MOCK TEST PAPER - 2

FINAL (NEW): GROUP: II

PAPER – 5: STRATEGIC COST MANAGEMENT AND PERFORMANCE EVALUATION

Question No. ***1*** *is compulsory*
Answer any ***four*** *questions from the remaining* ***five*** *questions*

Time Allowed – 3 Hours **Maximum Marks – 100**

1. **PEK Ltd.** is a paper mill producing excellent quality writing and printing paper. It is located in a small town where eucalyptus, acacia and casuarina trees grow in plenty, which are required in the paper production process. It sources its raw material from pulp-wood plantations that grow the above-mentioned trees. These plantations are located in degraded agrarian land surrounding the factory site, which was previously wasteland. Their owners are subsistence farmers, who have been encouraged to grow these trees to source raw material for the paper mill. The mill's local procurement policy has thus provided a source of livelihood for this community. Moreover, almost 40% of the staff working at the mill are from the local community. Most of the mill's labour force lives in residential areas near the factory site. Catering to the mill employees' livelihood needs like food, clothing, education etc. has given the town alternate sources of income and thus has benefited the town. The plant managers at the mill have been working on various projects in order to build a sustainable business. This includes, reducing waste during the manufacturing process, imparting knowledge to local farmers at the pulp-wood plantations to improve the quality of wood through breeding and seed improvement techniques. Operations at the mill have yielded substantial profits over the last 15 years since inception.

   You are the chief accounting officer of PEK taking care of all the reporting (internal and external) needs of the company. Recently, you read about the Triple Bottom Line (TBL) reporting that many other companies are following. You feel the need to introduce TBL reporting because:

   The vital role played by the mill towards the development of the town. This can be highlighted in the TBL report. This will enhance the company's goodwill. At the same time, you feel the need for transparency of operations and balancing the need of various stakeholders involved. All this can be addressed by publishing the TBL report periodically.

   The mill's operations are driven by the resources available in the environment. What the mill takes should be returned in equal if not in a higher measure. TBL reporting can help identify opportunities of giving back to the environment.

   You have an appointment with the Chief Executive Officer to discuss this reporting framework. During a preliminary discussion, the CEO was sceptical of the need for additional reporting. *"We are here to do business, profit should be the sole parameter for measuring our success. Shareholders are our only stakeholders. Annual reports would provide sufficient information to others who are interested in our operations."*

   Required

   To convince the CEO, you need bring out the differences traditional accounting framework and the triple bottom line framework. Draft an e-mail on this subject that you need to send to the CEO for discussion at the meeting. ***(20 Marks)***

2. **History**

   H & M is one of Country 'D''s top footwear companies and other equipment. Since its foundation in 1988, H & M has been one of the all-inclusive footwear brand that is committed to nurturing the youth across the world through sports to contribute to society. Over more than three decades, the company inherits its values and provides own products while capturing the changes in the social environment. It's stateof-the-art production facilities are located strategically across the Country 'D' and produces all kinds of footwear. H & M is best known for its high ethical standards towards its workers, suppliers and the environment and voluntarily publish CSR report every year.

Organizational Structure and Footwear Market

H & M is organized into conventional functional departments such as procurement on order basis, sales, and finance, most of which have their non-reliable excel sheet-based systems for planning and reporting. Consequently, it often fails to generate accurate, timely and consistent information to monitor its own performance, thus, company faces failures in achieving the performance and delivery targets set by its retail customers.

In Country 'D', footwear market is competitive and seasonal. Retailers, who are H & M's customers, for footwear, they have two main demands, they want –

(i) footwear at lower prices to pass it on to consumers.

(ii) suppliers to meet performance and delivery targets relating to lead times and quality.

In order to comply with the retailer's demands, H & M's competitors have discontinued all their own manufacturing facilities and outsourced all production to suppliers, who have much larger production lines and lower costs. To reduce the shipment cost over long distances, competitors have invested in advanced procurement software to consolidate orders so that each 40-foot shipping container gets fully loaded. Purchase invoice processing is also automated via the integration of information systems into the supplier's software.

