

PYQ RTP COMPILER

Chp 15 Budget Cost

Costing CA Intermediate Regular Batch Jan 2025



CA
PRANAV
POPAT



Past Year Questions (PYQs)

May 2018 to May 2024

PYQ Analysis

Exam	Q No.	Marks	Requirement	Special Points
PYQ - May 2024	3a	7m	Profits at various levels of capacity	Regular with No New Point - Presentation should be smart enough to save time
PYQ - May 2024	1c	4m	AH, SH, Activity Ratio, Std Cap usage Ratio	New Requirement but Easy
PYQ - Nov 2023	2b	10m	Production Bud, Sales Bud	Large Data to be presented
PYQ - May 2023	2a	10m	RM Consumption, RM Purchase, Stores Ledger	Basic Easy
PYQ - May 2023	3a	10m	Budgetet Profit YoY	W Note of Cal of FOH, Cal of SP pu
PYQ - Nov 2022	6d	5m	Budget Manual	Theory
PYQ - May 2022	3a	10m	Product Mix, Sales Budget, Production Budget	atleast 25% of other, Mix of Budget and Marginal
PYQ - Dec 2021	1b	5m	Flexible Budget before promotion and after promotion	Basic Easy

PYQ Analysis

Exam	Q No.	Marks	Requirement	Special Points
PYQ - Dec 2021	6d	5m	Budgetary Control System and components	Theory
PYQ - July 2021	5b	10m	Sales Budget, Production Budget, RM Consp Budget	Basic Easy (RM Budget is RM Consump Budget considering data given in que)
PYQ - Jan 2021	6b	5m	Limitations of Budgetary Control System	Theory
PYQ - Nov 2020	1a	5m	Flexible budget with Operating Profit at 60%, 80% and 100% levels	Very Easy
PYQ - Nov 2020	6b	5m	Points before we adopt performance budgeting	Theory
PYQ - Nov 2019	6e	5m	Define ZBB and mention its various stages	Theory
PYQ - May 2019	1a	5m	All Ratios	Basic Easy
PYQ - May 2019	6b	5m	Cases when a flexible budget is suitable	Theory
PYQ - Nov 2018	5a	10m	Production Budget in units, Purchase Budget, PNL	Profit Statement considering discount
PYQ - May 2018	6a	5m	Why ZBB is better than Traditional	Theory

PYQ May 2024 – Q1c

(c) *Following data is available for XYZ Ltd. for the month of February 2024:*

<i>Standard working hours</i>	<i>8 hours per day of 6 days per week</i>
<i>No. of weeks in the month</i>	<i>4</i>
<i>Maximum capacity</i>	<i>150 employees</i>
<i>Actual working</i>	<i>125 employees</i>
<i>Actual usage of Budgeted Capacity Ratio</i>	<i>86%</i>
<i>Efficiency Ratio</i>	<i>110%</i>

You are required to calculate the following:

- (i) Actual Hours worked.*
- (ii) Standard Hours for actual output.*
- (iii) Activity Ratio.*
- (iv) Standard Capacity Usage Ratio.*

PYQ May 2024 – Q1c

(c) (i) **Actual Hours worked**

$$\text{Actual Usage of Budgeted Capacity Ratio} = \frac{\text{Actual working Hours}}{\text{Budgeted Hours}} \times 100$$

$$86\% = (\text{Actual working hours} \div \text{Budgeted hours}) \times 100$$

$$\text{Budgeted hours} = 125 \text{ workers} \times 8 \text{ hours} \times 6 \text{ days} \times 4 \text{ weeks} = 24,000 \text{ hours}$$

$$\text{Actual hours} = 24,000 \times 86\% = 20,640 \text{ hours}$$

(ii) **Standard hours for actual output**

$$\text{Efficiency ratio} = \frac{\text{Standard Hrs}}{\text{Actual Hrs}} \times 100$$

$$110\% = \text{Standard hours} \div \text{Actual hours}$$

$$\text{Standard hours} = 20,640 \times 110\% = 22,704 \text{ hours}$$

PYQ May 2024 – Q1c

$$\text{(iii) Activity ratio} = \frac{\text{Standard Hrs}}{\text{Budgeted Hrs}} \times 100$$

$$= (22,704 \div 24,000) \times 100 = 94.6\%$$

(iv) Standard capacity usage ratio

$$= \frac{\text{Budgeted Hours}}{\text{Max. possible hours in the budgeted period}} \times 100$$

$$= \{24,000 \text{ hours} \div (150 \text{ workers} \times 8 \text{ hours} \times 6 \text{ days} \times 4 \text{ weeks})\} \times 100$$

$$= (24,000 \div 28,800) \times 100 = 83.33\%$$

PYQ May 2024 – Q3a

(a) A factory is currently working at 60% capacity and produces 12,000 units of a product. Management is thinking to increase the working capacity either to 70% or 90% level. It is estimated that at both the levels, it will be able to sell all the produced units. The other details are as under:

- At 70% capacity, the cost of raw materials increases by 4% and the selling price falls by 3%.
- At 90% capacity, the cost of raw materials increases by 5% and selling price falls by 4%.
- At 60% capacity, the product cost is ₹ 360 per unit and it is sold at ₹ 400 per unit.
- The unit cost of 360 consists of the following:

Material	₹ 200
Labour	₹ 60
Factory overhead	₹ 60 (50 % fixed)
Administrative & Selling overhead	₹ 40 (60 % fixed)

PYQ May 2024 – Q3a

- *Additional advertising cost of ₹ 20,000 is to be incurred for selling the product above 80% capacity.*

You are required to:

- Calculate the profits of the company when the factory works at 60%, 70% and 90% capacity level.*
- Offer your comments regarding increase in the capacity based on profit calculated.*

PYQ May 2024 – Q3a

(a) (i) Expense Budget at 60%, 70% & 90% level

	60% (12,000 units)		70% (14,000 units)		90% (18,000 units)	
	Per unit (₹)	Amount (₹)	Per unit (₹)	Amount (₹)	Per unit (₹)	Amount (₹)
Sales (A)	400	48,00,000	388	54,32,000	384	69,12,000
Variable Costs:						
Direct Material	200	24,00,000	208	29,12,000	210	37,80,000
Direct Wages	60	7,20,000	60	8,40,000	60	10,80,000
Variable Factory Overheads	30	3,60,000	30	4,20,000	30	5,40,000
Variable Administrative & Selling Overheads	16	1,92,000	16	2,24,000	16	2,88,000
Total Variable Cost (B)	306	36,72,000	314	43,96,000	316	56,88,000

PYQ May 2024 – Q3a

Contribution (C) = (A – B)	94	11,28,000	74	10,36,000	68	12,24,000
Fixed Costs:						
Fixed Factory Overheads (50%)	--	3,60,000	--	3,60,000	--	3,60,000
Fixed Administrative & Selling Overheads (60%)	--	2,88,000	--	2,88,000	--	2,88,000
Adverting Cost	--	--	--	--	--	20,000
Total Fixed Costs (D)	--	6,48,000	--	6,48,000	--	6,68,000
Profit (C – D)	--	4,80,000	--	3,88,000	--	5,56,000

- (ii) **Comment:** Increase of production capacity to 90% is likely to increase the profit to maximum of ₹ 5,56,000 due to increase in contribution while fixed cost is slightly increased due to in advertising cost. At 70% capacity, profit is reduced to minimum of ₹ 3,88,00 due to decrease in selling price by 3% along with increase in raw material cost by 4% resulting in decrease of contribution. Therefore, it is recommended that factory should operate at 90% capacity.

