CA INTERMEDIATE N'19

SUBJECT- COSTING

Test Code – PIN 5055

(Date :)

(Marks - 100)

Question no. 1 is compulsory and attempt any four out of remaining five questions.

QUESTION NO.1 **(10 MARKS X 2 = 20 MARKS)**

A. PQR Ltd., manufactures a special product, which requires 'ZED'. The following particulars were collected for the year 2005-06:

(i)	Monthly demand of Zed	:	7,500 units
(ii)	Cost of placing an order	:	Rs. 500
(iii)	Re-order period	:	5 to 8 weeks
(iv)	Cost per unit	:	Rs. 60
(v)	Carrying cost % p.a.	:	10%
(vi)	Normal usage	:	500 units per week
(vii)	Minimum usage	:	250 units per week
(viii)	Maximum usage	:	750 units per week

Required:

(i) Re-order quantity.

(ii) Re-order level.

(iii) Minimum stock level.

(iv) Maximum stock level.

(v) Average stock level.

B. The existing Incentive system of Alpha Limited is as under:

Normal working week shifts of 3 hours each	5 days of 8 hours each plus 3 late
Rate of Payment	Day work: Rs. 160 per hour
	Late shift: Rs. 225 per hour

Average output per operator for 49-hours week i.e. including 3 late shifts 120 articles

In order to increase output and eliminate overtime, it was decided to switch on to a system of payment by results. The following Information is obtained:

Time-rate (as usual)	:	Rs. 160 per hour
Basic time allowed for 15 articles	:	5 hours
Piece-work rate	:	Add 20% to basic piece-rate
Premium Bonus	:	Add 50% to time.

Required:

Prepare a Statement showing hours worked, weekly earnings, number of articles produced and labour cost per article for one operator under the following systems:

(a) Existing time-rate

(b) Straight piece-work

(c) Halsey premium system

Assume that 135 articles are produced in a 40-hour week under straight piece work, and Halsey premium system above and worker earns half the time saved under Halsey premium system.

QUESTION NO.2 **(10 MARKS X 2 = 20 MARKS)**

A. A B C D Co. Ltd. produces and sells four products A, B, C and D. These products are similar and usually produced in production runs of 10 units and sold in a batch of 5 units. The production details of these products are as follows:

Product	A	B	C	D
Production (Units)	100	110	120	150
Cost per unit:				
Direct material (Rs.)	30	40	35	45
Direct labour (Rs.)	25	30	30	40
Machine hour (per unit)	5	4	3	4

The production overheads during the period are as follows:

	Rs.	Rs.
Factory works expenses	22,500	
Stores receiving costs	8,100	
Machine set up costs	12,200	
Cost relating to quality control	4,600	
Material handling and dispatch	9,600	57,000

The cost drivers for these overheads are detailed below:

Cost	Cost drivers
Factory works expenses	Machine hours
Stores receiving costs	Requisitions raised
Machine set up costs	No. of production runs
Cost relating to quality control	No. of production runs
Material handling and dispatch	No. of orders executed

The number of requisitions raised on the stores was 25 for each product and number of orders executed was 96, each order was in a batch of 05 units.

Required:

(i) Total cost of each product assuming the absorption of overhead on machine hour basis;

(ii) Total cost of each product assuming the absorption of overhead by using activity base costing; and

(iii) Show the differences between (i) and (ii) and comment.

B. JKL Limited produces two products – J and K together with a by-product L from a single main process (process I). Product J is sold at the point of separation for Rs. 55 per kg, whereas product K is sold for Rs. 77 per kg. after further processing into product K2. By-product L is sold without further processing for Rs. 19.25 per kg.

Process I is closely monitored by a team of chemists, who planned the output per 1,000 kg of input materials to be as follows:

Product J	500 kg
Product K	350 kg
Product L	100 kg
Toxic waste	50 kg

The toxic waste is disposed at a cost of Rs. 16.50 per kg, and arises at the end of processing.

