CHAPTER-11

JOINT PRODUCT & BY PRODUCTS

PHYSICAL UNIT METHOD

Q1. **(SMN1).**A coke manufacturing company produces the following products by using 5,000 tonnes of coal @ Rs. 15 per tonne into a common process.

Coke	3,500 tonnes
Tar	1,200 tonnes
Sulphate of ammonia	52 tonnes
Benzol	48 tonnes

Apportion the joint cost amongst the products on the basis of the physical unit method.

AVERAGE UNIT COST METHOD

Q2. **(SMN2).**Find out the cost of joint products A, B and C using average unit cost method from the following data :

(a) Pre-separation Joint Cost Rs. 60,000.

(b) Production data :

Products	Units produced
A	500
B	200
C	300
	1,000

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CONTRIBUTION MARGIN METHOD

Q3. **(SMN3).** Find out the cost of joint products A and B using contribution margin method from the following data:

Sales

A : 100 kg @ Rs. 60 per kg.

B: 120 kg @ Rs. 30 per kg.

Joint costs

Marginal cost Rs. 4,400

Fixed cost Rs. 3,900.

CONSTANT GROSS MARGIN PERCENTAGE METHOD

Q4. **(A10N).**JAI Ltd. operates a chemical process which produces four products - P, Q, R, and S from a basic raw material and provides you the following data:

1. Basis raw material 1,25,000 units @ Rs. 2
2. Initial processing wages Rs. 1,50,000
3. Initial processing overheads Rs. 1,00,000
4. Output, selling prices and additional processing costs:

Products	Output (Units)	Selling Price per unit after further processing (Rs.)	Additional Processing Costs after split off (Rs.)
P	10,000	70	2,50,000
Q	20,000	65	3,00,000
R	30,000	40	7,50,000
S	40,000	20	2,00,000

Prepare a statement showing the apportionment of joint costs on the basis of constant gross margin percentage method.

REVERSE COST METHOD

Q5. **(PM).** A company manufactures one main product (M_1) and two by-products B_1 and B_2 For the month of January 2013, following details are available:

Total Cost upto separation Point Rs. 2,12,400.

	M_1	B_1	B_2
Cost after separation	--	Rs. 35,000	Rs. 24,000
No. of units produced	4,000	1,800	3,000
Selling price per unit	Rs. 100	Rs. 40	Rs. 30
Estimated net profit as percentage to sales Value	--	20%	30%
Estimated selling expenses as percentage to sales value	20%	15%	15%

There are no beginning or closing inventories.

Prepare statement showing:

(i).Allocation of joint cost; and

(ii).Product-wise and overall profitability of the company for January 2013.

Q6. A Ltd. produces 'M' as a main product and gets two by products - 'P' and 'Q' in the course of processing.

Following information are available for the month of October, 2017:

	M	P	Q
Cost after separation	-	Rs. 60,000	Rs. 30,000
No. of units produced	4500	2500	1500
Selling price (per unit)	Rs. 170	Rs. 80	Rs. 50
Estimated Net profit to sales	-	30%	25%

The joint cost of manufacture upto separation point amounts to Rs. 2,50,000.

Selling expenses amounting to Rs. 85,000 are to be apportioned to the three products in the ratio of sales units.

There is no opening and closing stock. Prepare the statement showing:

(i) Allocation of joint cost.

(ii) Product wise overall profitability and

(iii) Advise the company regarding results if the byproduct ' P' is not further processed and is sold at the point of separation at Rs. 60 per unit without incurring selling expenses.**[ICAI-N17/2(A)]**

Q7. A factory producing article A also produces a by-product B which is further processed into finished product. The joint cost of manufacture is given below:

Material	Rs. 5,000
Labour	Rs. 3,000
Overhead	Rs. 2,000
	Rs. 10,000

Subsequent cost in Rs. are given below:

	A	B
Material	3,000	1,500
Labour	1,400	1,000
Overhead	600	500
	5,000	3,000

Selling prices are A Rs. 16,000

B Rs. 8,000

Estimated profit on selling prices is 25% for A and 20% for B.