PYQ Nov 2023 – Q2b

- (b) *HL Limited produces and sells four varieties of beverage. The past data shows different demand patterns for various quarters during the year. The sales quantity and selling price for the month of September 2023 is as follows:*

	Sales Quantity	Selling Price per unit
Hot Coffee	1,40,000 Units	₹ 20/-
Cold Coffee	3,40,000 Units	₹ 40/-
Fruit Juice	4,20,000 Units	₹ 20/-
Carbonated Soft Drink	2,70,000 units	₹ 20/-

For the quarter October to December 2023, it is estimated that due to climate changes the demand for Hot Coffee would increase every month by 50% of the previous month and the demand for Cold Coffee would decrease every month by 30% of the previous month. The demand for Fruit Juice would decrease by 20% in the month of October 2023 and thereafter it will remain constant. HL Limited would be able to sell only 60,000 units, 50,000 units and 30,000 units of Carbonated Soft Drink respectively during the months of October,

PYQ Nov 2023 – Q2b

November and December 2023. There would be no change in the selling price of all the products during the next quarter.

Standard Quantity of closing stock for the period September 2023 to December 2023 is as follows: *(in units)*

	Hot Coffee	Cold Coffee	Fruit Juice	Carbonated Soft Drink
<i>September 2023</i>	12,000	13,000	11,000	7,500
<i>October 2023</i>	15,000	14,000	12,000	5,500
<i>November 2023</i>	13,000	15,000	10,000	6,000
<i>December 2023</i>	11,000	16,000	13,000	7,000

*You are required to prepare a Production Budget (in units) and Sales Budget (in units and sales value) for the months of October, November and December 2023. **(10 Marks)***

PYQ Nov 2023 – Q2b

(b)

Production Budget (in units)

Particulars	Hot Coffee	Cold Coffee	Fruit Juice	Carbonated Soft Drink
October 2023				
Sales*	2,10,000	2,38,000	3,36,000	60,000
Add: Closing stock	15,000	14,000	12,000	5,500
Total Quantity Required	2,25,000	2,52,000	3,48,000	65,500
Less: Opening stock	12,000	13,000	11,000	7,500
Production	2,13,000	2,39,000	3,37,000	58,000
November 2023				
Sales*	3,15,000	1,66,600	3,36,000	50,000
Add: Closing stock	13,000	15,000	10,000	6,000
Total Quantity Required	3,28,000	1,81,600	3,46,000	56,000

PYQ Nov 2023 – Q2b

Less: Opening stock	15,000	14,000	12,000	5,500
Production	3,13,000	1,67,600	3,34,000	50,500
December 2023				
Sales*	4,72,500	1,16,620	3,36,000	30,000
Add: Closing stock	11,000	16,000	13,000	7,000
Total Quantity Required	4,83,500	1,32,620	3,49,000	37,000
Less: Opening stock	13,000	15,000	10,000	6,000
Production	4,70,500	1,17,620	3,39,000	31,000

*sales units are taken from sales budget

PYQ Nov 2023 – Q2b

Sales Budget (in Units and sales value)

Particulars	Hot Coffee	Cold Coffee	Fruit Juice	Carbonated Soft Drink
October 2023 (in units)	2,10,000 [1,40,000 + (1,40,000 x 50%)]	2,38,000 [3,40,000 -(3,40,000 x 30%)]	3,36,000 [420,000 -(4,20,000 x 20%)]	60,000
October 2023 (Sales Value in ₹)	42,00,000 (2,10,000 x ₹ 20)	95,20,000 (2,38,000 x ₹ 40)	67,20,000 (3,36,000 x ₹ 20)	12,00,000 (60,000 x ₹ 20)
November 2023 (in units)	3,15,000 [2,10,000 +(2,10,000 x 50%)]	1,66,600 [2,38,000 -(2,38,000 x 30%)]	3,36,000	50,000
November 2023 (Sales Value in ₹)	63,00,000 (3,15,000 x ₹ 20)	66,64,000 (1,66,600 x ₹ 40)	67,20,000 (3,36,000 x ₹ 20)	10,00,000 (50,000 x ₹ 20)

PYQ Nov 2023 – Q2b

December 2023 (in units)	4,72,500 [3,15,000 +(3,15,000 x 50%)]	1,16,620 [1,66,600 -(1,66,600 x 30%)]	3,36,000	30,000
December 2023 (Sales Value in ₹)	94,50,000 (4,72,500 x ₹ 20)	46,64,800 (1,16,620 x ₹ 40)	67,20,000 (3,36,000 x ₹ 20)	6,00,000 (30,000 x ₹ 20)

PYQ May 2023 - 2a

- (a) A Limited has furnished the following information for the months from 1st January to 30th April, 2023:

	January	February	March	April
Number of Working days	25	24	26	25
Production (in units) per working day	50	55	60	52
Raw Material Purchases (% by weights to total of 4 months)	21%	26%	30%	23%
Purchase price of raw material (per kg)	₹ 10	₹ 12	₹ 13	₹ 11

Quantity of raw material per unit of product: 4 kg.

Opening stock of raw material on 1st January: 6,020 kg. (Cost ₹ 63, 210)

Closing stock of raw material on 30th April: 5,100 kg.

All the purchases of material are made at the start of each month.

Required:

- (i) Calculate the consumption of raw materials (in kgs) month-by- month and in total.
- (ii) Calculate the month-wise quantity and value of raw materials purchased.
- (iii) Prepare the priced stores ledger for each month using the FIFO method.

PYQ May 2023 - 2a

(a) (i) Calculation of consumption of Raw Material (in kgs) month by month and total

Particulars	Jan	Feb	March	April	Total
No. of working days	25	24	26	25	-
Production (Per day)	50	55	60	52	-
Production	1,250	1,320	1,560	1,300	5,430
Raw Material Consumed (in kgs)	5,000	5,280	6,240	5,200	21,720

Calculation of Raw Material Purchased

Purchased	(Kg)
Closing stock on 30 th April	5,100
Add: Raw Material consumed	21,720
Less: Opening stock on 1 st January	(6,020)
Raw Material purchased	20,800

PYQ May 2023 - 2a

(ii) Calculation of month wise quantity and value of raw material purchased

	%	Purchased (Kg)	Price (₹)	Value (₹)
January	21	4,368	10	43,680
February	26	5,408	12	64,896
March	30	6,240	13	81,120
April	23	4,784	11	52,624
Total		20,800		2,42,320

(iii) Store Price Ledger by using FIFO method.

Months	Particulars	Receipts			Issue			Balance		
		Qty	Rate	Amount (₹)	Qty	Rate	Amount (₹)	Qty	Rate	Amount (₹)
Jan	Opening							6,020	10.5	63,210
	Purchases	4,368	10	43,680				6,020	10.5	63,210
								4,368	10	43,680
	Consumption				5,000	10.5	52,500	1,020	10.5	10,710
Feb								4,368	10	43,680
	Purchases	5,408	12	64,896				1,020	10.5	10,710

PYQ May 2023 - 2a

March	Consumption	6,240	13	81,120				4,368	10	43,680
								5,408	12	64,896
					1,020	10.5	10,710	108	10	1,080
	4,260				10	42,600	5,408	12	64,896	
	Purchase							108	10	1,080
								5,408	12	64,896
				6,240	13	81,120				
Consumption				108	10	1,080				
				5,408	12	64,896				
April	Purchases	4,784	11	52,624				5,516	13	71,708
								4,784	11	52,624
					5,200	13	67,600	316	13	4,108
	Consumption							4,784	11	52,624
										56,732

PYQ May 2023 - 3a

- (a) PQR Limited manufactures three products - Product X, Product Y and Product Z. The output for the current year is 2,50,000 units of Product X, 2,80,000 units of Product Y and 3,20,000 units of Product Z respectively.

