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FOR CA FINAL EXAM PREPARATION

CA Final 2020 Question Paper · Paper 5 Strategic Cost Management and Performance Evaluation

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Question Paper

SUBJECT
Paper 5 Strategic Cost Management and Performance Evaluation

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Final New Syllabus
Paper - 5
Strategic Cost Management & Performance Evaluation

Roll No. ..... – NOV 2020

Total No. of Questions – **6** Total No. of Printed Pages – **15**

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

PLB

Answers to questions are to be given only in English except in the case of candidates who have opted for Hindi Medium. If a candidate has not opted for Hindi Medium, his/her answers in Hindi will not be valued.

Question No. **1** is compulsory.

Candidates are also required to answer any **four** questions from the remaining **five** questions.

Working notes should form part of the respective answer.

No statistical or other table will be provided with this question paper.

Marks

1. The world fame Taj Mahal is situated on the banks of Yamuna River in the city of Agra, Uttar Pradesh, known for its beautiful design and is counted as one of the Seven Wonders of the World; the city attracts a lot of tourist from all around the world. The Tourism is one of the main sources of livelihood for its residents. Consequently, cleanliness and maintenance of garden area within the Taj Mahal campus is of prime importance in order to sustain and develop this industry.

   The local government has recently employed a contractor to clean and maintain the garden area within the Taj Mahal campus. The contractor uses cleaning machines pulled by horses to avoid pollution. The contractor has been selected through an online competitive tendering/bidding process. Majority of the litter comprises of plastic waste (bags, bottles etc.) while some portion also includes glass, aluminium cans, paper and cardboard. A detailed log is held by the contractor about the waste that has been cleaned,

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time taken for the clean-up, number of horses used, etc. This log is also checked and signed by local government officials. This record is used to process payments at the end of the month.

In addition to contracting, the local government has also placed bins at various locations within the campus for the public to dispose their waste. The Nagar Nigam's workers clean these bins every morning. Again, detailed logs of the man power and other resources employed are kept by the respective department. In addition, the government has started a mobile messaging system, whereby the public can message the concerned department if they find litter anywhere in the campus. Depending on whether it is from overflowing bins or scattered waste, the Nagar Nigam's workers will take action to clean it within 12 hours. A detailed log of these operations is also maintained. Patrons can also suggest measures for improving cleanliness on the above mentioned areas.

Due to its importance to the economy, the local government has allotted substantial budget for these operations. At the same time, it is essential to know if this is sufficient for the purpose of maintaining the cleanliness of the campus. Therefore, the government wants to assess whether the city is getting "good value for money" from expenditure. The "value for money" concept can be looked at from three perspectives: (i) economy, (ii) efficiency and (iii) effectiveness. The internal audit department that has been requested to undertake this study has requested for guidelines on whether the audit should focus on economy and efficiency of the Taj Mahal campus cleaning operations or on effectiveness of the same. Economy and efficiency audit assess whether the same level of service can be procured at lower cost or resources while effectiveness audit assess whether better service can be procured at same cost.

Depending on the outcome of the audits, if required, policy decisions like requesting for additional funding from the state government, alternate policy measures like levying penalty for littering etc. can be taken.

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Required :

(i) Recommend guidelines to assess economy, efficiency and effectiveness of Taj Mahal and campus cleaning operations. **8**

(ii) Identify challenges involved in assessment of effectiveness. **6**

(iii) Recommend general guidelines, how the audit team may conclude the audit based on the combined outcomes of economy, efficiency and effectiveness. **6**

2. NEC Furniture Ltd. is a leading manufacturer and supplier of furniture for students of pre-primary classes. The full cost of one set (comprising one Table and one chair) is ₹ 900 per set. The company has fixed its selling price so as to earn 30% return on investment of ₹ 45,00,000. The company produces and sells 6,000 sets per annum. Relevant cost data per annum are as follows :

Cost Component	Budget	Actual	Actual Cost p.a. (₹)
Direct Material	90,000 sq. ft.	1,00,000 sq. ft.	16,50,000
Direct Labour	35,000 hrs.	40,000 hrs	10,32,000
Mechanical Assembly	60,000 hrs.	60,000 hrs.	12,00,000
Machine Setup	5,000 hrs.	5,000 hrs.	1,68,000

It has been revealed that the actual and budgeted operating levels are the same. Actual and standard rates of material purchase and labour rate per hour are also the same. Any variance in cost is solely on account of

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difference in the material usage and hours required to complete the production. A competitor has introduced a product very similar to product of the company at an aggressive price of ₹ 820 per set which has resulted in downtrend in the sales volume the company. The management has called urgent meeting of the marketing team. After the meeting, following recommendations of the marketing team are approved by the management:

(a) To maintain the company's existing sales volume and amount of present return on investment, reduce the selling price by 10%.