Assume that selling and distribution expenses are in proportion of sales prices. Show how you would apportion joint costs of manufacture and prepare a statement showing cost of production of A and B.

[ICAI-M16/4(A)]

Q8. A company manufactures one main product (M1) and two by-products B1 and B2. For the month of January 2015, following details are available:

Total cost upto separation point Rs. 2,12,400.

	M_1	B_1	B_2
Cost after separation	-	Rs. 35,000	Rs. 24,000
No. of Units produced	4,000	1,800	3,000
Selling Price per unit	Rs. 100	Rs. 40	Rs. 30
Estimated net profit as percentage to Sales Value	-	20%	30%
Estimated selling expenses as percentage to Sales Value	20%	15%	15%

There are no opening or closing inventories. Prepare statement showing:

(i) Allocation of Joint Cost; and

(ii) Product-wise and overall profitability of the company for January, 2015. **[ICAI-M15/4(A)]**

Q9. **(AK47)**Two products P and Q are obtained in a crude form and require further processing at a cost of Rs. 5 for P and Rs. 4 for Q per unit before sale. Assuming a net margin of 25 percent of cost, their sale prices are fixed at Rs. 13.75 and Rs. 8.75 per unit respectively. During the period, the joint cost was Rs. 88,000 and the output were:

P	8,000 units
Q	6,000 units

Ascertain the joint cost per unit. **[CA-May-1998]**

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Q10. **(AK44)** A factory is engaged in the production of a chemical BOMEX and in the course of its manufacture, a by-product BRUCIL is produced, which after further processing has a commercial value. For the month of April 1998, the following are the summarized cost data:

	Joint Expenses	**Separate Expenses**	
		BOMEX	**BRUCIL**
	Rs.	**Rs.**	**Rs.**
Materials	1,00,000	6,000	4,000
Labour	50,000	20,000	18,000
Overheads	30,000	10,000	6,000
Selling price per unit		98	34
Estimated profit per unit on			4
		Units	**Units**
No. of units produced		2,000	2,000

The factory uses reverse cost method of accounting for by-products whereby the sales value of by-products after deduction of the estimated profit & post separation costs relating to the by-products is credited to the joint process cost account.

You are required to prepare statements showing –

(i) the joint cost allocable to BOMEX

(ii) the product-wise and overall profitability of the factory for April 1998.

[CA-IPCC M-90][INTER/M19/1(C)]

SALES VALUE AT SPLIT OFF POINT METHOD

Q11. In an Oil Mill four products emerge from a refining process. The total cost of input during the quarter ending March 2016 is Rs.1,48,000. The output, sales and additional processing costs are as under:

Particulars	Output in Litres	Additional processing cost after split off (Rs.)	Sales value (Rs.)
ACH	8,000	43,000	1,72,500
BCH	4,000	9,000	15,000
CSH	2,000	-	6,000
DSH	4,000	1,500	45,000

In case these products were disposed-off at the split off point that is before further processing, the selling price per litre would have been:

ACH (Rs.)	BCH (Rs.)	CSH (Rs.)	DSH (Rs.)
15.00	6.00	3.00	7.50

Prepare a statement of profitability based on:

(i) If the products are sold after further processing is carried out in the mill.

(ii) If they are sold at the split off point.

[R-M-17/7 & R-N18/10][MTP-OCT19/5(B)-Similar]

Q12. (PM). A company's plant processes 1,50,000 kg. of raw material in a month to produce two products, viz, 'P' and 'Q'. The cost of raw material is Rs. 12 per kg. The processing costs per month are:

	Rs.
Direct Materials	90,000
Direct Wages	1,20,000
Variable Overheads	1,00,000
Fixed Overheads	1,00,000

The loss in process is 5% of input and the output ratio of P and Q which emerge simultaneously is 1:2. The selling prices of the two products at the point of split off are : P Rs. 12 per kg. and Q Rs. 20 per kg. A proposal is available to process P further by mixing it with other purchased materials. The entire current output of the plant can be so processed further to obtain a new product 'S'. The price per kg. of S is Rs. 15 and each kg. of output of S will require one kilogram of input P. The cost of processing of P into S (including other materials) is Rs. 1,85,000 per month.