Selling price of Product X is 1.25 times of Product Z whereas Product Y can be sold at double the price at which product Z can be sold. Product Z can be sold at a profit of 20% on its marginal cost.

Other information are as follows:

	Product X	Product Y	Product Z
Direct Material Cost (Per unit)	₹ 20	₹ 20	₹ 20
Direct Wages Cost (per unit)	₹ 16	₹ 24	₹ 16

Raw material used for manufacturing all the three products is the same. Direct Wages are paid @ ₹ 4 per labour hour,

Total overhead cost of the company is ₹ 52,80,000 for the year, out of which ₹ 1 per labour hour is variable and the rest is fixed.

PYQ May 2023 - 3a

In the next year it is expected that sales of product X and product Z will increase by 12% and 15% respectively and sale of product Y will decline by 5%. The total overhead cost of the company for the next year is estimated at ₹ 55,08,000. The variable cost of ₹ 1 per labour hour remains unchanged.

It is anticipated that all other costs will remain same for the next year and there is opening and closing stock. Selling Price per unit of each product will remain unchanged in the next year.

Required:

Prepare a budget showing the current position and the position for the next year clearly indicating the total product-wise contribution and profit for the company as a whole.

PYQ May 2023 - 3a

(a) (i) Budget showing current position of total product wise contribution and profitability

	Particulars	Product X (₹)	Product Y (₹)	Product Z (₹)	Total (₹)
A	Direct material cost (per unit)	20	20	20	
B	Direct wages cost (per unit)	16	24	16	
C	Variable overhead per unit (Refer WN-1)	4	6	4	
D	Total variable cost/ Marginal cost per unit [A+B+C]	40	50	40	
E	Add: Profit [20% of D]	-	-	8	
F	Selling price unit [D+E]	-	-	48	

PYQ May 2023 - 3a

G	Price weight	1.25	2	1	
H	Selling price per unit [Selling price of Product Z × G]	60	96	48	
I	Contribution per unit [H-D]	20	46	8	
J	Quantity to be sold	2,50,000	2,80,000	3,20,000	
K	Total Contribution [J×I]	50,00,000	1,28,80,000	25,60,000	2,04,40,000
L	Fixed Overheads [Refer WN-1]				13,20,000
M	Profit				1,91,20,000

PYQ May 2023 - 3a

Working Notes:

1. Segregation of Overheads into variable and fixed in current year

	Particulars	Product X (₹)	Product Y (₹)	Product Z (₹)	Total (₹)
A	Total overhead cost	-	-	-	52,80,000
B	Labour hour per unit [Direct wages Cost ÷ Re.1]	4	6	4	
C	Quantity produced	2,50,000	2,80,000	3,20,000	
D	Total variable overhead cost [B×C]	10,00,000	16,80,000	12,80,000	39,60,000
E	Fixed overhead cost [A-D]				13,20,000

PYQ May 2023 - 3a

(ii) Budget showing next year's position of total product wise contribution and profitability

	Particulars	Product X (₹)	Product Y (₹)	Product Z (₹)	Total (₹)
A	Selling price per unit	60	96	48	
B	Contribution per unit	20	46	8	
C	Quantity to be sold	2,80,000 [112% of 2,50,000]	2,66,000 [95% of 2,80,000]	3,68,000 [115% of 3,20,000]	
D	Total Contribution [B×C]	56,00,000	1,22,36,000	29,44,000	2,07,80,000
	Fixed Overheads [Refer WN-2]				13,20,000
	Profit				1,94,60,000

PYQ May 2023 - 3a

Working Notes:

2. Segregation of Overheads into variable and fixed in next year

	Particulars	Product X (₹)	Product Y (₹)	Product Z (₹)	Total (₹)
A	Total overhead cost	-	-	-	55,08,000
B	Labour hour per unit [Direct wages Cost ÷ Re.1]	4	6	4	
C	Quantity produced	2,80,000	2,66,000	3,68,000	
D	Total variable overhead cost [B×C]	11,20,000	15,96,000	14,72,000	41,88,000
E	Fixed overhead cost [A-D]				13,20,000

PYQ May 2022 - 3a

- (a) SR Ltd. is a manufacturer of Garments. For the first three months of financial year 2022-23 commencing on 1st April 2022, production will be constrained by direct labour. It is estimated that only 12,000 hours of direct labour hours will be available in each month.

For market reasons, production of either of the two garments must be at least 25% of the production of the other. Estimated cost and revenue per garment are as follows:

	Shirt (₹)	Short (₹)
Sales price	60	44
Raw Materials		
Fabric @12 per metre	24	12
Dyes and cotton	6	4
Direct labour @ 8 per hour	8	4
Fixed Overhead @ 4 per hour	4	2
Profit	18	22

PYQ May 2022 - 3a

From the month of July 2022 direct labour will no longer be a constraint. The company expects to be able to sell 15,000 shirts and 20,000 shorts in July, 2022. There will be no opening stock at the beginning of July 2022.

Sales volumes are expected to grow at 10% per month cumulatively thereafter throughout the year. Following additional information is available:

- The company intends to carry stock of finished garments sufficient to meet 40% of the next month's sale from July 2022 onwards.*
- The estimated selling price will be same as above.*

Required:

- I. Calculate the number of shirts and shorts to be produced per month in the first quarter of financial year 2022-2023 to maximize company's profit.*
- II. Prepare the following budgets on a monthly basis for July, August and September 2022:*
 - (i) Sales budget showing sales units and sales revenue for each product.*
 - (ii) Production budget (in units) for each product.*

(10 Marks)

PYQ May 2022 - 3a

(a) I. Calculation of number of shirts & shorts to be produced per month:

Contribution per labour hour:

		Shirts (₹)	Shorts (₹)
A	Sales Price per unit	60	44
B	Variable Cost:		
	- Raw materials	30	16
	- Direct labour	8	4
		38	20
C	Contribution per unit [A-B]	22	24
D	Labour hour per unit	1 hour	0.5 hour
E	Contribution per labour hour [C÷D]	22	48

PYQ May 2022 - 3a

Production plan for the first three months:

Since, Shorts has the higher Contribution per labour hour, it will be made first. Shirts will be 25% of Shorts. The quantity will be determined as below:

Let the Quantity of Shorts be X and Shirts will be 0.25 X, then

(Qty. of Shorts × labour hour per unit) + (Qty. of Shirts × labour hour per unit) = Total labour hours available

Or, $(X \times 0.5 \text{ hour}) + (0.25X \times 1 \text{ hour}) = 12,000 \text{ hours}$

Or, $0.5X + 0.25X = 12,000$

Or, $0.75X = 12,000$

Or, $X = 12,000 \div 0.75$

= 16,000 units of Shorts

PYQ May 2022 - 3a

Therefore, for Shirts = 25% of 16,000 units

= 4,000 units

Production per month for the first quarter will be:

Shorts- 16,000 units &

Shirts- 4,000 units

II. (i) Sales Budget for the month of July, August & September 2022:

		July 2022		August 2022		September 2022	
		Shirts	Shorts	Shirts	Shorts	Shirts	Shorts
A	Sales demand	15,000	20,000	16,500	22,000	18,150	24,200
B	Selling price per unit (₹)	60	44	60	44	60	44
C	Sales Revenue (₹)	9,00,000	8,80,000	9,90,000	9,68,000	10,89,000	10,64,800

PYQ May 2022 - 3a

(ii) Production budget for the month of July, August & September 2022:

		July 2022		August 2022		September 2022		October 2022	
		Shirts	Shorts	Shirts	Shorts	Shirts	Shorts	Shirts	Shorts
A	Opening stock	0	0	6,600	8,800	7,260	9,680		
B	Sales demand	15,000	20,000	16,500	22,000	18,150	24,200	19,965	26,620
C	Closing stock	6,600	8,800	7,260	9,680	7,986	10,648		
D	Production [B+C-A]	21,600	28,800	17,160	22,880	18,876	25,168		

PYQ Dec 2021 – 1b

- (b) The Accountant of KPMR Ltd. has prepared the following budget for the coming year 2022 for its two products 'AYE' and 'ZYE':

Particulars	Product 'AYE'	Product 'ZYE'
Production and Sales (in Units)	4,000	3,000
	Amount (in ₹)	Amount (in ₹)
Selling Price per unit	200	180
Direct Material per unit	80	70
Direct Labour per unit	40	35
Variable Overhead per unit	20	25
Fixed Overhead per unit	10	10

PYQ Dec 2021 – 1b

After reviewing the above budget, the management has called the marketing team for suggesting some measures for increasing the sales. The marketing team has suggested that by promoting the products on social media, the sales quantity of both the products can be increased by 5%. Also, the selling price per unit will go up by 10%. But this will result in increase in expenditure on variable overhead and fixed overhead by 20% and 5% respectively for both the products.

You are required to prepare flexible budget for both the products:

- (i) Before promotion on social media,*
- (ii) After promotion on social media.*

PYQ Dec 2021 – 1b

(b) (i) Flexible Budget (before promotion)

	Particulars	Product 'AYE'	Product 'ZYE'	Total
	Production & Sales (units)	4,000	3,000	
		Amount (₹)	Amount (₹)	Amount (₹)
A.	Sales Value	8,00,000 (₹ 200×4,000)	5,40,000 (₹ 180×3,000)	13,40,000
B.	Direct Materials	3,20,000 (₹ 80 × 4,000)	2,10,000 (₹70 × 3,000)	5,30,000
C.	Direct labour	1,60,000 (₹ 40 × 4,000)	1,05,000 (₹ 35 × 3,000)	2,65,000

PYQ Dec 2021 – 1b

D.	Variable Overheads	80,000 (₹ 20 × 4,000)	75,000 (₹ 25 × 3,000)	1,55,000
E.	Total Variable Cost (B+C+D)	5,60,000	3,90,000	9,50,000
F.	Contribution (A-E)	2,40,000	1,50,000	3,90,000
G.	Fixed Overhead	40,000 (₹10 × 4,000)	30,000 (₹10 × 3,000)	70,000
H.	Profit (F-G)	2,00,000	1,20,000	3,20,000
	Profit per unit	50	40	

PYQ Dec 2021 – 1b

(ii) Flexible Budget (after promotion)

	Particulars	Product 'AYE'	Product 'ZYE'	Total
	Production & Sales (units)	4,200 (4,000×105%)	3,150 (3,000×105%)	
		Amount (₹)	Amount (₹)	Amount (₹)
A.	Sales Value	9,24,000 (₹ 220 × 4,200)	6,23,700 (₹ 198 × 3,150)	15,47,700
B.	Direct Materials	3,36,000 (₹ 80 × 4,200)	2,20,500 (₹ 70 × 3,150)	5,56,500
C.	Direct labour	1,68,000 (₹ 40 × 4,200)	1,10,250 (₹ 35 × 3,150)	2,78,250
D.	Variable Overheads	1,00,800 (₹ 24 × 4,200)	94,500 (₹ 30 × 3,150)	1,95,300
E.	Total Variable Cost (B+C+D)	6,04,800	4,25,250	10,30,050

PYQ Dec 2021 – 1b

F.	Contribution (A-E)	3,19,200	1,98,450	5,17,650
G.	Fixed Overhead	42,000 (₹ 40,000 × 105%)	31,500 (₹ 30,000 × 105%)	73,500
H.	Profit (F-G)	2,77,200	1,66,950	4,44,150
	Profit per unit	66	53	

PYQ Jul 2021 – 5b

- (b) PSV Ltd. manufactures and sells a single product and estimated the following related information for the period November, 2020 to March, 2021.

Particulars	November, 2020	December, 2020	January, 2021	February, 2021	March, 2021
Opening Stock of Finished Goods (in Units)	7,500	3,000	9,000	8,000	6,000
Sales (in Units)	30,000	35,000	38,000	25,000	40,000
Selling Price per unit (in ₹)	10	12	15	15	20

Additional Information:

- Closing stock of finished goods at the end of March, 2021 is 10,000 units.
- Each unit of finished output requires 2 kg of Raw Material 'A' and 3 kg of Raw Material 'B'.

You are required to prepare the following budgets for the period November, 2020 to March, 2021 on monthly basis:

- Sales Budget (in ₹)
- Production budget (in units) and
- Raw material Budget for Raw material 'A' and 'B' separately (in units) **(10 Marks)**

PYQ Jul 2021 – 5b

(b) (i) Sales Budget

(in ₹)

Particulars	Nov, 20	Dec, 20	Jan, 21	Feb, 21	Mar, 21	Total
Sales (in Units)	30,000	35,000	38,000	25,000	40,000	1,68,000
Selling Price per unit (₹)	10	12	15	15	20	-
Total Sales (₹)	3,00,000	4,20,000	5,70,000	3,75,000	8,00,000	24,65,000

(ii) Production Budget (in units)

Particulars	Nov, 20	Dec, 20	Jan, 21	Feb, 21	Mar, 21	Total
Sales	30,000	35,000	38,000	25,000	40,000	1,68,000
Add: Closing stock of finished goods	3,000	9,000	8,000	6,000	10,000	36,000
Total quantity required	33,000	44,000	46,000	31,000	50,000	2,04,000
Less: Opening stock of finished goods	7,500	3,000	9,000	8,000	6,000	33,500
Units to be produced	25,500	41,000	37,000	23,000	44,000	1,70,500

PYQ Jul 2021 – 5b

(iii) Raw material budget (in units)

For Raw material 'A'

Particulars	Nov, 20	Dec, 20	Jan, 21	Feb, 21	Mar, 21	Total
Units to be produced: (a)	25,500	41,000	37,000	23,000	44,000	1,70,500
Raw material consumption p.u. (kg.): (b)	2	2	2	2	2	-
Total raw material consumption (Kg.): (a × b)	51,000	82,000	74,000	46,000	88,000	3,41,000

For Raw material 'B'

Particulars	Nov, 20	Dec, 20	Jan, 21	Feb, 21	Mar, 21	Total
Units to be produced: (a)	25,500	41,000	37,000	23,000	44,000	1,70,500
Raw material consumption p.u. (kg.): (b)	3	3	3	3	3	-
Total raw material consumption (Kg.): (a × b)	76,500	1,23,000	1,11,000	69,000	1,32,000	5,11,500

PYQ Nov 2020 – 1a

(a) G Ltd. manufactures a single product for which market demand exists for additional quantity. Present sales of ₹6,00,000 utilises only 60% capacity of the plant. The following data are available:

- | | | |
|----------------------------|---|--|
| (1) Selling price | : | ₹ 100 per unit |
| (2) Variable cost | : | ₹ 30 per unit |
| (3) Semi-variable expenses | : | ₹ 60,000 fixed + ₹ 5 per unit |
| (4) Fixed expenses | : | ₹ 1,00,000 at present level,
estimated to increase by 25% at
and above 80% capacity. |

You are required to prepare a flexible budget so as to arrive at the operating profit at 60%, 80% and 100% levels.