Proposal of Outsourcing

In order to mitigate costs, it has been proposed to outsource the manufacture of footwear, to a Chinese Supplier 3,750 km away. A comparison of the average cost of manufacturing and the cost of outsourcing footwear is given below–

	Manufacturing	**Outsourcing**
Average manufacturing cost *per pair*	BND 625	---
Purchase cost *per pair*	---	CNY 28

Notes

1. Country 'D''s home currency is the BND.
2. Exchange Rate 1CNY = 18 BND.
3. In addition to the purchase cost from the supplier, H & M will be subject to pay for shipping costs at the rate of BND 40,000 for each large, standard sized shipping container, regardless of the number of units in it. Each container contains 5,000 pairs when fully loaded.
4. Custom tariffs are expected to change soon, footwear imports into H & M's home country might be subject to 10% basic custom duty (plus 10% social welfare surcharge on duty) on the assessable value of imports excluding shipping costs.

Therefore, to implement the proposal, restructuring of functional departments into multi-disciplinary teams are needed to serve major buyer accounts. Each team is required to perform all activities, related to the buyer account management from order taking (sales order) to procurement to arranging shipping and after sales services. Team members dealing with buyers will work in H & M's corporate office, while those like QC etc. managing quality and supplier audits, will work at the manufacturing site of Chinese Supplier. Teams will be given greater independence to selling prices to reflect market conditions or setting a price based on the value of the product in the perception of the customer. Many support staff will work as helper roles, or be offered new jobs opportunities overseas after the restructuring.

Expert Advise

Prof. W, Performance Management Consultant has advised H & M that the proposal has features of re-engineered processes and can be defined as business process re-engineering (BPR). Prof. advised, for evaluating the proposal, H & M should consider software development for full front-end order entry, purchasing, and inventory management solution which may be required along with ethical aspect of the proposed changes.

Required

(i) ADVISE on information system which would be required for the reengineering. ***(4 Marks)***

(ii) ASSESS the likely impact of reengineering on the H & M's high ethical standards and accordingly on business performance. ***(6 Marks)***

(iii) EVALUATE how the BPR proposal can improve H & M's performance in relation to retail customers. ***(10 Marks)***

3. Water Utilities Services (WUS) is a parastatal company established with an aim for supply and distribution of water in Mumbai as well as supply of water to the various local authorities for distribution to villages and other small cities adjacent to Mumbai. This involved planning, operating, treating, maintaining, and distributing water resources in the country's urban centres and other areas mandated by Maharashtra Government. Its mission is "To provide sustainable water in a cost effective and environmentally friendly manner to the economy".

The government ensures that WUS does not take advantage of its monopoly position in the regional area by increasing prices. The government controls majority of services through its water regulatory body which determines an acceptable margin level (ROCE) and ensures that the pricing of WUS within these areas does not break this level. The remaining work i.e. a water bottle operation (WBO) is not regulated by government and WUS charges a market rate for water supply in bottle. The regulator compute return on capital employed (ROCE) of WUS based on its own valuation of the capital assets which are used in operation and the profit from those services.

Acceptable level of ROCE set by the regulator is 7.00%. If WUS breach this level, then the company would be penalized. WUS board is trying to improve the performance for the benefit of the shareholders. In order to communicate the objective of maximizing shareholders' wealth, the directors have decided to consider economic value added (EVA) as the key performance indicator.

Compute EVA of WUS based on the following information for the year ending 31 March 2019:

Particulars	**Water Distribution Operation (WDO)**	**Water Bottle Operation (WBO)**	**Total**
	Rs. in Crore	**Rs. in Crore**	**Rs. in Crore**
Revenue	555.00	186.00	741.00
Less: Operating Cost	460.00	119.00	579.00
Operating Profit	95.00	67.00	162.00
Less: Finance Charges			46.00
Profit Before Tax			116.00
Less: Tax at 30%			34.80
Profit After Tax			81.20

Capital Employed	2018-19	2017-18
	Rs. in Crore	Rs. in Crore
Audited Accounts	1,616.20	1,495.00
Determined by the Regulator (for WDO Only)	1,558.00	1,422.00

Notes

1. Operating Costs includes:

Particular	2018-19	2017-18
	Rs. in Crore	Rs. in Crore
Depreciation	118	114
Provision for Doubtful Debts	4	1
Research and Development	24	–
Other Non-Cash Items	14	12

2. Economic depreciation is Rs.166 Crore in 2018-19. In FY 2017-18, economic and accounting depreciation were assumed to be the same.

3. Current year tax paid is (Rs.18crore) and deferred tax provisions of Rs.1.50 crore has been adjusted. There was no deferred tax balance before 2018-19. The provision for doubtful debts was Rs.9 crore in the 2018-19 balance sheet.

4. Research and development has been non-capitalized. It belongs to a new project that will be developed over five years and is expected to be of long-term benefit to the company. 2018-19 is the first year of this project.

