

TU EXAM QUESTIONS

TU Exam 2015

Brief Answer Questions:

Group 'A'

[6×1=6]

1. Define management accounting.
2. What do you mean by marginal costing?
3. What is opportunity cost?
4. The following information is provided to you.

Cost (Rs.)	Units
Rs 1000	200
Rs 1400	400
Rs 1800	600

Required: Fixed and variable cost using High low method.

5. The following information of a manufacturing company is:

Beginning stock of raw material	Rs. 15,000
Ending stock of raw material	Rs. 25,000
Productive wages	Rs. 200,000
Carriage inward	Rs. 35,000
Purchase	Rs. 300,000

Required: Prime cost

6. The company purchase new machine costing Rs 60,000. Life of the machine is 5 yrs. Average cash flow after tax for five years will be Rs 18,000.

Required: Payback period.

Group 'B'

[6×3=18]

Descriptive Answer Questions:

7. Define Job order costing and give two examples where job order costing is used.
8. "Budgeting is related with controlling function of management." Explain.
9. The following differences are notified on reconcile cost and financial accounts:

Particulars	Cost A/C (Rs)	Financial A/C (Rs)
Factory overhead	47,000	50,000
Office overhead	20,000	18,000
Interest received	Nil	10,000
Opening stock	50,000	44,000
Net Profit	70,000	?

Required: Reconcile between Cost and Financial Accounts.

10. Following information overhead

Fixed manufacturing overhead	Rs. 100,000
Normal capacity	10,000
Closing inventory	1,000
Beginning inventory	2,000 units
Net income under variable	Rs. 60,000

Required: Reconcile net income under absorption costing.

11. The following information are presented below:
A company produces two products: X and Y. Both are produced on the same equipment and use similar processes. The information for last period is given below:

	Product X	Product Y
Output in units	6,000	8,000
Machine hours per unit	4	2
Orders handled in the period	12	60
No. of set-up	15	45

Other Information is:

Cost Pool	Total Cost	Cost Driver	Cost Driver Rate
Relating to Production Set-ups	Rs. 180,000	No. of set-up	3,000
Relating to Order Handling	Rs. 72,000	No. of orders handled	1,000
Related to Machine Activities	Rs. 80,000	Machine hours	2

Required: CPU under Activity Based Costing method

12. Nepalese Plastic Industry products plastic buckets. An analysis of their accounting records reveals:

Variable cost per bucket Rs. 40

Fixed cost Rs. 60,000 for the year

Capacity 3,000 buckets per year Selling price per bucket Rs 70.

Required:

- Contribution margin ratio.
- Break-even point (in unit).
- Number of buckets to be sold to earn a profit of Rs. 30,000.

Group 'C'

Problem Solving Questions:

[4×6=24]

13. "Cost volume profit analysis is used to analyze the relationship between sales, cost and profit." Discuss.

14. "Management reporting provides adequate business information to various levels of management in the form of reports and statements at regular intervals". Comment.

15. The following information of sales, purchase and expenses are given below:

The recent and forecasted sales of the company have been given below:

Baishakh	Rs 100,000	Shrawan	Rs 100,000
Jestha	Rs 150,000	Bhadra	Rs 200,000
Ashadh	Rs 150,000	Aswin	Rs 250,000

40% of sales are for cash and rest on credit. Experience has been shown that 50% of credit sales will be collected in the month of sales, 30% in the following month of sales and rest on next following month of sales.

Creditors and the expenses would be paid in the month of purchase and the expenses and purchases forecast for three months would be:

Month	Shrawan	Bhadra	Aswin
Expenses	Rs 30,000	Rs 30,000	Rs 30,000
Purchases	Rs 40,000	Rs 80,000	Rs 100,000

The company would like to purchase a computer at a cost of Rs 80,000 in the month of Shrawan. The company would like to maintain a uniform cash balance of Rs. 20,000, which the company has maintaining in the past. If there is any deficit company can borrow from the commercial bank. The company can borrow and repayment of loan on a multiple of Rs. 10,000 with 12% interest rate, which will be paid at the time of loan paid.

Required: Cash budget for three months starting Shrawan.