PYQ Nov 2020 – 1a

Flexible Budget

Activity Level	60%	80%	100%
Production (units)	6,000	8,000	10,000
	(₹)	(₹)	(₹)
Sales @ ₹ 100 per unit	6,00,000	8,00,000	10,00,000
Variable Cost (@ ₹ 35 (₹ 30 + ₹ 5) per unit)	2,10,000	2,80,000	3,50,000
Contribution (A)	3,90,000	5,20,000	6,50,000
Fixed Cost (part of semi-variable cost)	60,000	60,000	60,000
Other Fixed Cost	1,00,000	1,25,000	1,25,000
Total Fixed Cost (B)	1,60,000	1,85,000	1,85,000
Operating Profit (A – B)	2,30,000	3,35,000	4,65,000

PYQ May 2019 – Q1a

(a) Following data is available for ABC Ltd.:

Standard working hours	8 hours per day of 5 days per week
Maximum Capacity	60 employees
Actual working	50 employees
Actual hours expected to be worked per four week	8,000 hours
Standard hours expected to be earned per four week	9,600 hours
Actual hours worked in the four week period	7,500 hours
Standard hours earned in the four week period	8,800 hours

The related period is of four weeks. Calculate the following Ratios :

- (i) Efficiency Ratio
- (ii) Activity Ratio
- (iii) Standard Capacity Usage Ratio
- (iv) Actual Capacity Usage Ratio
- (v) Actual Usage of Budgeted Capacity Ratio

PYQ May 2019 – Q1a

(a) (i) **Efficiency Ratio:**

$$= \frac{\text{Standard Hrs}}{\text{Actual Hrs}} \times 100 = \frac{8,800 \text{ hours}}{7,500 \text{ hours}} \times 100 = 117.33\%$$

(ii) **Activity Ratio:**

$$= \frac{\text{Standard Hrs}}{\text{Budgeted Hrs}} \times 100 = \frac{8,800 \text{ hours}}{8,000 \text{ hours}} \times 100 = 110\%$$

(iii) **Standard Capacity Usage Ratio:**

$$= \frac{\text{Budgeted Hours}}{\text{Max. possible hours in the budgeted period}} \times 100$$
$$= \frac{8,000 \text{ hours}}{9,600 \text{ hours}} \times 100 = 83.33\%$$

(iv) **Actual Capacity Usage Ratio:**

$$= \frac{\text{Actual Hours worked}}{\text{Max. possible working hours in a period}} \times 100$$
$$= \frac{7,500 \text{ hours}}{9,600 \text{ hours}} \times 100 = 78.125\%$$

PYQ May 2019 – Q1a

(v) Actual Usage of Budgeted Capacity Ratio:

$$= \frac{\text{Actual working Hours}}{\text{Budgeted Hours}} \times 100 = \frac{7,500 \text{ hours}}{8,000 \text{ hours}} \times 100 = \mathbf{93.75\%}$$

Working Notes:

1. Maximum Capacity in a budget period
= 60 Employees × 8 Hrs. × 5 Days × 4 Weeks = 9,600 Hrs.
2. Budgeted Hours (Hrs)
= 50 Employees × 8 Hrs. × 5 Days × 4 Weeks = 8,000 Hrs.
3. Actual Hrs. = 7,500 Hrs. (given)
4. Standard Hrs. for Actual Output = 8,800 Hrs.

PYQ Nov 2018 – Q5a

- (a) *An electronic gadget manufacturer has prepared sales budget for the next few months. In this respect, following figures are available:*

Months	Electronic gadgets' sales
January	5000 units
February	6000 units
March	7000 units
April	7500 units
May	8000 units

To manufacture an electronic gadget, a standard cost of ₹ 1,500 is incurred and it is sold through dealers at an uniform price of ₹ 2,000 per gadget to customers. Dealers are given a discount of 15% on selling price.

PYQ Nov 2018 – Q5a

Apart from other materials, two units of batteries are required to manufacture a gadget. The company wants to hold stock of batteries at the end of each month to cover 30% of next month's production and to hold stock of manufactured gadgets to cover 25% of the next month's sale.

3250 units of batteries and 1200 units of manufactured gadgets were in stock on 1st January.

Required:

- (i) Prepare production budget (in units) for the month of January, February, March and April.*
- (ii) Prepare purchase budget for batteries (in units) for the month of January, February and March and calculate profit for the quarter ending on March. **(10 Marks)***

PYQ Nov 2018 – Q5a

(a) (i) **Preparation of Production Budget (in Units)**

	January	February	March	April	May
Sales	5,000	6,000	7,000	7,500	8,000
Add: Closing stock (25% of next month's sales)	1,500	1,750	1,875	2,000	
Less: Opening Stock	(1200)	(1500)	(1750)	(1875)	
Production of electronic Gadgets	5,300	6,250	7,125	7,625	

(ii) **Preparation of Purchase budget**

	January	February	March	April
Consumption/production of Batteries (@ 2 per Gadget)	10,600	12,500	14,250	15,250
Add: Closing Stock (30% of next month's production)	3750	4275	4575	
Less: Opening Stock	3,250	3,750	4275	
Purchase of Batteries	11,100	13,025	14,550	

PYQ Nov 2018 – Q5a

Statement Showing Profit

	Jan.	Feb.	March	Total
Sales (A)	5,000	6,000	7,000	18,000
Selling Price per unit*	₹. 2,000	₹. 2,000	₹. 2,000	₹. 2,000
Less: Discount @15% of selling price	300	300	300	300
Less: Standard cost of Manufacturing per gadget Cost	1500	1500	1500	1500
Profit (B) (selling Price-discount-cost)	200	200	200	200
Total Profit (A × B)	₹.10,00,000	₹.12,00,000	₹.14,00,000	₹.36,00,000

Revision Test Papers (RTPs)

May 2018 to Sep 2024

RTP Analysis

Exam	Q No.	Requirement	Special Points
RTP - Sep 2024	18	Number of units to be sold, SP, Production Budget, Purchase Budget	Sales unit calculation using Total VC/ VC per unit
RTP - Sep 2024	7	MCQ - Cal of Production Units	Basic Easy
RTP - May 2024	12	Flexible Budget for 2024, Bud P&L	Large Denomination Values, WPI, CPI, Wages Cal, Power Cal, RCM (Similar to RTP May 2022)
RTP - Nov 2023	13	Sales Budget	Regular Study Material Question
RTP - May 2023	14	Material Purchase Budget, Wages Budget	Regular Study Material Question
RTP - Nov 2022	14	Multiple Ratios	Regular Study Material Question
RTP - May 2022	13	Revenue (Flexible Budget) and budgeted PL account	Large Denomination Values, WPI, CPI, RCM

RTP Analysis

Exam	Q No.	Requirement	Special Points
RTP - Nov 2021	14	Budgeted PL, Flexible Expense Budget	Regular Study Material Question
RTP - May 2021	12	Number of units to be sold, SP, Production Budget, Purchase Budget	Sales unit calculation Same as RTP Sep 2024 - Q18
RTP - Nov 2020	14	Current PL and Budgeted PL in Marginal Format	Regular
RTP - May 2020	12	Production Budget, Purchase Budget of X, Budgeted GP	Similar to PYQ Nov 2018
RTP - Nov 2019	14	Expense budget at diff levels	Regular
RTP - May 2019	13	Flexible Budget before marketing and after marketing	Similar to PYQ Dec 21
RTP - Nov 2018	14	Production Budget	Regular Study Material Question
RTP - May 2018	14	Production Budget, Purchase Budget, EOQ, Limiting Factor	Increase in Stock, Material Usage Wastage, Limiting Factor (Material and Budget Chapter)

RTP Sep 2024 – Q7 (MCQ)

7. A business manufactures a single product and is preparing its production budget for the year ahead. It is estimated that 2,00,000 units of the product can be sold in the year and the opening inventory is currently 25,000 units. The inventory level is to be reduced by 40% by the end of the year. What is production budget in units?
- (a) 1,95,000 units
 - (b) 1,90,000 units
 - (c) 1,84,000 units

RTP Sep 2024 – Q18

18. Raja Ltd manufactures and sells a single product and has estimated sales revenue of ₹ 302.4 lakh during the year based on 20% profit on selling price. Each unit of product requires 6 kg of material A and 3 kg of material B and processing time of 4 hours in machine shop and 2 hours in assembly shop. Factory overheads are absorbed at a blanket rate of 20% of direct labour. Variable selling & distribution overheads are ₹ 60 per unit sold and fixed selling & distribution overheads are estimated to be ₹ 69,12,000.