Process II which is used for further processing of product K into product K2, has the following cost structure:

Fixed costs	Rs. 2,64,000 per week
Variable cost	Rs. 16.50 per kg processed

The following actual data relate to the first week of the month:

Process I

Opening Work-in-progress	Nil
Material input	40,000 kg costing Rs. 6,60,000
Direct labour	Rs. 4,40,000
Variable overheads	Rs. 1,76,000
Fixed overheads	Rs. 2,64,000

Outputs:

Product J	19,200 kg
Product K	14,400 kg
Product L	4,000 kg

Toxic waste	2,400 kg
Closing Work-in-progress	Nil
Process II	
Opening work-in-progress	Nil
Input of product K	14,400 kg
Output of product K2	13,200 kg
Closing work-in-progress	1200 kg
(50% converted and conversion costs were incurred in accordance with the planned cost structure)	

Required:

(i) Prepare Process I account for the first week of the month using the final sales value method of attribute the pre-separation costs to join products.

(ii) Prepare the toxic waste account and Process II account for the first week of the month.

(iii) Comment on the method used by the JKL Limited to attribute the pre-separation costs to joint products.

(iv) Advise the management of JKL Limited whether or not, on purely financial grounds, it should continue to process product K into product K2:

(a) If product K could be sold at the point of separation for Rs.47.30 per kg; and

(b) If the 60% of the weekly fixed costs of Process II were avoided by not processing product K further.

QUESTION NO.3 **(10 MARKS X 2 = 20 MARKS)**

A. GVL Ltd. commenced a contract on April 1, 2018. The total contract was for Rs. 1,08,50,000. It was decided to estimate the total profit and to take to the credit of Costing P & L A/c the proportion of estimated profit on cash basis which work completed bear to the total contract. Actual expenditure in 2018-19 and estimated expenditure in 2019-20 are given below:

	2018-19	**2019-20**
	Actual (Rs.)	**Estimated (Rs.)**
Material issued	18,24,000	32,56,000
Labour : Paid	12,20,000	15,20,000
: Outstanding at end	96,000	1,50,000
Plant purchased	9,00,000	-
Expenses : Paid	4,00,000	7,00,000
: Outstanding at the end	-	1,00,000
: Prepaid at the end	90,000	-
Plant returned to stores (a historical stores)	3,00,000	6,00,000 (on Sep. 30, 2019)
Material at site	1,20,000	3,00,000

Work-in progress certified	51,00,000	Full
Work-in-progress uncertified	1,60,000	----
Cash received	40,00,000	Full

The plant is subject to annual depreciation @ 20% of WDV cost. The contract is likely to be completed on September 30, 2019.

Required:

(i) PREPARE the Contract A/c for the year 2018-19.

(ii) ESTIMATE the profit for the contract.

B. A Light Motor Vehicle manufacturer has prepared sales budget for the next few months, and the following draft figures are available:

Month	No. of vehicles
October	4,000
November	3,500
December	4,500
January	6,000
February	6,500

To manufacture a vehicle a standard cost of Rs. 2,85,700 is incurred and sold through dealers at an uniform selling price of Rs. 3,95,600 to customers. Dealers are paid 12.5% commission on selling price on sale of a vehicle.

Apart from other materials four units of Part-X are required to manufacture a vehicle. It is a policy of the company to hold stocks of Part-X at the end of the each month to cover 40% of next month's production. 4,800 units of Part-X are in stock as on 1st October.

There are 950 nos. of completed vehicles are in stock as on 1st October and it is policy to have stocks at the end of each month to cover 20% of the next month's sales.

You are required to

(a) Prepare Production budget (in nos.) for the month of October, November, December and January.

(b) Prepare a Purchase budget for Part-X (in units) for the months of October, November and December.

(c) Calculate the budgeted gross profit for the quarter October to December.

QUESTION NO.4 **(10 MARKS X 2 = 20 MARKS)**

A. The following figures are related to LM Limited for the year ending 31st March, 2012 :

Sales - 24,000 units @ Rs. 200 per unit;

P/V Ratio 25% and Break-even Point 50% of sales.

You are required to calculate:

(i) Fixed cost for the year

(ii) Profit earned for the year

(iii) Units to be sold to earn a target net profit of Rs. 11,00,000 for a year.

(iv) Number of units to be sold to earn a net income of 25% on cost.

(v) Selling price per unit if Break-even Point is to be brought down by 4,000 units.

B. EPS is a Public School having 25 buses each plying in different directions for the transport of its school students. In view of large number of students availing of the bus service, the buses work two shifts daily both in the morning and in the afternoon. The buses are garaged in the school. The workload of the students has been so arranged that in the morning, the first trip picks up senior students and the second trip plying an hour later picks up junior students. Similarly, in the afternoon, the first trip takes the junior students and an hour later the second trip takes the senior students home.

