

MOCK TEST PAPER – 1

FINAL COURSE: GROUP – II

PAPER – 5: STRATEGIC COST MANAGEMENT AND PERFORMANCE EVALUATION

SUGGESTED ANSWERS/HINTS

1. (i) Authority structure deals with the exercise of powers and its' delegation in the organisation. It considers the level at which decisions are made. There are two major classifications centralised and decentralised. In a centralised structure, the upper levels of an organisation's hierarchy retain the authority to make decisions. In a decentralised structure, the authority to make decisions is passed down to units and people at lower levels. The degree of decentralisation may vary from mild to extensive.

(ii) Sankalpa has a **completely decentralised structure** because the restaurant managers have complete autonomy in decision-making. The manager decides from whom to purchase and on what terms, also makes the marketing plans and decides the prices of the products; even the manager influences the investment decision too. Each restaurant act as independent units.

Ratan Sagar too has **decentralised structure, but the degree of delegation of authority is mild** and far less than it is in Sankalpa but quite high in comparison to Anandam G. The restaurant managers have limited autonomy. They can take operational decisions including pricing but within the four-corner of guidelines issued by the corporate office.

Anandam G. has **centralised structure** because restaurant managers hardly have any autonomy. Authority is exercised centrally at the corporate level only.

(iii) Sankalpa has a completely decentralised structure. Decentralisation has its own pros and cons the majors are;

Pros

1. Senior management free to concentrate on strategic planning (due to delegation of authority)
2. Better local decisions and greater responsiveness to local needs as well as opportunities (due to local expertise)
3. High motivation in restaurant manager (due to empowerment that comes from training or vesting of authority and feel of personal commitment)
4. Quicker responses and flexible decision making (due to a smaller chain of organisation command)

Cons

1. Loss of control by senior management
2. Dysfunctional decisions or sub-optimisation (due to a lack of goal congruence)
3. Poor decisions made by inexperienced managers (or increased of training)
4. Duplication of roles and efforts within the organisation.
5. Extra costs in obtaining information

The **degree of decentralisation** may vary from mild to extensive. The majors among the factors that will affect the amount of decentralisation are-

1. Ability of management and employees
2. Management style
3. Geographical and Locational spread
4. Size of the organisation (scale of activities).

- (iv) A responsibility centre is a specific unit of an organisation assigned to a manager who is held responsible for its operation and resources. Responsibility centres can be classified as-
1. **Cost or Expense Centres** are responsibility centres where the manager **has control over the costs** (other than those of capital nature) owing to function, for which he is responsible.
 2. **Revenue Centres** are the responsibility centres where the manager **has control over the generation of revenue from operation** with no responsibility for costs.
 3. **Profit Centres** are the responsibility centres where the manager of such a centre or division **has control on both revenue and costs** (other than those, which are of capital nature) earned out of and incurred on assets assigned to the division respectively.
 4. **Investment Centres** are the responsibility centres where the manager has responsibility for not just the revenues and costs relating to the centre, but **also the assets that cause these costs and generate these revenues** and the investment decisions relating to disposal and acquisition of assets.
- (v) **Sankalpa** restaurants seem to be an **investment centre** because the restaurant managers decide the factors which will result in cost and also makes the marketing plans as well as decide the prices of the products. The manager influences the investment decision too.
- Ratan Sagar** restaurants seem to be **profit centre** because managers who take a decision regarding the pricing are also responsible to meet the budgeted allocations. The corporate office solely takes investment decisions.
- Anandam G.** restaurants seem to be **cost centre** because restaurant managers are responsible to meet the cost budget allocated to them.
- (vi) Since the Sankalpa restaurants seem to be investment centre, hence the performance of restaurant managers shall be evaluated using financial measures such as **Return on Investment** or **Residual Income**.
- (vii) CPRL shall consciously make efforts to reduce the cultural conflicts. It is important to recognise that restaurant managers at Sankalpa have full autonomy in making the decisions, hence to ensure successful post-merger integration of two organisation management of CPRL need to modify the performance evaluation criteria as well as re-align (in the best interest of CRPL) the compensation structure.
- CPRL must communicate, restaurant managers that their suggestions are worth and valuable, but in order to attain goal congruence, it must link the rewards and benefits with the collaborative goals (weighted, restaurant-specific and company-wide)
- Alternatively, in order to avoid plausible difficulties on account of cultural conflicts and post-merger integration, CPRL may operate the newly acquired restaurant chain independently from its own; keeping them separate and distinct existence.