You are required to prepare a statement showing the monthly profitability based both on the existing manufacturing operations and on further processing. Will you recommend further processing ?

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Q13. (PM). A company produces two joint product X and Y , from the same basic materials. The processing is completed in three departments.

Materials are mixed in Department I. At the end of this process X and y get separated. After separation X is completed in the Department II and Y is finished in Department III. During a period 2,00,000 kg. of raw material were processed in Department I, at a total cost of Rs. 8,75,000, and the resultant 60% becomes X and 30% becomes Y and 10% normally lost in processing.

In Department II 1/6th of the quantity received from Department I is lost in processing. X is further processed in Department II at a cost of Rs. 1,80,000.

In Department III further new material added to the material received from Department I and weight mixture is doubled, there is no quantity loss in the department. Furhter processing cost (with material cost) in Department III is Rs. 1,50,000.

The detail of sales during the year are:

	Product X	Product Y
Quantity sold (kg.)	90,000	1,15,000
Sales price per kg. (Rs.)	10	4

There were no opening stocks. If these products sold at split-off-point., the selling price of X and Y would be Rs. 8 and Rs. 4 per kg respectively.

Required:

(i) Prepare a statement showing the apportionment of joint cost to X and Y in proportion of sales value at split off point.

(ii) Prepare a statement showing the cost per kg. of each product indicating joint cost, processing cost and total cost separately.

(iii) Prepare a statement showing the product wise profit for the year.

(iv) On the basis of profits before and after further processing of product X and Y, give your comment that products should be further processed or not.

Q14. A company processes a raw material in its Department 1 to produce three products, viz. A, B and X at the same split-off stage. During a period 1,80,000 kgs of raw materials were processed in Department 1 at a total cost of Rs.12,88,000 and the resultant output of A, B and X were 18,000 kgs, 10,000 kgs and 54,000 kgs respectively. A and B were further processed in Department 2 at a cost of Rs.1,80,000 and Rs.1,50,000 respectively.

X was further processed in Department 3 at a cost of Rs.1,08,000. There is no waste in further processing. The details of sales affected during the period were as under:

	A	**B**	**X**
Quantity Sold (kgs.)	17,000	5,000	44,000
Sales Value (Rs.)	12,24,000	2,50,000	7,92,000

There were no opening stocks. If these products were sold at split -off stage, the selling prices of A, B and X would have been Rs.50, Rs.40 and Rs.10 per kg respectively. Required:

(i) Prepare a statement showing the apportionment of joint costs to A, B and X.

(ii) Present a statement showing the cost per kg of each product indicating joint cost and further processing cost and total cost separately.

(iii) Prepare a statement showing the product wise and total profit for the period.

(iv) State with supporting calculations as to whether any or all the products should be further processed or not **(R-M-16/7)[R-M18/10][R-M-19/9]**

Q15. Oleum Refinery Ltd. refines crude oil and produces two joint product Gasoline and HSD in the ratio of 4:6. The refining is done in three processes.

Crude oil is first fed in Process-A, from where the two products Gasoline and HSD are get separated. After separation from Process-A, Gasoline and HSD are further processed in Process- B and Process- C respectively. During the month of July, 2014, 4,50,000 Ltr. of crude oil were processed in Process-A at a total cost of Rs.1,71,99,775.

In Process-B, Gasoline is further processed at a cost of Rs.10,80,000.

In Process- C, HSD is further processed at a cost of Rs.1,35,000.