5. Cost of Capital

Equity	14%
Debt (Pre-Tax)	6%

6. Gearing of WUS

Equity	45%
Debt	55%

Required

(i) EVALUATE the financial performance of WUS using EVA. ***(10 Marks)***

(ii) ASSESS whether WUS comply with its acceptable ROCE level ***(4 Marks)***

(iii) ADVISE on how to improve profitability. ***(6 Marks)***

4. (a) HEL Limited is a manufacturing company that produces a wide range of consumer products for home consumption. Among the popular products are its energy efficient and environment friendly LED lamps. The company has a quality control department that monitors the quality of production.

As per the recent cost of poor quality report, the current rejection rate for LED lamps is 5% of units input. 5,000 units of input go through the process each day. Each unit that is rejected results in a Rs.200 loss to the company. The quality control department has proposed few changes to the inspection process that would enable early detection of defects. This would reduce the overall rejection rate from 5% to 3% of units input. The improved inspection process would cost the company Rs.15,000 each day.

Required

(i) ANALYSE the proposal and suggest if it would be beneficial for the company to implement it.

(4 Marks)

(ii) After implementation, ANALYSE the maximum rejection rate beyond which the proposal ceases to be beneficial? ***(6 Marks)***

(b) NAC miners operates two divisions, one in Japan and other in United Kingdom (U.K.). Mining Division is operated in Japan which is rich in raw emerald.

The other division is United Kingdom Processing Division. It processes the raw emerald into polished stone fit for human wearing.

The cost details of these divisions are as follows:

Division	**Japan Mining Division**	**United Kingdom Processing Division**
	Per carat of raw emerald	**Per carat of polished emerald**
Variable Cost	2,500 Yen	150 Pound
Fixed Cost	5,000 Yen	350 Pound

Several polishing companies in Japan buy raw emerald from other local Mining Companies at 9,000 Yen per carat. Current Foreign Exchange Rate is 50 yen = 1 Pound. Income Tax rates are 20% and 30% in Japan and the United Kingdom respectively.

It takes 2 carats of Raw Yellow emerald to yield 1 carat of Polished Stone. Polished emerald sell for 3,000 Pounds per carat.

Required

(i) COMPUTE the transfer price for 1 carat of raw emerald transferred from Mining Division to the Processing Division under two methods - (a) 200% of Full Costs and (b) Market Price.

(2 Marks)

(ii) 1,000 carats of raw emerald are mined by the Japan Mining Division and then processed and sold by the U.K. Processing Division. COMPUTE the after tax operating income for each division under both the Transfer Pricing Methods stated above in (i). ***(8 Marks)***

5. (a) Recently, Ministry of Health and Family Welfare along with Drug Control Department have come hard on health care centres for charging exorbitant fees from their patients. Human Health Care Ltd. (HHCL), a leading integrated healthcare delivery provider company is feeling pinch of measures taken by authorities and facing margin pressures due to this. HHCL is operating in a competitive environment so; it's difficult to increase patient numbers also. Management Consultant of the company has come out with some plan for cost control and reduction. HHCL provides treatment under package system where fees is charged irrespective of days a patient stays in the hospital. Consultant has estimated 2.50 patient days per patient. He wants to reduce it to 2 days. By doing this, consultant has targeted the general variable cost of Rs.500 per patient day. Annually 15,000 patients visit to the hospital for treatment.

Medical Superintendent has some concerns with that of Consultant's plan. According to him, reducing the patient stay would be detrimental to the full recovery of patient. They would come again for admission thereby increasing current readmission rate from 3% to 5%; it means readmitting 300 additional patients. Company has to spend Rs.25,00,000 more to accommodate this increase in readmission. But Consultant has found bless in disguise in this. He said every readmission is treated as new admission so it would result in additional cash flow of Rs.4,500 per patient in the form of admission fees.

Required

(i) CALCULATE the impact of Management Consultant's plan on profit of the company. ***(4 Marks)***

(ii) Also COMMENT on result and other factors that should be kept in mind before taking any decision. ***(6 Marks)***

(b) Real Petroleum Corporation (RPC) manufactures lubricant oils for motor vehicles (two wheelers, four wheelers and heavy vehicles). The company offers lubricant oils in various packages ranging from a 100 ml pouch to a 200 litres drum. About 70% of lubricant sales comprise are made in the form of 900 ml 'cans'. The process of manufacturing and packaging lubricant oils are given below:

- Base oil of required grade is imported from middle east.
- The base oil is blended with additives at the manufacturing plants at specified temperatures to produce lubricant oils.
- The oil is stored for a day to bring the temperature to normal.
- The plant has an automated bottling facility. The operator is required to pre-set the quantity and number of 'cans' to be filled in a computerised system. No manual intervention is required thereafter.
- The product is filled in 'cans' at the first stage of packaging with 900 ml of product.
- Caps are fixed on the 'cans' and sealed at the second stage of packaging.
- The product is weighed at third stage of packaging (a conversion factor is used to cover volume into weight) before the 'cans' are packed into a carton.