2. "Pareto Analysis"

Model	Sales (₹'000)	% of Total Sales	Cumulative Total	Model	Cont. (₹'000)	% of Total Cont.	Cumulative Total %
Pareto Analysis Sales				Pareto Analysis Contribution			
A001	5,100	35.05%	35.05%	B002	690	30.87%	30.87%
B002	3,000	20.62%	55.67%	E005	435	19.47%*	50.34%
C003	2,100	14.43%	70.10%	C003	300	13.42%	63.76%
D004	1,800	12.37%	82.47%	D004	255	11.41%	75.17%
E005	1,050	7.22%	89.69%	F006	195	8.73%*	83.90%
F006	750	5.15%	94.84%	A001	180	8.05%	91.95%

G007	450	3.09%	97.93%	G007	120	5.37%	97.32%
H008	225	1.55%	99.48%	I009	45	2.01%	99.33%
I009	75	0.52%	100.00%	H008	15	0.67%	100.00%
	14,550	100.00%			2,235	100.00%	

(*) Rounding - off difference adjusted.

Recommendations

Pareto Analysis is a rule that recommends focus on most important aspects of the decision making in order to simplify the process of decision making. The very purpose of this analysis is to direct attention and efforts of management to the product or area where best returns can be achieved by taking appropriate actions.

Pareto Analysis is based on the 80/20 rule which implies that 20% of the products account for 80% of the revenue. But this is not the fixed percentage rule; in general business sense, it means that a few of the products, goods or customers may make up most of the value for the firm.

In present case, five models namely A001, B002, C003, D004 account for 80% of total sales where as 80% of the company's contribution is derived from models B002, E005, C003, D004 and F006.

Models B002 and E005 together account for 50.34% of total contribution but having only 27.84% share in total sales. So, these two models are the key models and should be the top priority of management. Both C003 and D004 are among the models giving 80% of total contribution as well as 80% of total sales so; they can also be clubbed with B002 and E005 as key models. Management of the company should allocate maximum resources to these four models.

Model F006 features among the models giving 80% of total contribution with relatively lower share in total sales. Management should focus on its promotional activities.

Model A001 accounts for 35.05% of total sales with only 8.05% share in total contribution. Company should review its pricing structure to enhance its contribution.

Models G007, H008 and I009 have lower share in both total sales as well as contribution. Company can delegate the pricing decision of these models to the lower levels of management, thus freeing themselves to focus on the pricing decisions for key models.

3. (i) Identification of Corporation Vision and Market and Financial measures for company's success.

Corporation Vision (Level 1) of Road runner is that "The company aims at maintaining good quality delivery standards to make its mark in the competitive environment it operates."

To increase its market growth and enlarge its clientele base, the company plans to increase its advertisement spend to make its presence known in the market. It is resorting to off-line print media, online media as well as by participating in relevant trade association events. It has a target clientele of mid-sized companies that have shipments to make at regular intervals. As explained above, it has to track customer satisfaction of its service with relation to the quality and delivery of its service.