16. A company wants to replace its existing machine. The existing machine originally cost Rs 270,000 has a present book value of Rs 120,000 and can be sold for Rs 150,000. The remaining useful life of existing machine in 5 years, at the end of that period it will have a residual value of Rs 30,000 and could be sold for Rs 20,000. *CSV(end)*

The new machine can be purchased for Rs 200,000 and will require Rs 25,000 for transportation and installation. It will have Rs 20,000 salvage value at the end of 5 years and could be sold for

opening
Cash bal.
20,000

Rs 30,000 at that time. The new machine will save (release) a working capital of Rs 10,000. It is expected to reduce operating cost of Rs 40,000 per year with the use of new machine. The company's required rate of return is 12%, tax rate is 50% and it uses straight line method of depreciation.

Required:

- a. Initial cash outlay.
- b. Annual cash flow after tax.
- c. Final year cash flow after tax.
- d. Net present value.
- e. Desirability of the project.

[1+2+1+1+1]

Comprehensive Answer Questions:

Group 'D'

[1×12=12]

17. Mr. Gopal Rana is the Chairman of Bishal Company (P) Ltd., which Produces and sells balls. Bishal Company (P) Ltd. is a leading manufacturing company in Nepal. It exports its product to USA, India, Japan, Korea and Singapore. It is established under the Companies Act, 2063, The company is in 25% tax bracket under the Income Tax Act, 2058.

The operating costs for the past year were as follows:

Variable costs per units:	
Direct materials	Rs 3
Direct Labor	4
Variable manufacturing overhead	1
Variable selling overhead	1.5
Fixed costs per year:	
Fixed manufacturing overheads	Rs 200,000
Fixed selling overhead	40,000
Fixed administrative overhead	40,000

During the year, Bishal Co. produced 200,000 balls and sold 225,000 at Rs 14 each. Bishal Co. had 31,000 balls in the beginning finished goods inventory; the costs have not changed from the last year to this year. An actual cost system is used for product costing.

On reconciliation of Cost and Financial Accounts of a company the following differences are noticed:

Factory overhead under recovered in Cost Account	Rs 5,000
Bank interest credited in Financial Account	Rs 10,000
Opening stock over recorded in financial account	Rs 4,000

Required:

As a chief financial analyst of the company, you have been asked by the Chairman of the Bishal Company to pass your suggestions on the following issues:

- a. Prepare cost sheet for the past year showing prime cost, factory cost, cost of production, cost of sales and profit.
- b. Reconcile the difference between profit shown by cost account and financial account.
- c. What is Bishal's variable cost ratio? What is its contribution margin ratio?
- d. How much sales revenue must Bishal earn for break-even? What is the expected margin of safety?
- e. How much sales revenue must Bishal generate to earn an after tax profit of Rs 63,000?
- f. What is the effect on the contribution margin ratio if the unit selling price and the variable cost each increase by 10 percent?

[2+2+2+2+2+2]

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Group-A

* Solved By Sanjit Ranjyar - MCC

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Q4. Solution,

$$\text{Variable cost (b)} = \frac{\text{High cost} - \text{Low cost}}{\text{High unit} - \text{Low unit}} = \frac{1800 - 1000}{600 - 200} = \text{Rs. } 2$$

$$\begin{aligned} \text{Fixed cost (a)} &= y - bx \\ &= 1000 - 2 \times 200 \\ &= 1000 - 400 \\ &= \text{Rs. } 600 \quad \underline{\text{Ans}} \end{aligned}$$

Q.5 Solution,

	Particulars	Amount
	Beginning Stock of Raw material	15,000
add:	purchases	3,00,000
	Carriage inward	35,000
less:	Ending stock of Raw material	(25,000)
	Raw material consumed	3,25,000
add:	productive wages	2,00,000
	prime cost \longrightarrow	<u>5,25,000</u>

Q6.

Q.6. Solution, Given,

Net cash outlay (NCO) = Rs. 60,000. Life of Machine = 5 year.

Average CFAT = Rs. 18,000.

We know,

$$\text{Payback period (PBP)} = \frac{\text{NCO}}{\text{Average CFAT}} = \frac{60,000}{18,000} = 3.34 \text{ years. } \underline{\text{Ans}}$$

Group-B

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Q.9 Solution, Reconciliation Statement.