Any 'can' having lesser quantity of oil is removed before the 'cans' are packed into the cartons. The 'cans' which are short filled cannot be reused. Once the seal is broken, the 'can' is of no use. There is no process by which the oil in short filled 'can' could be reused. Hence the product is wasted.

The company is considering a proposal to add a component in its packaging unit to avoid losses arising out of quantity issues in packaging. The component will be installed after the first stage of packaging. The component will measure the volume of product and will forward the 'can' for capping and sealing only if the quantity in 'cans' is correct. In case the 'can' does not have required volume of product, the 'can' will be topped up with balance product before the capping and sealing process. The company will be able to achieve 0% wastage due to short filling after implementation of new system.

Required

Using the context of control systems, IDENTIFY and EXPLAIN the type of control which is existing in the company and the type of control which is proposed.

6. (a) AB Chemicals, is engaged in manufacturing many chemical products. It is using many chemicals some of which are fast moving, some are slow moving and few are in non-moving category. The firm has a stock of 10 units of one non-moving toxic chemical. Its book value is Rs.2,400, realizable value is Rs.3,500 and replacement cost is Rs.4,200.

One of the customers of the firm asks to supply 10 units of a product which needs all the 10 units of the non-moving chemical as an input. The other costs associated with the production of the product are:

Allocated overhead expenses Rs.16 per unit

Out of pocket expenses Rs.50 per unit

Labour cost Rs.40 per hour. For each unit two hours are required.

Other material cost Rs.80 per unit.

The labour force required for the production of the product will be deployed from among the permanent employees of the firm. This temporary deployment will not lead to any loss of contribution.

Required

(i) RECOMMEND the minimum unit price to be charged to the customer without any loss to the firm. ***(4 Marks)***

(ii) ANALYSE with reasons for the inclusion or exclusion of each of the cost associated with the production of the product. ***(4 Marks)***

(iii) ADVICE a pricing policy to be followed by AB Chemicals in perfect competition. ***(2 Marks)***

(b) Y Ltd., based in Kuala Lumpur, is the Malaysian subsidiary of Japan's NY corporation, headquartered in Tokyo. Y's principal Malaysian businesses include marketing, sales, and after-sales service of electronic products & software exports products. Y set up a new factory in Penang to manufacture and sell integrated circuit 'Q50X-N'. The first quarter's budgeted production and sales were 2,000 units. The budgeted sales price and standard costs for 'Q50X-N' were as follows:

	RM	**RM**
Standard Sales Price *per unit*		50
Standard Costs *per unit*		
Circuit X (10 units @ RM 2.5)	25	
Circuit Designers (6 hrs. @ RM 2)	12	(37)
Standard Contribution *per unit*		13

Actual results for the first quarter were as follows:

	RM '000	**RM '000**
Sales (2,000 units)		158
Production Costs (2,000 units)		
Circuit X (21,600 units)	97.20	
Circuit Designers (11,600 hours)	34.80	(132)
Actual Contribution (2,000 units)		26

The management accountant made the following observations on the actual results–

"*In total, the performance agreed with budget; however, in every aspect other than volume, there were huge differences. Sales were made at what was supposed to be the highest feasible price, but we now feel that we could have sold for RM 82.50 with no adverse effect on volume. The Circuit X cost that was anticipated at the time the budget was prepared was RM 2.5 per unit. However, the general market price relating to efficient purchases of the Circuit X during the quarter was RM 4.25 per unit. Circuit designers have the responsibility of designing electronic circuits that make up electrical systems. Circuit Designer's costs rose dramatically with increased demand for the specialist skills required to produce the 'Q50X-N', and the general market rate was RM 3.125 per hour - although Y always paid below the normal market rate whenever possible. In my opinion, it is not necessary to measure the first quarter's performance through variance analysis. Further, our operations are fully efficient as the final contribution is equal to the original budget.*"

Required

COMMENT on management accountant's view. ***(10 Marks)***