The other relevant details are as under:

Purchase Price: Material A ₹ 160 per kg

Materials B ₹ 100 per kg

Labour Rate: Machine Shop ₹ 140 per hour

Assembly Shop ₹ 70 per hour

	Finished Stock	Material A	Material B
Opening Stock	2,500 units	7,500 kg	4,000 kg
Closing Stock	3,000 units	8,000 kg	5,500 kg

RTP Sep 2024 – Q18

Required

- (i) CALCULATE number of units of product proposed to be sold and selling price per unit,
- (ii) PREPARE Production Budget in units and
- (iii) PREPARE Material Purchase Budget in units.

18. Workings

Statement Showing “Total Variable Cost for the year”

Particulars	Amount (₹)
Estimated Sales Revenue	3,02,40,000
Less: Desired Profit Margin on Sale @ 20%	60,48,000
Estimated Total Cost	2,41,92,000
Less: Fixed Selling and Distribution Overheads	69,12,000
Total Variable Cost	1,72,80,000

Statement Showing “Variable Cost per unit”

Particulars	Variable Cost p.u. (₹)
Direct Materials:	
A: 6 Kg. @ ₹ 160 per kg.	960
B: 3 Kg. @ ₹ 100 per kg.	300
Labour Cost:	
Machine Shop: 4 hrs @ ₹ 140 per hour	560
Assembly Shop: 2 hrs @ ₹ 70 per hour	140
Factory Overheads: 20% of (₹ 560 + ₹ 140)	140
Variable Selling & Distribution Expenses	60
Total Variable Cost per unit	2,160

(i) Calculation of number of units of product proposed to be sold and selling price per unit:

$$\begin{aligned}\text{Number of Units Sold} &= \text{Total Variable Cost} / \text{Variable Cost per unit} \\ &= ₹ 1,72,80,000 / ₹ 2,160 \\ &= 8,000 \text{ units}\end{aligned}$$

$$\begin{aligned}\text{Selling Price per unit} &= \text{Total Sales Value} / \text{Number of Units Sold} \\ &= ₹ 3,02,40,000 / 8,000 \text{ units} \\ &= ₹ 3,780\end{aligned}$$

RTP Sep 2024 – Q18

(ii) Production Budget (units)

Particulars	Units
Budgeted Sales	8,000
<i>Add:</i> Closing Stock	3,000
Total Requirements	11,000
<i>Less:</i> Opening Stock	(2,500)
Required Production	8,500

(iii) Materials Purchase Budget (Kg.)

Particulars	Material A	Material B
Requirement for Production	51,000 (8,500 units × 6 Kg.)	25,500 (8,500 units × 3 Kg.)
<i>Add:</i> Desired Closing Stock	8,000	5,500
Total Requirements	59,000	31,000
<i>Less:</i> Opening Stock	(7,500)	(4,000)
Quantity to be purchased	51,500	27,000

RTP May 2024 – Q12

12. M Ltd. is a public sector undertaking (PSU), produces a product A. The company is in process of preparing its revenue budget for the year 2024. The company has the following information which can be useful in preparing the budget:
- (i) It has anticipated 12% growth in sales volume from the year 2023 of 4,20,000 tonnes.
 - (ii) The sales price of ₹ 23,000 per tonne will be increased by 10% provided Wholesale Price Index (WPI) increases by 5%.
 - (iii) To produce one tonne of product A, 2.3 tonnes of raw material are required. The raw material cost is ₹ 4,500 per tonne. The price of raw material will also increase by 10% if WPI increase by 5%.
 - (iv) The projected increase in WPI for 2024 is 4%

RTP May 2024 – Q12

- (v) A total of 6,000 employees works for the company. The company works 26 days in a month.
- (vi) 85% of employees of the company are permanent and getting salary as per 5- year wage agreement. The earnings per manshift (means an employee cost for a shift of 8 hours) is ₹ 3,000 (excluding terminal benefits). The new wage agreement will be implemented from 1st July 2024 and it is expected that a 15% increase in pay will be given.
- (vii) The casual employees are getting a daily wage of ₹ 850. The wages are linked to Consumer Price Index (CPI). The present CPI is 165.17 points and it is expected to be 173.59 points in year 2024.
- (viii) Power cost for the year 2023 is ₹ 42,00,000 for 7,00,000 units (1 unit = 1 Kwh). 60% of power is used for production purpose (directly related to production volume) and remaining are for employee quarters and administrative offices.
- (ix) During the year 2023, the company has paid ₹ 60,00,000 for safety and maintenance works. The amount will increase in proportion to the volume of production.

RTP May 2024 – Q12

- (x) During the year 2023, the company has paid ₹ 1,20,000 for the purchase of diesel to be used in car hired for administrative purposes. The cost of diesel will increase by 15% in year 2024.
- (xi) During the year 2023, the company has paid ₹ 6,00,000 for car hire charges (excluding fuel cost). In year 2024, the company has decided to reimburse the diesel cost to the car rental company. Doing this will attract 5% GST on Reverse Charge Mechanism (RCM) basis on which the company will not get GST input credit.
- (xii) Depreciation on fixed assets for the year 2023 is ₹ 80,40,00,000 and it will be 15% lower in 2024.

You being an associate to the budget controller of the company, PREPARE Revenue (Flexible) budget for the year 2024 and also show the budgeted profit/ loss for the year.

RTP May 2024 – Q12

12. Revenue Budget (Flexible Budget) of M Ltd. for the Year 2024

	Particulars	PY 2023	CY 2024
A	Sales Volume (Tonnes)	4,20,000	4,70,400 [112%×4,20,000]
B	Selling Price per tonne (₹)	23,000	23,000
		(₹ in lakh)	(₹ in lakh)
C	Sales value [A×B]	96,600	1,08,192
D	Raw material Cost:		
(i)	Qty. of Material [2.3 tonnes × A] (tonnes)	9,66,000	10,81,920
(ii)	Price per tonne (₹)	4,500	4,500
(iii)	Total raw material cost [(i)×(ii)]	43,470	48,686.40

RTP May 2024 – Q12

E	Wages & Salary Cost:		
(i)	Wages to casual employees (15%×6,000 = 900 employees)	2,386.80 [900×26×12×₹850]	2,508.47 [900×26×12×₹893.33]
(ii)	Salary to permanent employees (85%×6,000 = 5,100 employees)	47,736 [5100×26×12×₹3,000]	51,316.20 [(5100×26×6×₹3,000) + (5100×26×6×₹3,450)]
(iii)	Total wages & salary [(i) + (ii) + (iii)]	50,122.80	53,824.67
F	Power cost:		
(i)	For production (units)	4,20,000 [60%×7,00,000]	4,70,400 [112%×4,20,000]
(ii)	For employees & offices (units) [40%×7,00,000]	2,80,000	2,80,000