To maintain financial sustenance, the senior management has put in place metrics that will track if the LTL venture is profitable. Difference between the revenue per kilometer and cost per kilometer would be the profit earned per kilometer. **The target profit per kilometer = ₹350 - ₹200 = ₹150 per kilometer.**

Also, the company is clear that it wants quick turnover of its accounts receivable. For getting credit worthy customers, it has targeted clientele whose customer lifetime value is at least ₹20 lakh or more. The presumption made is that these mid-sized companies are less likely to default on their bills. For quick turnover of its accounts receivable, it proposes to give a 10 day credit period to its client to settle the bill. Quick conversion of accounts receivable into cash helps maintain liquidity. This is specially important for Roadrunner to maintain since its costs of operations, especially fuel costs are going up. Also, during slowdown in the economy, the risk of default is higher. Therefore, quicker conversion of Accounts Receivable to cash is preferable for financial stability of the company.

(ii) **Operational level measures and their link to customer satisfaction, flexibility and productivity.**

The operations level measures can be classified as follows:

- (a) ***Customer claims filed for damaged goods (absolute numbers and % of shipments made under the LTL system)*** – Quality of service. Incidents of such claims should be maintained at the very minimum to have good customer satisfaction.
- (b) ***Time taken to resolve the above claims (days from date of customer filing claim)*** – Quality of service. Quick resolution of claims leads to better customer satisfaction.
- (c) ***Delays in delivery beyond the agreed delivery time (% of shipments made under the LTL system)*** – Delivery of service. Incidents of such delays in delivery should be maintained at the very minimum to have good customer satisfaction.
- (d) ***Number of days truck was not on the road (due to maintenance or insufficient load)*** – Waste of resource. Utilization of resources impacts productivity. Trucks have to be used efficiently in order to improve productivity.
- (e) ***Average time taken to get full truck load under LTL (days)*** – Cycle time, time taken to complete the task. This should be kept at a minimum level to improve productivity. Faster the ability to fill up the truck, improves the utilization of resource and enhances productivity.
- (f) ***Deadheads (kilometers)*** – Kilometers the truck is on the road with no load to carry.– Waste of resource. When a truck runs on the road without any load, it incurs a cost but earns no revenue to recoup it. Therefore, the number of kilometer deadheads is a waste and should be kept at minimum.

(iii) **Impact of measures (g) and (h) on business.**

- (g) ***Number of orders turned down due to non-availability of trucks*** – Flexibility of service. This metric has to be maintained at the very minimum. The business must be able to cater to as many orders as possible. Tracking this metric can indicate if the current capacity of trucks is sufficient to cater to the demand from customers.
- (h) ***Ability to deliver within 7 days from the date of receiving client's goods under the LTL system (% of shipments under the LTL system)*** – Flexibility of service. It is given that under the LTL system on an average the client is willing to wait for maximum 7 days from the date of handing over goods until delivery. The ability to meet this expectation of the customer is very important to maintain and sustain business. Therefore, the company has to have sufficient capacity to cater to customers' expectation. It must have enough flexibility (capacity) in its operations to accommodate any exigencies to ensure that this expectation is met.

Concept of Performance Pyramid

The performance pyramid links business strategy to the day-to-day operations of a business. It gives a “top-to-bottom” overview of an organization. The top level is the *strategic level*, next comes the *tactical level* relating to business units and operating systems. The lower base level are the *operational levels*.

Vision Statement (Level 1) defines the business strategy that the company wishes to have to achieve success and competitive advantage. The pyramid cascades the vision statement through strategies related to market growth and financial sustenance (Level 2). Market growth and financial sustenance are dependent on customer satisfaction, flexibility and productivity (Level 3). Level 3 measures are again dependent on operational factors such as quality, delivery, cycle time and waste.

Quality and Delivery linked to Customer satisfaction and further to market growth has external focus. These are non-financial in nature. Cycle time and waste, linked to productivity linked further to financial sustenance has internal focus. These internal efficiency metrics are viewed for their financial impact on business. Flexibility serves as an enabler that can provide customer satisfaction. It can also be linked to productivity of operations. It is a factor that shows how agile a company with respect to changes in business environment and competition.

Performance Pyramid is thus a pictorial representation in the shape of a pyramid representing the hierarchy of strategic, tactical and operational measures of the organization.