(b) To make slight improvement in design to have edge over the competitors which will also reduce the direct material cost by ₹ 30 per set.

(c) To make the table and chair more attractive, print picture of Disney character on them, which will cost ₹ 5 per set.

Required :

(i) Calculate the present selling price and profit per unit from the above. Also calculate the mark-up % on the full cost per unit. **4**

(ii) Identify the non-value-added activities in the production process. **2**

(iii) (a) Calculate the new target cost per unit and new revised cost per unit after implementation of above recommendations. **2**

(b) How much reduction in cost is required to achieve the new target cost ? **2**

(iv) Recommend what strategy the company should adopt to attain the target cost calculated above. **10**

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3. Jal Cleaning and Distribution Services Ltd. (JCDSL) was established with an aim for supply and distribution of water in Nagpur and as well as supply of water to the various local authorities for distribution to villages and other small cities adjacent to Nagpur under "MISSION PAANI". This involved planning, operating, treating, maintaining, and distributing water resources in the country's urban centres and other areas mandated by State Government. The mission statement is "To provide clean and economical water for healthy life to the public".

There are two operational divisions of JCDSL viz Water Distribution Operation (WDO) for distribution of water through pipes and Water Packaging Operation (WPO) for supplying water in packaged drinking water bottles. The state government ensures that JCDSL 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 JCDSL within these areas does not break this level. The other operation i.e. Water Packing Operation (WPO) is not regulated by government and JCDSL is free to charge a market rate for water supply in bottles. The company is free to use water for Water Packaging Operation but the total use of water for Water Packing Operation (WPO) cannot exceed 35% of the total supply of water by the company. The company is presently using 20% of total water supply for packaging operation. The brand name of packaged drinking water is "Swachh-Jal" which is packed in transparent plastic bottles.

The water regulator calculates Return on Capital Employed (ROCE) of JCDSL based on its own valuation and assessment of the capital assets which are used in operation and profit from these services. Acceptable level

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of ROCE set by the regulator is 6.50%. If JCDSL breach this level, then the company would be heavily penalized. JCDSL board is making sincere efforts to improve the performance of the company for the benefit of the shareholders. The board of directors have decided to consider economic value added (EVA) as the key performance indicator, in order to meet the objective of maximizing shareholders' wealth.

Key Financial data for the year ending 31st March, 2020 is given below :

Particulars	Water Distribution Operation (₹ In Crore)	Water Packing Operation (₹ In Crore)	Total (₹ In Crore)
Revenue	585.00	212.00	797.00
Less : Operating Cost	475.00	146.00	621.00
Operating Profit	110.00	66.00	176.00
Less: Interest Cost			42.00
Profit before tax			134.00
Less: Tax @ 30%			40.20
Profit after tax			93.80

Capital Employed for the last two years	2019-20 (₹ In Crore)	2018-19 (₹ In Crore)
As per Audited Accounts	2,040.00	1,940.00
As calculated by Water Regulator (for WDO operations only)	1,812.00	1,760.00

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The following notes are to be taken into consideration in the analysis :

1. Operating Costs includes :

Particulars	2019-20 (₹ In Crore)	2018-19 (₹ In Crore)
Depreciation	124.00	118.00
Provision for bad and doubtful debts	6.00	2.00
R&D Cost	20.00	---
Other Non-Cash items	22.00	11.00

2. Economic depreciation is ₹ 156.00 Crore in 2019-20. In the FY 2018-19, economic and accounting depreciation were assumed to be the same.

3. Current year's tax paid is ₹ 23.00 Crore and deferred tax provisions of ₹ 2.00 Crore have been adjusted. There was no deferred tax balance before 2019-20.

4. The provision for doubtful debts was ₹ 12.00 Crore in the 2019-20 Balance Sheet.

5. Research and development has been non-capitalized. It belongs to a new project that will be developed over six years and is expected to be of long-term benefit to the company. 2019-20 is the first year of this project.