Particulars	Details	Amount
Net profit as per Cost a/c		70,000
Add: Office overhead	2,000	
Interest received	10,000	
Opening stock	6,000	18,000
less: Factory overhead	(3,000)	
Net profit as per Financial a/c		85,000

Q.10 Solution,

Reconciled net income under absorption costing.

Particulars	Amount
Net income under absorption costing	50,000
Net Income under variable costing	60,000
Difference in net income (A)	(10,000)
Closing inventory	1,000 units.
Opening/Beginning inventory	2,000 "
Difference in inventory	(1,000) units.
(x) FMC	10
Difference in net income (B)	(10,000)

$\therefore A = B$

Solution,

Q11. Calculation of Cost Drive Rate (CDR)

Step: 1

Cost Pool	Cost Drive	Total Amount	Products		Total Activity	CDR
			X	Y		
Production Set-ups	No. of Set-up	180,000	15	45	60	3,000
Order Handling	No. of orders handled	72,000	12	60	72	1,000
Machine Activities	Machine Hours	80,000	24,000	16,000	40,000	2

Step 2: Calculation of cost under Activities Based Costing Method.

Particulars	Products	
	X	Y
<u>Related to Overhead cost</u>		
- Related to Production Set-ups @ 3,000	45,000	135,000
- Related to Order Handling @ 1,000	12,000	60,000
- Related to Machine Activities @ 2	48,000	32,000
Total cost →	105,000	227,000
Cost per unit (CPU) = $\frac{TC}{\text{output}}$	17.5	28.3750

Q.12

Solution, Given,

Variable cost per unit/bucket $v_p(vcpu) = \text{Rs. } 40$

Fixed cost (FC) = Rs 60,000

Selling price per bucket (Sppu) = Rs. 70

Capacity = 3,000 buckets per year.

We know,

a) Contribution margin Ratio / PV Ratio \Rightarrow ?

$$\text{CM/PV Ratio} = \frac{\text{Sppu} - \text{Vcpu}}{\text{Sppu}} = \frac{70 - 40}{70} = 0.4286$$

OR,

b) ~~BEP in (unit) =~~

$$\begin{aligned} \text{CM/PV Ratio} &= \frac{\text{Total Sales} - \text{Total variable cost}}{\text{Sales}} = \frac{\text{Contribution Margin}}{\text{Sales}} \\ &= \frac{(3000 \times 70) - (3000 \times 40)}{(3000 \times 70)} = \frac{90,000}{210,000} = 0.4286. \end{aligned}$$

$$\text{b) BEP in (units)} = \frac{\text{FC}}{\text{Contribution Margin per unit}} = \frac{\text{FC}}{\text{CMPU}} = \frac{60,000}{30} = 2,000$$

WN:

$$\text{CMPU} = \frac{\text{CM}}{\text{output}} = \frac{90,000}{3,000} = \text{Rs. } 30$$

c)

$$\begin{aligned} \text{Req. sales (buckets)} &= \frac{\text{FC} + \text{profit}}{\text{CMPU}} = \frac{60,000 + 30,000}{30} = \frac{90,000}{30} \\ &= 3,000 \text{ buckets. } \underline{\underline{\text{Ans}}} \end{aligned}$$

4 step - C
Cash Budget For three Months
Starting Shrawan

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Q.15.	Solution,	Shrawan	Bhadra	Kshwin
	Items			
1.	Opening of Cash Balance	₹0,000	₹5,000	50,000
2.	Cash Receipt (Cash in Flow)			
	2.1 Cash Sales	40,000	80,000	100,000
	2.2 Cash Collection from debtors (KWN)	75,000	96,000	123,000
	Total Cash Receipts	115,000	176,000	223,000
3.	Total Cash Available (1+2)	135,000	201,000	273,200
4.	Cash payment			
	4.1 Cash purchases	40,000	80,000	100,000
	4.2 Operating Expenses	30,000	30,000	30,000
	4.3 purchases of computer	80,000	-	-
	Total Cash payment	150,000	110,000	130,000
5.	Minimum Cash Balance (given)	20,000	20,000	20,000
6.	Total Cash Needed (4+5)	170,000	130,000	150,000
7.	Surplus or Deficit (3-6)	(35,000)	71,000	123,200
8.	Financing:			
	8.1 Short-term borrowing	40,000	-	-
	8.2 Repayment of borrowing	-	40,000	-
	8.3 Interest payment of borrowing	-	800	-
9.	Surplus from Financing (7+8.1) - (8.2+8.3)	5000	30,200	123,200
10.	Closing Cash Balance (5+9)	25,000	50,200	143,200