4. (a) (i) JIT Inventory System

“For successful operation of JIT inventory system, the suppliers chosen must be willing to make frequent deliveries in small lots. Rather than deliver a week’s or a month’s material at one time, suppliers must be willing to make deliveries several times a day and in the exact quantities specified by the buyer.”

It is described in the problem that suppliers are not willing to

- make frequent deliveries and
- make supplies in the exact quantities as required

Accordingly, Mr. Bee’s doubt is correct on successful implementation of JIT System.

- (ii) For each day, ‘N’ spends ₹360 per clerk (₹90 per hr. × 4 hrs.). Therefore, ‘N’ spends ₹1,080 per day to employ three clerks. Annually, this outlay amounts to ₹2,59,200 (₹1,080 per day × 240 days).

Over five years, the outlay would be ₹12,96,000. If the WCMS is implemented, the initial cost is ₹1,25,000. If we add the annual cost of ₹36,000, the total cost over five years amounts to ₹3,05,000. Since one clerk will be needed as well, ‘N’ has to incur ₹4,32,000 over five years to pay clerk (₹4,32,000 = ₹90 × 4 hrs. × 1 clerk × 240 days × 5 years). Therefore, the total cost of this option is ₹7,37,000.

Accordingly, there is cost saving of ₹5,59,000 from WCMS implementation.

Relevant Non-Financial Considerations

The WCMS may be a lot more efficient, but more rigid. For instance, what if, a student forgets to bring his/ her card or transaction failure due to connectivity issue, and may not have enough cash to pay. Automated systems may be less able to handle these situations. Having clerks may add an aspect of flexibility and a human aspect that is hard to quantify.

Conclusion

Obviously, WCMS option is more cost effective for ‘N’ because there is a cost saving of ₹5,59,000. But, non- financial factors should also be taken into consideration.

OR

Calculation of labour hours required

No. of units	Cumulative Average Time per unit (hrs.)	Total Hours
1	10	10
2	8	16
4	6.4	25.6
8	5.12	40.96

Calculation of price to be quoted for 8 motors

	₹
Material Cost (8 x ₹2,500)	20,000
Labour Cost (40.96 x ₹175)	7,168
Overheads (7168 x 125%)	<u>8,960</u>
Total Cost	36,128
Add: Profit 20% on sales i.e., 25% on cost	<u>9,032</u>
Price to be quoted	<u>45,160</u>

- (b) (i) Transfer Price: 200% of Full Cost Basis
 = 200% of (¥ 2,500 + ¥ 5,000)
 = ¥ 15,000 or £300 (¥ 15,000/ 50)
 Transfer Price: Market Price Basis
 = ¥ 9,000 or £180 (¥ 9,000/ 50)

(ii) Statement Showing “Operating Income”

Particulars	Japan Mining Division		UK Processing Division	
	Transfer Price		Transfer Price	
	¥15,000	¥9,000	£300	£180
Selling Price (Polished Stone)	---	---	£3,000	£3,000
Transfer Price (Raw Emerald)	¥ 15,000	¥ 9,000	---	---
Raw Emerald	---	---	£600 (£300 × 2)	£360 (£180 × 2)
Variable Cost	¥ 2,500	¥ 2,500	£150	£150
Fixed Cost	¥ 5,000	¥ 5,000	£350	£350
Profit Before Tax	¥ 7,500	¥ 1,500	£1,900	£2,140
Less: Tax 20%/ 30%	¥ 1,500	¥ 300	£570	£642
Profit After Tax per Carat of Raw Emerald	¥ 6,000	¥ 1,200	£1,330	£1,498
Raw Emerald	1,000 Carats	1,000 Carats	500 Carats	500 Carats
Total Profit	¥ 60,00,000	¥ 12,00,000	£6,65,000	£7,49,000
	Or	Or		
Total Profit (£)	£1,20,000	£24,000	£6,65,000	£7,49,000