RTP May 2024 – Q12

(iii)	Total Power consumption (units) [(i) + (ii)]	7,00,000	7,50,400
(iv)	Power rate per unit (₹) [₹42,00,000 ÷ 7,00,000]	6.00	6.00
(v)	Total power cost [(iii) × (iv)]	42	45.024
G	Safety and maintenance Cost	60	67.20 [112% × 4,20,000]
H	Diesel cost	1.2	-

RTP May 2024 – Q12

I	Car Hire charge:		
(i)	Car hire charge	6	6
(ii)	Fuel reimbursement cost	-	1.38 [115%×1.2]
(iii)	GST@5% on RCM basis [5%×(i+ii)]	-	0.369
(iv)	Total Car hire charge cost [(i) + (ii) + (iii)]	6	7.749
J	Depreciation	8,040	6,834 [85%×8040]
K	Total Cost [Sum of D to J]	1,01,742	1,09,465.043
L	Profit/ (Loss) [C-L]	(5,142)	(1273.043)

RTP May 2022 – Q13

13. Maharatna Ltd., a public sector undertaking (PSU), produces product A. The company is in process of preparing its revenue budget for the year 2022. The company has the following information which can be useful in preparing the budget:
- (i) It has anticipated 12% growth in sales volume from the year 2021 of 4,20,000 tonnes.
 - (ii) The sales price of ₹23,000 per tonne will be increased by 10% provided Wholesale Price Index (WPI) increases by 5%.
 - (iii) To produce one tonne of product A, 2.3 tonnes of raw material are required. The raw material cost is ₹4,500 per tonne. The price of raw material will also increase by 10% if WPI increase by 5%.
 - (iv) The projected increase in WPI for 2022 is 4%
 - (v) A total of 6,000 employees works for the company. The company works 26 days in a month.
 - (vi) 85% of employees of the company are permanent and getting salary as per 5- year wage agreement. The earnings per manshift (means an employee cost for a shift of 8 hours) is ₹ 3,000 (excluding terminal benefits). The new wage agreement will be implemented from 1st July 2022 and it is expected that a 15% increase in pay will be given.

RTP May 2022 – Q13

- (vii) The casual employees are getting a daily wage of ₹ 850. The wages are linked to Consumer Price Index (CPI). The present CPI is 165.17 points and it is expected to be 173.59 points in year 2022.
- (viii) Power cost for the year 2021 is ₹ 42,00,000 for 7,00,000 units (1 unit = 1 Kwh). 60% of power is used for production purpose (directly related to production volume) and remaining are for employee quarters and administrative offices.
- (ix) During the year 2021, the company has paid ₹ 60,00,000 for safety and maintenance works. The amount will increase in proportion to the volume of production.
- (x) During the year 2021, the company has paid ₹ 1,20,000 for the purchase of diesel to be used in car hired for administrative purposes. The cost of diesel will increase by 15% in year 2022.
- (xi) During the year 2021, the company has paid ₹ 6,00,000 for car hire charges (excluding fuel cost). In year 2022, the company has decided to reimburse the diesel cost to the car rental company. Doing this will attract 5% GST on Reverse Charge Mechanism (RCM) basis on which the company will not get GST input credit.
- (xii) Depreciation on fixed assets for the year 2021 is ₹ 80,40,00,000 and it will be 15% lower in 2022.

Required:

From the above information PREPARE Revenue (Flexible) budget for the year 2022 and also show the budgeted profit/ loss for the year.

RTP May 2022 – Q13

13. Revenue Budget (Flexible Budget) of Maharatna Ltd. for the Year 2022

	Particulars	PY 2021	CY 2022
A	Sales Volume (Tonnes)	4,20,000	4,70,400 [112%×4,20,000]
B	Selling Price per tonne (₹)	23,000	23,000
		(₹ in lakh)	(₹ in lakh)
C	Sales value [A×B]	96,600	1,08,192
D	Raw material Cost:		
(i)	Qty. of Material [2.3 tonnes × A] (tonnes)	9,66,000	10,81,920
(ii)	Price per tonne (₹)	4,500	4,500
(iii)	Total raw material cost (₹ in lakh) [(i)×(ii)]	43,470	48,686.40
E	Wages & Salary Cost:		
(i)	Wages to casual employees (15% × 6,000 = 900 employees)	2,386.80 [900 × 26 × 12 × ₹ 850]	2,508.47 [900 × 26 × 12 × ₹ 893.33]
(ii)	Salary to permanent employees (85% × 6,000 = 5,100 employees)	47,736 [5100 × 26 × 12 × ₹ 3,000]	51,316.20 [(5100 × 26 × 6 × ₹ 3,000) + (5100 × 26 × 6 × ₹ 3,450)]
(iii)	Total wages & salary [(i)+(ii)]	50,122.80	53,824.67

RTP May 2022 – Q13

F	Power cost:		
(i)	For production (units)	4,20,000 [60% × 7,00,000]	4,70,400 [112% × 4,20,000]
(ii)	For employees & offices (units) [40% × 7,00,000]	2,80,000	2,80,000
(iii)	Total Power consumption (units) [(i)+(ii)]	7,00,000	7,50,400
(iv)	Power rate per unit (₹) [₹42,00,000 ÷ 7,00,000]	6.00	6.00
(v)	Total power cost [(iii)×(iv)]	42	45.024
G	Safety and maintenance Cost	60	67.20 [112% × 60,00,000]
H	Diesel cost	1.2	-

RTP May 2022 – Q13

I	Car Hire charge:		
(i)	Car hire charge	6	6
(ii)	Fuel reimbursement cost	-	1.38
			[115% × 1.2]
(iii)	GST@5% on RCM basis [5%×(i+ii)]	-	0.369
(iv)	Total Car hire charge cost [(i)+(ii)+(iii)]	6	7.749
J	Depreciation	8,040	6,834
			[85% × 8040]
K	Total Cost [Sum of D to J]	1,01,742	1,09,465.043
L	Profit/ (Loss) [C-L]	(5,142)	(1273.043)

RTP May 2021 – Q12

12. RS Ltd manufactures and sells a single product and has estimated sales revenue of ₹ 302.4 lakh during the year based on 20% profit on selling price. Each unit of product requires 6 kg of material A and 3 kg of material B and processing time of 4 hours in machine shop and 2 hours in assembly shop. Factory overheads are absorbed at a blanket rate of 20% of direct labour. Variable selling & distribution overheads are ₹ 60 per unit sold and fixed selling & distribution overheads are estimated to be ₹ 69,12,000.

The other relevant details are as under:

Purchase Price:	Material A	₹ 160 per kg
	Materials B	₹ 100 per kg
Labour Rate:	Machine Shop	₹ 140 per hour
	Assembly Shop	₹ 70 per hour

	Finished Stock	Material A	Material B
Opening Stock	2,500 units	7,500 kg	4,000 kg
Closing Stock	3,000 units	8,000 kg	5,500 kg

Required:

- CALCULATE number of units of product proposed to be sold and selling price per unit,
- PREPARE Production Budget in units, and
- PREPARE Material Purchase Budget in units.