6. Cost of Capital :

Equity	15%
Debt (Post Tax)	5%

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7. Gearing of JCDSL

Equity	30%
Debt	70%

Required :

(i) Calculate EVA of JCDSL for the year ending 31 March, 2020 based on the above information. **6**

(ii) Evaluate the financial performance of JCDSL using EVA. **4**

(iii) Assess whether JCDSL comply with its acceptable ROCE level. **3**

(iv) Advise how JCDSL can improve its performance in terms of profitability and EVA in future. **7**

4. (a) 'Mahesh is a canteen contractor at Jamshedpur. He manages office canteen of 1,200 employees where tea and snacks are served between 9 am to 5 pm. He has employed four supervisors for managing cash. Mahesh pays ₹ 400 per working day to every supervisor. The office remains closed on Saturday and Sunday. A solution provider has approached Mahesh for managing Cash. He has advised Mahesh to install an automated payment mechanism for accepting payments through machines. Every employee of office will swipe smart card for making the payment. The complete system would cost ₹ 3,35,000 with working life of 4 years with annual maintenance of ₹ 60,000. Only one supervisor will be required after the installation of machines.

Required :

Advise Mahesh on his plan of installation of automated payment mechanism. (Ignore the time value of money.) **5**

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(a) State the most appropriate pricing policy to be adopted in the following independent situations :

(Situations need not be copied. Only policy name is required.)

(i) The company manufactures original equipment and does railways contract work. Other companies are also there in the market who also undertake similar projects.

(ii) Patented Drug for COVID 19 ready to be launched in the market.

(iii) A bike manufacturer is launching an innovative, technologically advanced bike in the highly priced segment.

(iv) A company making a variant of sanitizers, trying to enter the market. The same varieties of sanitizers are already successfully capturing the market.

(v) A successful mobile manufacturing company has built into its latest tablet, an additional sliding screen and improved processing capabilities so that the tablet is almost a laptop. **5**

(b) TSC Box Ltd. is a manufacturer and supplier of android set up boxes for various DTH operators. This is very popular with the operators as it converts normal TV to a smart TV. To ensure supply of good quality products to meet the expectations of the viewers, it has set up quality control department that regularly conducts quality inspection and submits it report to the management on weekly basis.

As per the latest quality inspection report submitted by the department, it reflects that the current rejection rate is 7% of units input into the manufacturing system due to poor quality. 3,000 units of input go through the process every day. As per analysis, for each rejection, there is loss of ₹ 150 to the company. The management is very much worried due to high rate of rejection of input units.

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The management has asked for suggestions from the quality control department in this regard. The department has suggested implementation of new system for inspection for early detection of defective units. This change would result in drop of rejection rate to 4% from earlier 7%. The cost of new system will be ₹ 12,000 per day.

Required :

(i) Analyse the proposed new system for inspection and suggest if it would be beneficial for the company. **3**

(ii) Also Calculate the minimum reduction in number of rejections each day upto which the proposed system will be beneficial. **2**

(c) TRISEL Ltd. makes three products X, Y and Z in Divisions A, B and C respectively. The division X is currently working at 60%, Y is working at 80% and Z is working at 100% of the total production capacity.

The following information is given :

Figures ₹/unit

Particulars	**X**	**Y**	**Z**
Direct Material	10	25 (Excl. Material X)	35 (Excl. Material X)
Direct Labour	6	8	10
Variable Overhead	2	3	4
Total Production Capacity	15,000 units	5,000 units	2,500 Units
External Demand	7,500 Units	5,000 Units	3,000 units
Selling price to External Customers	30	83	90

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The company has to incur additional fixed cost of ₹ 9,000 for using every 10% of idle production capacity. Production capacity cannot be enhanced beyond total production capacity.

Product X can be used as input material for Y and Z. Product X is available in the market at ₹ 30 per unit. Each unit of Y and Z need one unit of X as their input material.

X supplies the product without any defects, error free for direct use at shop floor without any further quality inspection to Y and Z. If Y gets transfer of material from X, it can be directly used, but if it buys from outside vendor, it has to pay ₹ 30 plus quality inspection charges of ₹ 2.

Z gets material from outside vendor at ₹ 30. If it buys from X, it has to slightly alter the product X which will cost ₹ 3 as alteration cost.

X wants to fix uniform transfer price for both Y and Z. This price will be for divisional transfer only and it has nothing to do with outside sales.