The Input output ratio for the each process is as follows:

Process- A 1 : 0.80

Process- B 1 : 0.95

Process- C 1 : 0.90

The details of sales during the month are:

	Gasoline	HSD
Quantity sold (Ltr.)	1,32,000	1,88,000
Sales price per Ltr.(Rs.)	68	46

There were no opening stocks. If these products were sold at split-off point, the selling price of Gasoline and HSD would be Rs.64 and Rs.41 per Ltr. respectively.

Required:

(i) Prepare a statement showing the apportionment of joint cost to Gasoline and HSD in proportion of sales value at split off point.

(ii) Prepare a statement showing the cost per Ltr. of each product indicating joint cost, processing cost and total cost separately.

(iii) Prepare a statement showing the product wise profit or loss for the month.**[R-N-14/6]**

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FINAL SALES VALUE METHOD

Q16. **(A12(14).**Viru Ltd. operates a chemical process which produces four products - P, Q, R, and S from a basic raw material provides you the following data:

1. Basis raw material 1,25,000 units @ Rs. 2
2. Initial processing wages Rs. 1,50,000
3. Initial processing overheads Rs. 1,00,000
4. Output, selling prices and additional processing costs:

Products	Output (Units)	Selling Price per unit at split off point (Rs.)	Selling Price per unit after further processing (Rs.)	Additional Processing Costs after split off (Rs.)
P	10,000	40	70	2,50,000
Q	20,000	30	65	3,00,000
R	30,000	20	40	7,50,000
S	40,000	10	20	2,00,000

Required: Prepare a statement showing the apportionment of joint costs on the basis of Final Sales Value Method

NET REALISABLE VALUE METHOD

Q17. **(SMP1/B17(A15/SM).**SUNMOON Ltd. produces 2,00,000; 30,000, 25,000; 20,000 and 75,000 units of its five products A, B, C, D and E respectively in a manufacturing process and sells them at Rs. 17, Rs. 13, Rs. 8, Rs. 10 and Rs. 14 per unit. Except product D remaining products can be further processed and then can be sold at Rs. 25, Rs. 17, Rs. 12 and Rs. 20 per unit in case of A, B, C, and E respectively.

Raw material costs Rs. 35,90,000 and other manufacturing expenses cost Rs. 5,47,000 in the manufacturing process which are absorbed on the products on the basis of their 'Net realizable value'. The further processing costs of A, B, C and E are Rs. 12,50,000; Rs. 1,50,000; Rs. 50,000 and Rs. 1,50,000 respectively. Fixed costs are Rs. 4,73,000.

Required: Prepare the following in respect of the coming year.

(a) Statement showing income forecast of the company assuming that none of its products A, B, C and E are to be processed

(b) Statement showing income forecast of the company assuming that products A, B, C and E are to be processed further.

Can you suggest any other production plan whereby the company can maximize its profits. If yes, then submit a statement showing income forecast arising out of adoption of that plan.

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MIXED METHODS

Q18. **(SMN4/C3/SM-Similar).**Inorganic chemical purchases salt and processes it into more-refined products such as caustic soda, chlorine, and PVC (Polyvinyl chloride). During the month of April , 2008, inorganic chemicals purchased salt for Rs.10,00,000. Conversion cost of Rs. 15,00,000 were incurred upto the split-off point, at which time to saleable products were produced: Caustic soda and chlorine. Chlorine can be further processed into PVC. The April production and sales information are as follows:

	Production	Sales	Sales Price
Caustic Soda	1,200 tons	1,200 tons	Rs. 1,250
Chlorine	800 tons		
PVC	500 tons	500 tons	Rs. 5,000

All 800 tons of chlorine were further processed, at an incremental cost of Rs. 5,00,000 to yield 500 tons of PVC. There were no by products or scrap from this further processing of chlorine. There were no beginning or ending inventories of caustic soda, chlorine or PVC in April.

There is an active market for chlorine, inorganic chemicals could have sold all its April production of chlorine at Rs.1,875 a ton.

Required:

(i) calculate , how the joint costs of Rs. 25,00,000 would be allocated between caustic soda and chlorine under each of the following methods:

(1). sales value at split off.