5. (a) (i) A: Statement Showing Computation of Effective Cost before Inspection

Particulars	DE Ltd.	PE Ltd.	ZE Ltd.
Units Supplies (No.s)	12,000	12,000	12,000
Defectives Expected (No.s)	360	600	240
Costs:			
Purchase of Components	28,800	28,080	31,200
Add: Production Damage on Defective Components (@ ₹200 per 100 components)	720	1,200	480
Total	29,520	29,280	31,680
Good Components (Nos.)	11,640	11,400	11,760
Cost per 100 Good Components	253.61	256.84	269.39

B: Statement Showing Computation of Effective Cost after Inspection

Particulars	DE Ltd.	PE Ltd.	ZE Ltd.
Units Supplies (No.s)	12,000	12,000	12,000
Defects Not Expected (No.s)	36	60	24

Defectives Expected (No.s)	324	540	216
Components Paid For	11,676	11,460	11,784
Costs:			
Purchase of Components	28,022.40	26,816.40	30,638.40
Add: Inspection Cost	3,120.00	3,120.00	3,120.00
Add: Production Damage on Defective Components (@ ₹200 per 100 components)	72.00	120.00	48.00
Total	31,214.40	30,056.40	33,806.40
Good Components (Nos.)	11,640	11,400	11,760
Cost per 100 Good Components	268.16	263.65	287.47

Advice Whether Inspection at the Point of Receipt is Justified

On comparing the cost under situation, A and B shown above, we find that it will not be economical to install a system of inspection.

Further we also need to consider that presently many organizations are undergoing Just in Time (JIT) implementation. JIT aims to find a way of working and managing to eliminate wastes in a process. Achievement of this is ensured through eliminating the need to perform incoming inspection. Inspection does not reduce the number of defects, it does not help in improving quality. In general inspection, does not add value to the product. It simply serves as a means of identifying defects the supplier has failed to recognize subsequent to the manufacturing of the product.

As a matter of fact, organizations implementing JIT are seeking eventually to eliminate the need for performing incoming inspection activities through a combination of reducing the supplier base, selection through qualification and vendor development. Vendor development and its proper management seeks to assist the supplier who maintains an interest in striving to provide 100% defect-free materials and parts.

So, to decision whether inspection at the point of receipt is justified or not will also depend on Qualitative factors as well.

- (ii) On comparing the buying cost of components under different situations, as analysed and advised above, if company decides not to install a system of inspection, supplier DE would be cheaper otherwise supplier PE would be cheaper and company may choose supplier accordingly.



This question can also be solved by assuming receipt of **good components** as requirement i.e. 12,000 units.

- (b) (i) In participative budgeting, subordinate managers create their own budget and these budgets are reviewed by senior management. Such budget communicates a sense of responsibility to subordinate managers and fosters creativity. This is also called bottom up approach (sometime referred as participative approach).

As the subordinate manager creates the budget, it might be possible that the budget's goals become the manager's personal goal, resulting in greater goal congruence. In addition to the behavioural benefits, participative budgeting also has the advantage of involving individuals whose knowledge of local conditions may enhance the entire planning process.

The participative budget described here appears participative in name only. In virtually every instance, the participative input is subject to oversight and discussion by sales manager. Some amount of revision is also common. However, excessive and arbitrary review that substitutes a top-down target for a bottom-up estimate makes a deceit process. Such a gutting appears to be the case in EWPL. J's statement indicates a very autocratic style. The revision process also seems to be arbitrary and capricious. There is little incentive for the salesgirls to spend much time and effort in projecting the true expected sales because they know that the target would be revised again and J's estimate will prevail. This situation creates an interesting discussion about the costs and benefits of participative budgeting and gives rise to game playing and slack.

