not confined by the states in which Sun Electronics has store.
- The current practice of 1 order p.m shall not work as order shall be made at any time and any where.
- Hence, SCM shall be the required for success of e-commerce business.

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Customer Orders:-

The Customer Orders shall be captured & feed into production planning on real time basis. Delay will lead to delay in production. Sun Electronics should not follow the current process as it couldn't lead to success in E-commerce.

Procurement:-

The procurement of materials from supplier should be seamlessly done as any delay would lead to delay in production process & delivery time. Quality of goods shall be maintained.

Production:- Production must be in accordance with customer order. Only change will lead to

dissatisfaction of customers.

The company should not produce to store & sell later

logistics:-

The main steps for the entire e-commerce set up from sourcing of materials till delivery of products to customers. The logistics must be important. The company have to tie-up with new logistics in order to avoid any delay in deliveries.

Q-5:-

(i) 1. Magical Stay is operating in a highly competitive scenario. The traditional budget focuses to open profit of £ 1500 million & 10% increase every year. The market

3.5 marks

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The management operates from Top-Down Approach as senior management decides the requirements & announce it to their employees at each property to achieve the desired results.

elaborate more.

2. The management of Magical Stay doesn't consider the th issues with relevant place of property if they due to non-attainment of targets, it had closed down certain hotels.

3. The Budgets on these policies are not flexible enough to change as per the environment.

4. The employees are pressurized to achieve targets on performance is measured on that basis.

5. The management doesn't consider the external factors as currently there is a recessionary trend.

Hence traditional budgeting focuses only on target achievement rather than creating value to the business.

(ii) Growth Based Targets:-

3 marks

This is a philosophy of "Beyond Budgeting".

Features:-

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a) It is more de-centralized & participative way. Manager at each location has been delegated responsibility with authority to take decisions.

b) Operating managers & employees are likely to adopt quick changing environment as they interact with customers directly.

c) Managers & employees performance is measured based on their service records.

d) Benchmarks are not based on industry conditions.

Thus, Beyond Budgeting helps in value creation & growth of the company results in better position.