(2). Physical measure (tone); and

(3). Estimated net realizable value.

(ii) What is the gross margin percentage of caustic soda and PVC under the three methods cited in requirement (i)?

(ii) Lifetime Swimming Pool products offer to purchase 800 tons of chlorine in May , 2008 at Rs. 1,875 a ton. This sale would mean that no PVC would be produced in May. How would accepting the offer affect May operating Income?

Q19. **(C5/PM).**ABC Ltd. operates a simple chemical process to convert a single material into three separate item referred to here as X, Y and Z. All three end products are separated simultaneously at a single split-off point.

Product X and Y are ready for sale immediately upon split off without further processing or any other additional costs. Product Z, however, is processed further before being sold. There is no available market price for Z at the split-off point.

The selling prices quoted here are expected to remain the same in the coming year. During 2007-08, the selling prices of the items and the total amounts were sold were;

X - 186 tons sold for Rs.1,500 per ton.

Y - 527 tons sold for Rs.1,125 per ton.

Z - 736 tons sold for Rs.750 per ton.

The total joint manufacturing costs for the year were Rs. 6,25,000. An additional Rs.3,10,000 was spent to finished product Z.

There were no opening inventories of X, Y or Z, at the end of the year, the following inventories of complete units were on hand:

X - 180 tons, Y - 60 tons, Z – 25 tons

There -were no opening or closing work-in-progress.

Required:

(i) Compute the cost of inventories of X, Y and Z for Balance Sheet purposes and cost of goods sold for income statement purpose as of March 31, 2008, using: -

(a) Net realizable value (NRV) method of joint cost allocation

(b) Constant gross-margin percentage NRV method of joint-cost allocation.

(ii) Compare the gross-margin percentage for X, Y and Z two methods given in requirement (i).

Q20. (C6/PM). Pokemon chocolates manufactures and distributes chocolate products. It purchases Cocoa beans and processes them into two intermediate products.

Chocolate powder liquor base; Milk-Chocolate liquor base.

These two intermediate products become separately identifiable at a single split off point. Every 500 pounds of cocoa beans yields 20 gallons of chocolate – powder liquor base and 30 gallons of milk-chocolate liquor base.

The chocolate powder liquor base is further processed into chocolate powder. Every 20 gallons of chocolate-powder liquor base yields 200 pounds of chocolate powder. The milk-chocolate liquor base is further processed into milk-chocolate. Every 30 gallons of milk chocolate liquor base yields 340 pounds of milk chocolate.

Production and sales data for October , are:

Cocoa beans processed 7500 Pounds

Cost of processing Cocoa beans to split off point (including purchase of beans)Rs. 7,12,500.

	Production	Sales	Selling Price
Chocolate powder	3,000 pounds	3000pounds	Rs.190per pound
Milk Chocolate	5100 pounds	5100 pounds	Rs. 237.50 per pound

The October, separate costs of processing chocolate-powder liquor into chocolate powder are Rs.3,02,812.50. The October separable costs of processing milk-chocolate liquor base into milk-chocolate are Rs.6,23,437.50.

Pokemon full processes both of its intermediate products into chocolate powder or milk-chocolate powder or milk-chocolate. There is an active market for these intermediate products. In October , Pokemon could have sold the chocolate powder liquor base for Rs.997.50 a gallon and the milk-chocolate liquor base for Rs.1,235.

Required:

(i) Calculate how the joint cost of Rs.7,12,500 would be allocated between the chocolate powder and milk-chocolate liquor bases under the following methods :

(a) Sales value at split off point

(b) Physical measure (gallons)

(c) Estimated net realizable value , (NRV) and

(d) Constant gross-margin percentage NRV.

(ii) What is the gross-margin percentage of the chocolate powder and milk-chocolate liquor bases under each of the methods in requirements(i) ?

(iii) Could Pokemon have increased its operating income by a change in its decision to fully process both of its intermediate products? Show your computations.