RTP May 2021 – Q12

12. Workings:

Statement Showing “Total Variable Cost for the year”

Particulars	Amount (₹)
Estimated Sales Revenue	3,02,40,000
Less: Desired Profit Margin on Sale @ 20%	60,48,000
Estimated Total Cost	2,41,92,000
Less: Fixed Selling and Distribution Overheads	69,12,000
Total Variable Cost	1,72,80,000

RTP May 2021 – Q12

Statement Showing “Variable Cost per unit”

Particulars	Variable Cost p.u. (₹)
Direct Materials:	
A: 6 Kg. @ ₹ 160 per kg.	960
B: 3 Kg. @ ₹ 100 per kg.	300
Labour Cost:	
Machine Shop: 4 hrs. @ ₹ 140 per hour	560
Assembly Shop: 2 hrs. @ ₹ 70 per hour	140
Factory Overheads: 20% of (₹ 560 + ₹ 140)	140
Variable Selling & Distribution Expenses	60
Total Variable Cost per unit	2,160

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- (i) **Calculation of number of units of product proposed to be sold and selling price per unit:**

$$\begin{aligned}\text{Number of Units Sold} &= \text{Total Variable Cost} / \text{Variable Cost per unit} \\ &= ₹ 1,72,80,000 / ₹ 2,160 \\ &= 8,000 \text{ units} \\ \text{Selling Price per unit} &= \text{Total Sales Value} / \text{Number of Units Sold} \\ &= ₹ 3,02,40,000 / 8,000 \text{ units} \\ &= ₹ 3,780\end{aligned}$$

- (ii) **Production Budget (units)**

Particulars	Units
Budgeted Sales	8,000
Add: Closing Stock	3,000
Total Requirements	11,000
Less: Opening Stock	(2,500)
Required Production	8,500

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(iii) Materials Purchase Budget (Kg.)

Particulars	Material A	Material B
Requirement for Production	51,000 (8,500 units × 6 Kg.)	25,500 (8,500 units × 3 Kg.)
Add: Desired Closing Stock	8,000	5,500
Total Requirements	59,000	31,000
Less: Opening Stock	(7,500)	(4,000)
Quantity to be purchased	51,500	27,000

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

Month	No. of vehicles
October	40,000
November	35,000
December	45,000
January	60,000
February	65,000

To manufacture a vehicle a standard cost of ₹11,42,800 is incurred and sold through dealers at a uniform selling price of ₹17,14,200 to customers. Dealers are paid 15% 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 each month to cover 40% of next month's production. 48,000 units of Part-X are in stock as on 1st October.

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There are 9,500 nos. of completed vehicles 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 -

- (i) PREPARE Production budget (in nos.) for the month of October, November, December and January.
- (ii) PREPARE a Purchase budget for Part-X (in units) for the months of October, November and December.
- (iii) CALCULATE the budgeted gross profit for the quarter October to December.

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12. (i) Preparation of Production Budget (in units)

	October	November	December	January
Demand for the month (Nos.)	40,000	35,000	45,000	60,000
Add: 20% of next month's demand	7,000	9,000	12,000	13,000
Less: Opening Stock	(9,500)	(7,000)	(9,000)	(12,000)
Vehicles to be produced	37,500	37,000	48,000	61,000

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(ii) Preparation of Purchase budget for Part-X

	October	November	December
Production for the month (Nos.)	37,500	37,000	48,000
Add: 40% of next month's production	14,800 (40% of 37,000)	19,200 (40% of 48,000)	24,400 (40% of 61,000)
	52,300	56,200	72,400
No. of units required for production	2,09,200 (52,300 × 4 units)	2,24,800 (56,200 × 4 units)	2,89,600 (72,400 × 4 units)
Less: Opening Stock	(48,000)	(59,200) (14,800 × 4 units)	(76,800) (19,200 × 4 units)
No. of units to be purchased	1,61,200	1,65,600	2,12,800

RTP May 2020 – Q12

(iii) Budgeted Gross Profit for the Quarter October to December

	October	November	December	Total
Sales in nos.	40,000	35,000	45,000	1,20,000
Net Selling Price per unit* (₹)	14,57,070	14,57,070	14,57,070	
Sales Revenue (₹ in lakh)	5,82,828	5,09,974.50	6,55,681.50	17,48,484
Less: Cost of Sales (₹ in lakh) (Sales unit × Cost per unit)	4,57,120	3,99,980	5,14,260	13,71,360
Gross Profit (₹ in lakh)	1,25,708	1,09,994.50	1,41,421.50	3,77,124

* Net Selling price unit = ₹17,14,200 – 15% commission on ₹17,14,200
= ₹14,57,070.

RTP May 2018 – Q14

14. G Ltd. manufactures two products called 'M' and 'N'. Both products use a common raw material Z. The raw material Z is purchased @ ₹ 36 per kg from the market. The company has decided to review inventory management policies for the forthcoming year.

The following information has been extracted from departmental estimates for the year ended 31st March 2018 (the budget period):

	Product M	Product N
Sales (units)	28,000	13,000
Finished goods stock increase by year-end	320	160
Post-production rejection rate (%)	4	6
Material Z usage (per completed unit, net of wastage)	5 kg	6 kg
Material Z wastage (%)	10	5

Additional information:

- Usage of raw material Z is expected to be at a constant rate over the period.
- Annual cost of holding one unit of raw material in stock is 11% of the material cost.
- The cost of placing an orders is ₹ 320 per order.
- The management of G Ltd. has decided that there should not be more than 40 orders in a year for the raw material Z.

RTP May 2018 – Q14

Required:

- (i) PREPARE functional budgets for the year ended 31st March 2018 under the following headings:
 - (a) Production budget for Products M and N (in units).
 - (b) Purchases budget for Material Z (in kgs and value).
- (ii) CALCULATE the Economic Order Quantity for Material Z (in kgs).
- (iii) If there is a sole supplier for the raw material Z in the market and the supplier do not sale more than 4,000 kg. of material Z at a time. Keeping the management purchase policy and production quantity mix into consideration, CALCULATE the maximum number of units of Product M and N that could be produced.

RTP May 2018 – Q14

(a) Production Budget (in units) for the year ended 31st March 2016

	Product M	Product N
Budgeted sales (units)	28,000	13,000
Add: Increase in closing stock	320	160
No. good units to be produced	28,320	13,160
Post production rejection rate	4%	6%
No. of units to be produced	29,500 $\left(\frac{28,320}{0.96} \right)$	14,000 $\left(\frac{13,160}{0.94} \right)$

(b) Purchase budget (in kgs and value) for Material Z

	Product M	Product N
No. of units to be produced	29,500	14,000
Usage of Material Z per unit of production	5 kg.	6 kg.
Material needed for production	1,47,500 kg.	84,000 kg.
Materials to be purchased	1,63,889 kg.	88,421 kg.

RTP May 2018 – Q14

	$\left(\frac{1,47,500}{0.90} \right)$	$\left(\frac{84,000}{0.95} \right)$
Total quantity to be purchased	2,52,310 kg.	
Rate per kg. of Material Z	₹36	
Total purchase price	₹90,83,160	

(ii) Calculation of Economic Order Quantity for Material Z

$$\text{EOQ} = \sqrt{\frac{2 \times 2,52,310 \text{ kg.} \times ₹320}{₹36 \times 11\%}} = \sqrt{\frac{16,14,78,400}{₹3.96}} = 6,385.72 \text{ kg.}$$

RTP May 2018 – Q14

- (iii) Since, the maximum number of order per year can not be more than 40 orders and the maximum quantity per order that can be purchased is 4,000 kg. Hence, the total quantity of Material Z that can be available for production:

$$= 4,000 \text{ kg.} \times 40 \text{ orders} = 1,60,000 \text{ kg.}$$

	Product M	Product N
Material needed for production to maintain the same production mix	1,03,929 kg. $\left(1,60,000 \times \frac{1,63,889}{2,52,310} \right)$	56,071 kg. $\left(1,60,000 \times \frac{88,421}{2,52,310} \right)$
Less: Process wastage	10,393 kg.	2,804 kg.
Net Material available for production	93,536 kg.	53,267 kg.
Units to be produced	18,707 units $\left(\frac{93,536 \text{ kg.}}{5 \text{ kg.}} \right)$	8,878 units $\left(\frac{53,267 \text{ kg.}}{6 \text{ kg.}} \right)$