- (ii) In top down approach, budget figures will be imposed on sales personnel by senior management and sales personnel will have a very little participation in the budget process. Such budget will not interest them since it ignores their involvement altogether. While in bottom up approach, each sales person will prepare their own budget. These budgets will be combined and reviewed by seniors with adjustment being made to coordinate the needs and goals of overall company. Proponents of this approach is that salespersons have the best information of customer's requirements, therefore they are in the best position in setting the sales goal of the company. More importantly, salespersons who have role in setting these goals are more motivated to achieve these goals. However, this approach is time-intensive and very costly when compared with top down approach. In order to achieve personal goals, participants may also engage in politics that create budgetary slack and other problems in the budget system.

Since both top down and bottom up approaches are legitimate approaches, so EWPL can use combination of both. Seniors know the strategic direction of the company and the important external factors that affect it, so they might prepare a set of planning guidelines for the salesgirls. These guidelines may include forecast of key economic variables and their potential impact on the EWPL, plans for introducing and advertising a new product and some broad sales targets etc. With these guidelines, salesgirls might prepare their individual budget. These budgets need to be reviewed to validate the uniformity with the EWPL's objectives. After review, if changes are to be made, the same should be discussed with salesgirls involved.

6. (a) (i) AB Chemicals has the opportunity to utilize 5 units of non-moving chemical as input to produce 5 units of a product demanded by one of its customers. The minimum unit price to be charged to the customer would be—

Cost Component	Cost per unit of product (₹)
Cost of Material (Realizable value = ₹7,000 / 5 units of chemical)	1,400
Out of Pocket Expenses	100
Other Material Cost	160
Minimum Unit Price that can be charged	1,660

Therefore, the minimum unit price that can be charged to the customer, without incurring any loss is ₹1,660 per unit of product. As explained below in point (ii), allocated overhead expenses and labor cost are sunk costs that have been ignored while calculating the minimum unit price to be charged.

(ii) Analysis

- (a) Cost of Material: Relevant and hence included at realizable value. AB Chemicals has 5 units of non-moving chemical input that has a book value of ₹4,800, realizable value of ₹7,000 and replacement cost of ₹8,400. Realizable value of ₹7,000 would be the salvage value of the chemical had it been sold by AB Chemicals instead of using it to

meet the current order. This represents an opportunity cost for the firm and hence included while pricing the product. Book value would represent the cost at which the inventory has been recorded in the books, a sunk cost that has been ignored. Replacement cost of ₹8,400 would be the current market price to procure 5 units of the input chemical. This would be relevant only when the inventory has to be replenished after use. This chemical is from the non-moving category, that means that it is not used regularly in production process and hence need not be replenished after use. Therefore, replacement cost is also ignored for pricing.

- (b) Labour Cost: Not relevant and hence excluded from pricing. It is given in the problem that this order would be met by permanent employees of the firm. Permanent employee cost is a fixed cost that AB Chemicals would incur irrespective of whether this order is produced or not. No additional labour is being employed to meet this order. Therefore, this cost is a sunk cost, excluded from pricing.
- (c) Allocated Overhead Expenses: These expenses have been incurred at another Cost Centre, typical example would be office and administration costs. Such costs are fixed in nature that would be incurred irrespective of whether this order is produced or not. Therefore, this cost is a sunk cost, excluded from pricing.
- (d) Out of Pocket Expenses: These are expenses that are incurred to meet the production requirement of this order. These are additional variable expenses, that need to be included in pricing.
- (e) Other Material Costs: These are expenses that are incurred to meet the production requirement of this order. These are additional variable expenses, that need to be included in pricing.

(iii) Advice on Pricing Policy

Under perfect competition conditions, AB Chemicals can have no pricing policy of its own, here sellers are price takers. It cannot increase its price beyond the current market price. The firm can only decide on the quantity to sell and continue to produce as long as the marginal cost is recovered. When marginal cost exceeds the selling price, the firm starts incurring a loss.

Since AB Chemicals cannot control the selling price individually in the market, it can adopt the *going rate pricing* method. Here it can keep its selling price at the average level charged by the industry. This would yield a fair return to the firm. An average selling price would help the firm attract a *fair market share* in competitive conditions.