Q21. (PM). Three joint products are produced by passing chemicals through two consecutive processes. Output from process 1 is transferred to process 2 from which the three joint products are produced and immediately sold. The data regarding the processes for April, 2014 is given below:

	Process 1	**Process 2**
Direct Material 2,500 kg. @ Rs. 4 per kg.	Rs. 10,000	-
Direct Labour	Rs. 6,250	Rs.. 6,900
Overheads	Rs. 4,500	Rs.6,900
Normal Loss	10% of input	-
Scrap Value of loss	Rs. 2 per kg.	-
Output	2,300 kg.	Joint products
		A-900 kg.
		B-800 kg.
		C-600 kg.

There were no opening or closing stocks in either process and the selling prices of the output from process 2 were:

Joint Product A	Rs. 24 per kg.
Joint Product B	Rs. 18 per kg.
Joint Product C	Rs. 12 per kg.

Required:

(a) Prepare an account for process 1 together with any Loss or Gain Accounts you consider necessary to record the month's activities.

(b) Calculate the profit attributable to each of the joint products by apportioning the total costs from process 2.

(i) According to weight of output;

(ii) By the market value of production. **(Exclusive)**

Q22. (C9)[IMP]. A company products two joint products P and Q in 70:30 ratio from basic raw materials in department A. The input output ratio of departmental A is 100:85. Product P can be sold at the split of stage or can be processed further at department B and sold as product AR. The input output ratio is 100:90 of department B. The department B is created to process product P only to make it product AR. The selling price per Kg. are as under:

Product P Rs.85

Product Q Rs.290

Product AR Rs.115

The Production will be taken up in the next month.

Raw materials 8,00,000 Kgs.

Purchase price Rs.80 per kg.

	Deptt. A	**Deptt. B**
	Rs. lacs	**Rs.lacs**
Direct Materials	35.00	5.00
Direct Labour	30.00	9.00
Variable overheads	45.00	18.00
Fixed overheads	40.00	32.00
Total	**150.00**	**64.00**
Selling expenses:		
	Rs. In lacs	
Product P	24.60	
Product Q	21.60	
Product AR	16.80	

Required:

(i) Prepare a statement showing the apportionment of joint costs.

(ii) State whether it is advisable to produce product AR or not. **[MTP-MAR-18/4(B)-Similar]**

ADDITIONAL QUESTIONS FOR PRACTICE

Q23. **(AK43)**The Progressive Manufacturing Company manufactures on Main Products and to By-Product Data for a month are shown below:

	Main Product	By-Product A	By-Product B
Sales (Rs.)	1,50,000	12,000	7,000
Manufacturing Cost:			
(i) Before separation	75,000	-	-
(ii) After separation	23,000	2,200	1,800
Administration Cost	12,000	1,500	1,000
Ratio of Distribution of Selling Cost	85%	10%	5%
Net Profit in Sales	20%	15%	10%

Assuming no beginning or ending inventories, apportion the joint cost among Main Product and the By-Prouduct.

Q24. **(P23)** Triple-Products Ltd. manufactures product A, which yields two by-products B and C. The actual joint expenses of manufacture for a period were Rs. 8,000. It was estimated that the profit on each products as a percentage of sales would 30%, 25% and 15% respectively. Subsequently expenses were incurred as under –

Particulars	A	B	C
Materials	100	75	25
Direct Wages	200	125	50
Overheads	150	125	75
Total	**450**	**325**	**150**
Sales	**6,000**	**4,000**	**2,500**

Prepare statement showing the apportionment of the joint expenses of manufacture over the different products. Also presume that selling expenses are apportioned over the products as a percentage to sales.

Q25. **(P22).** The yield of a certain process is 80% towards Main-Product, 15% towards By-Product and 5% towards Normal Loss. The material put in process (5,000 units) cost Rs. 23.75 per unit and all other Overhead Charges are Rs. 14,250. Of the Overheads, Power Cost accounted for 33.33%. It is ascertained that Power Cost is chargeable in the ratio 10 : 9 between Main and By – Product. Prepare a statement showing the cost of the By-Product.