The distance travelled by each bus, one way is 16 kms. The school works 24 days in a month and remains closed for vacation in May and June. The bus fee, however, is payable by the students for all the 12 months in a year.

The details of expenses for the year 2003-2004 are as under:

Driver's salary –payable for all the 12 months	Rs. 5,000 per month per driver
Cleaner's salary payable for all the 12 months (one cleaner has been employed for every five buses)	Rs. 3000 per month per cleaner
Licence Fees, Taxes etc.	Rs. 2,300 per bus per annum
Insurance Premium	Rs. 15,600 per bus per annum
Repairs and Maintenance	Rs. 16,400 per bus per annum
Purchase price of the bus	Rs. 16,50,000 each
Life of the bus	16 years
Scrap value	Rs. 1,50,000

Diesel Cost Rs. 18.50 per litre

Each bus gives an average of 10 kms per litre of diesel. The seating capacity of each bus is 60 students. The seating capacity is fully occupied during the whole year.

The school follows differential bus fees based on distance travelled as under:

Students picked up and dropped within the range of distance from the school	Bus fee	Percentage of students availing this facility
4 kms	25% of Full	15%
8 kms	50% of Full	30%
16 kms	Full	55%

Ignore interest. Since the bus fees has to be based on average cost, you are required to:

(i) Prepare a statement showing the expenses of operating a single bus and the fleet of 25 buses for a year.

(ii) Work out average cost per student per month in respect of:

(a) Students coming from a distance of upto 4 kms from the school;

(b) Students coming from a distance of upto 8 kms from the school; and

(c) Students coming from a distance of upto 16 kms from the school.

QUESTION NO.5 **(10 MARKS X 2 = 20 MARKS)**

A. The following information have been extracted from the cost records of a manufacturing company:

		Rs.
	Stores	
*	Opening balance	9,000
*	Purchases	48,000
*	Transfer from WIP	24,000
*	Issue to work-in-progress	48,000
*	Issue for repairs	6,000
*	Deficiency found in stock	1,800
	Work-in-Progress:	

*	Opening balance	18,000
*	Direct Wages applied	18,000
*	Overhead charged	72,000
*	Closing balance	12,000
	Finished Production :	
*	Entire production is sold at a profit of 10% on cost from work-in-progress	
*	Wages paid	21,000
*	Overhead incurred	75,000

Draw the Stores Leger Control A/c, Work-in-Progress Control A/c, Overheads Control A/c and Costing Profit and Loss A/c.

B. The following information is available from the cost records of Vatika & Co. For the month of August, 2009:

Material purchased 24,000 kg Rs. 1,05,600

Material consumed 22,800 kg

Actual wages paid for 5,940 hours Rs.29,700

Unit produced 2,160 units.

Standard rates and prices are:

Direct material rate is Rs.4.00 per unit

Direct labour rate is Rs.4.00 per hour

Standard input is 10 kg. for one unit

Standard requirement is 2.5 hours per unit.

Calculate all material and labour variances for the month of August, 2009.

QUESTION NO.6 **(5 MARKS X 4 = 20 MARKS)**

A. STATE the advantages of Zero-based budgeting.

B. EXPLAIN the difference between Cost Control and Control Reduction.

C. DISCUSS the essential features of a good cost accounting system.

D. Rio Limited undertakes to supply 1000 units of a component per month for the months of January, February and March 20X8. Every month a batch order is opened

against which materials and labour cost are booked at actual. Overheads are levied at a rate per labour hour. The selling price is contracted at Rs. 15 per unit.

From the following data, present the profit per unit of each batch order and the overall position of the order for the 3,000 units.

Month	Batch Output	Material Cost (Rs.)	Labour Cost (Rs.)
	(Numbers)		
January 20X8	1,250	6,250	2,500
February 20X8	1,500	9,000	3,000
March 20X8	1,000	5,000	2,000

Labour is paid at the rate of Rs. 2 per hour. The other details are :

Month	Overheads(Rs.)	Total Labour Hours
January 20X8	12,000	4,000
February 20X8	9,000	4,500
March 20X8	15,000	5,000