(b) Comment

As the management accountant states, and the analysis (W.N.1) presents, the overall variance for the KONI is nil. The cumulative adverse variances exactly offset the favourable variances i.e. sales price variance and circuit designer's efficiency variance. However, this traditional analysis does not clearly show the efficiency with which the KONI operated during the quarter, as it is difficult to say whether some of the variances arose from the use of incorrect standards, or whether they were due to efficient or inefficient application of those standards.

In order to determine this, a revised ex post plan should be required, setting out the standards that, with hindsight, should have been in operation during the quarter. These revised ex post standards are presented in W.N.2.

As seen from W.N.3, *on the cost side*, the circuit designer's rate variance has changed from adverse to favourable, and the price variance for circuit X, while remaining adverse, is significantly reduced in comparison to that calculated under the traditional analysis (W.N.1); *on the sales side*, sales price variance, which was particularly large and favourable in the traditional analysis (W.N.1), is changed into an adverse variance in the revised approach, reflecting the fact that the KONI failed to sell at prices that were actually available in the market.

Further, variances arose from changes in factors external to the business (W.N .4), which might not have been known or acknowledged by standard-setters at the time of planning are beyond the control of the operational managers. The distinction between variances is necessary to gain a realistic measure of operational efficiency.

W.N.1

KONY India Ltd.

Quarter-1

Operating Statement

Particulars	Favourable RM	Adverse RM	RM
Budgeted Contribution			26,000
Sales Price Variance [(RM 79 - RM 50) × 2,000 units]	58,000	---	NIL
Circuit X Price Variance [(RM 2.50 – RM 4.50) × 21,600 units]		43,200	
Circuit X Usage Variance [(20,000 units - 21,600 units) × RM 2.50]		4,000	
Circuit Designer's Rate Variance [(RM 2 - RM 3) × 11,600 hrs.]		11,600	
Circuit Designer's Efficiency Variance [(12,000 hrs. - 11,600 hrs.) × RM 2.00]	800		
Actual Contribution			26,000

W.N.2

Statement Showing Original Standards, Revised Standards, and Actual Results for Quarter 1

	Original Standards (ex-ante)		Revised Standards (ex-post)		Actual	
Sales	2,000 units × RM 50.00	RM 1,00,000	2,000 units × RM 82.50	RM 1,65,000	2,000 units × RM 79.00	RM 1,58,000
Circuit X	20,000 units × RM 2.50	RM 50,000	20,000 units × RM 4.25	RM 85,000	21,600 units × RM 4.50	RM 97,200
Circuit Designer	12,000 hrs. × RM 2.00	RM 24,000	12,000 hrs. × RM 3.125	RM 37,500	11,600 hrs. × RM 3.00	RM 34,800

W.N.3

Statement Showing Operational Variances

Particulars	(₹)	(₹)
<i>Operational Variances</i>		
Sales Price [(RM 79.00 - RM 82.50) × 2,000 units]	7,000 (A)	16,500 (A)
Circuit X Price [(RM 4.25 - RM 4.50) × 21,600 units]	5,400 (A)	
Circuit X Usage [(20,000 units – 21,600 units) × RM 4.25]	6,800 (A)	
Circuit Designer Rate [(RM 3.125 - RM 3.00) × 11,600 hrs.]	1,450 (F)	
Circuit Designer Efficiency [(12,000 hrs.– 11,600 hrs.) × RM 3.125]	1,250 (F)	

W.N.4**Statement Showing Planning Variances**

Particulars	(₹)	(₹)
<i>Planning Variance</i>		
Sales Price [(RM 82.50 - RM 50.00) × 2,000 units]	65,000 (F)	16,500 (F)
Circuit X Price [(RM 2.50 - RM 4.25) × 20,000 units]	35,000 (A)	
Circuit Designer Rate [(RM 2.00 - RM 3.125) × 12,000 hrs.]	13,500 (A)	