Required :

Recommend the best strategy for each division and company as a whole. **10**

5. (a) AMKP International has developed ultra-modern smart LED TV with latest features. It has been developed after extensive research and is ready for manufacturing. The firm has incurred ₹ 6,50,000 as development cost on this LED TV. The firm is deciding on plant capacity, which could cost ₹ 40,00,000 for manufacturing of 600 units. With additional outlay of 40%, plant capacity can be increased by 50%. The relevant data pertaining to the life cycle of the LED TV at different capacity levels is as under :

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Expected Sales	600 Units	900 Units
Selling Price	₹ 45,000 per unit	₹ 41,400 per unit
Variable Selling Costs	12% of the Selling price	12% of the selling price
Salvage Value of the plant	20% of the total plant cost	20% of the total plant cost
Profit Volume Ratio	30%	

Required :

Advise AMKP International regarding the 'Optimal Plant Capacity' to install. The LED TVs life cycle is two years. (Note: Ignore the time value of money.) **10**

(b) Osaka Tea Co. manufactures and distributes finest quality black tea to hotels, restaurants and retailers. The company has wide presence in tea market. It has become one of the largest premium brands. The customers are very happy with the finest quality of tea.

Osaka Tea Co. never compromise with the quality of the tea. The aim of the company is to deliver finest black tea to keep the customers happy. It has tied up with big tea estates for procurement of finest tea leaves directly from the estate for processing in its own plants. The tea leaves go through various processes like plucking, withering, brushing, oxidising, grading, drying, sorting and shaping etc. Then these are packed in beautiful plastic jars for distribution to the hotels, restaurants and retailers.

During the meeting of the management, it has been decided to reduce the price per kg by 5% to increase the volume of sales. The following variances pertain to last month's operations, arose as a consequence of implementation of above decision :

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Sales Price Variance	24,500 (A)
Sales Volume Variance	20,600 (F)
Purchase Price Variance	15,500 (A)
Labour Efficiency Variance	14,300 (A)
Fixed Cost Expenditure Variance	11,100 (A)

Required :

(i) Identify the 'Critical Success Factor' for Osaka Tea Co. **1**

(ii) Evaluate the management's decision with the 'Overall Corporate Strategy' and 'Critical Success Factors'. **9**

6. (a) ZAINA Private Limited is a manufacturing company of electrical equipment. The company is facing the possibility of a strike by its direct production workers engaged on the assembly of one of its machines. The Trade Union is demanding an increase of 8% backdated to the beginning of its financial year (1st April), but the company expects that if a strike takes place, it will last four weeks after which the Union will settle for an increase of 6% similarly backdated.

The Machine whose production (Ceiling Fans) would be affected by the strike is sold to distributors at a discount of 25% from the current recommended selling price of ₹ 2,000. The estimated costs for the Ceiling Fans are :

Particulars	**Fixed Cost (₹)**	**Variable Cost (₹)**
Production	8,00,000	1,200 Per Ceiling Fan
Distribution	3,00,000	80 Per Ceiling Fan
Total Cost	**11,00,000**	**1280 Per Ceiling Fan**

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Direct labour comprises 60% of the variable production cost. The budgeted output is 30,000 Ceiling Fans in 50 working weeks per year. If the strike takes place, the following situations are expected by the company :

(a) Maintenance staff, whose wages are included in the fixed production costs, would be used to carry out an overhaul of the conveyor system using materials worth ₹ 50,000. This work would otherwise be undertaken by an outside contractor at a cost including materials ₹ 1,50,000.

(b) Sales of 500 Ceiling Fans would be lost to completion. The balance that could ordinarily have been produced during the strike period, could however, be sold, but these ceiling fans would have to be produced in overtime working which would be at an efficiency rating of 80% of the normal. This would also entail additional fixed costs of ₹ 40,000 and wage payments at time and one-half.

Required :

(i) Calculate the profit or loss with and without strike.

(ii) Taking, purely economic point of view, advise the management to allow the strike to go ahead, rather than agree to the Union's demand.

(iii) List-Any two factors, not considered in yours above evaluation that may have adverse financial effects for the company, if the strike were to take place. **10**

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(b) KRI Sanitation Ltd. manufactures a single product and the standard cost system is followed. Standard cost per unit is calculated as below :

Particulars	Amount (₹)
Direct Materials (4 kg. @ ₹ 7 kg.)	28
Direct Labour (5 Hours @ ₹ 9 per hour)	45
Variable overheads (6 Hours @ ₹ 2 per hour)	12

The other data for the month of June 2020 is given below :

Particulars	Budgeted	Actual
Production and Sales	15,000 units	13,800 units
Direct Material	60,000 kg @ ₹ 7 per kg.	60,000 kg. @ ₹ 7 per kg.
Direct Labour	75,000 Hours @ ₹ 9 per hour	₹ 5,69,600 (for 71,200 hours)
Variable Overheads	1,80,000	1,72,500

Required :

(i) Calculate following variances : 3

- Direct Labour Rate Variance
- Direct Labour Efficiency Variance

(ii) Interpret the result. 7

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