Q26. **(P24).**ABC Ltd. produces 7,250 kg of a main product X from one of its chemical processes, together with 350 kg of By – Product Y and 270 kg of By – Product Z. the Total Cost of the process was Rs. 1,46,375 and the By – Products are sold at Rs. 2 and Rs. 2.50 per kg respectively. The Management wishes to consider the effect on unit costs of Main Product, of the two alternative methods of treating By – Product Income. Make suitable calculations.

Q27. **(C4/PM).**In a chemical manufacturing company, three products A, B and C emerge at a single split off stage in department P. Product A is further processed in department Q, Product B in department R and Product R and Product C in department S. There is no loss in further processing of any of the three products. The cost data for a month are as under:

Cost of raw materials introduced in department P Rs.12,68,800

Direct Wages Department	Rs.
P	3,84,000
Q	96,000
R	64,000
S	36,000

Factory overheads of Rs.4,64,000 are to be apportioned to the departments on direct wage basis. During the month under reference, the company sold all three products after processing them further as under:

Products	**A**	**B**	**C**
Output sold kg.	44,000	40,000	20,000
Selling Price per kg. Rs.	32	24	16

There are no Opening or Closing Stocks if these products were sold at the split off stage, that is, without further processing, the selling prices would have been Rs.20, Rs.22 and Rs.10 each per kg respectively for A, B and C.

Required:

(i) Prepare a statement showing the apportionment of joint costs to joint products.

(ii) Prepare a statement showing product—wise and total profit for the month under reference as per the company's current processing policy

(iii) What processing decision should have been taken to improve the profitability of the company.

(iv) Calculate the product-wise and total profit arising from your recommendation in (iii)

[IPC/R-M19/9-Similar]

Q28. **(C1).**IB Limited produces four joint products A, B, C and D, all of which emerge from the processing of one raw material. The following are the relevant data:

Production for the period:

Joint Product	**Number of Units**	**Selling Price per unit**
		Rs.
A	500	18.00
B	900	8.00
C	400	4.00
D	200	11.00

The company budgets for a profit of 10% of sale value. The other estimated costs are:

	Rs.
Carriage inwards	1,000
Direct wages	3,000
Manufacturing overhead	2,000
Administration overhead	10% of Sales Value

Required:

(i) Calculate the maximum price that may be paid for the raw material.

(ii) Prepare a comprehensive cost statement for each of the product allocating the materials and other costs based upon:

(a) Number of units;

(b) Sales value.

PAGE

Q29. A Factory produces two products, 'A' and 'B' from a single process. The joint processing costs during a particulars month are:

Direct Material	Rs. 30,000
Direct Labour	Rs. 9,600
Variable Overheads	Rs. 12,000
Fixed Overheads	Rs. 32,000

Sales: A – 100 units @ Rs. 600 per unit; B – 120 units @ Rs. 200 per unit Apportion joints costs on the basis of:

(i) Physical Quantity of each product.
(ii) Contribution Margin method, and
(iii) Determine Profit or Loss under both the methods. **[INTER/N19/1(C)]**

Q30. Three products X,Y and Z along with a byproducts B are obtained again in a crude state which requires further processing at a cost of Rs. 5 for X ; Rs. 4 for Y; and Rs. 2.50 for Z per unit before sale. The byproduct is however saleable as such to a nearby factory. The selling prices for the three main products and byproducts, assuming they should yield a net margin of 25 percent of cost, are fixed at Rs. 13.75 Rs. 8.75 and Rs. 7.50 and Rs. 1.00 respectively – all per unit quantity sold.

During a period, the joint input cost including the material cost was Rs. 90,800 and the respective outputs were :

X	8,000 units
Y	6,000 units
Z	4,000 units
B	1,000 units

By products should be credited to the joint cost and only the net joint costs are to be allocated to the main products.

CALCULATE the joint cost per unit of each product and the margin available as a percentage on cost. **[MTP/AUG.18/3(A)]**

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Home work

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