Q.15

Working Note:

	Baishakh	Jestha	Ashadh	Shrawan	Bhadra	Aswin
Cash Sales (40%)	40,000	60,000	60,000	40,000	80,000	1,00,000
Credit Sales (60%)	60,000	30,000	90,000	60,000	120,000	150,000
Total Sales:	100,000	150,000	150,000	1,00,000	2,00,000	2,50,000
Cash Collection:						
Same month (50%)	30,000	45,000	45,000	30,000	60,000	75,000
Next month (30%)		18,000	27,000	27,000	18,000	36,000
Following Next month (20%)			12,000	18,000	18,000	12,000
Bad debt	-	-	-	-	-	-
Cash Collection from Debtors:				75,000	96,000	123,000

Q.16

Solution. Given,

	New	Old	Difference New - Old
1) Salvage value			
BSV (now)	-	120,000	
CSV (now)	-	150,000	
BSV (end)	20,000	30,000	(10,000)
CSV (end)	30,000	20,000	10,000
2) purchase price	2,100,000	2,700,000	
3) Installation and transportation	25,000		
4) Life	5 year	5 years	
5) Working Capital	10,000		
6) Investment tax credit			
7) Tax 15%			
8) Cost of capital (k) = 12%			
9) For CFAT			
- Sales operating cost			
Differential EBDT / CFAT			40,000

Step 3

b) Calculation of differential CFAT

Particulars	Amount
Differential EBDT	40,000
less: Diff annual dep ⁿ (step 2)	23,000
Differential EBT	17,000
less: Tax @ 50%	8,500
Differential EAT	8,500
Add: Back differential annual dep ⁿ	23,000
Differential Annual CFAT	<u>31,500</u>

Step 4:

c) Calculation of differential final year CFAT

Particulars	Amount
1) Tax adjustment:	
Differential BSV (end) (10,000)	
" CSV (end) 10,000	
Gain 20,000	
Tax paid (50% of 20,000)	(10,000)
2) Differential CSV (end)	10,000
3) Working Capital tied up (opposite step 2)	(10,000)
4) Differential annual CFAT (step 3)	31,500
Final year CFAT	<u>21,500</u>

Step 5:

d) Calculation of NPV.

Year	CFAT	PVIFA@12%,t	PV
1-4	31,500	3.0373	95674.95
5	21,500	0.5674	12199.10

$$TPV = 107874.05$$

$$- MCO = 80,000$$

$$NPV = 27,874.05$$

e)

Ans:

The project is desirable because its net present value is highly positive.

Group-D

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Solution,

Q.17 9)

Cost sheet

	Particulars	Amounts	Amount.
	Direct material		6,00,000
	Direct labour		8,00,000
	prime cost →		14,00,000
Add:	Factory overhead:		
	Variable mfg. o/H	2,00,000	
	fixed mfg. o/H	2,00,000	4,00,000
	Factory/Work cost →		18,00,000
Add:	fixed administrative o/H		40,000
	Cost of production →		18,40,000
Add:	opening stock of finished goods @ 9.20		2,55,200
less:	closing stock of finished goods @ 9.20		(55,200)
	cost of goods sold →		20,70,000
Add:	Selling and distribution o/H		
	Variable selling o/H	3,37,500	
	Fixed selling o/H	40,000	3,77,500
	Total cost / cost of sales →		24,47,500
Add:	profit / loss		702,500
	Sales Revenue		31,50,000

b)

Reconciliation Statement

Particulars	Amount
Net Income as per Cost account	702,500
Add: Bank Interest credit in financial a/c	10,000
less: Factory o/H under recorded in cost a/c	(5,000)
less: Opening Stock over recorded in financial a/c	(4,000)
Net profit as per financial a/c	703,500

$$c) \text{ Variable Cost Ratio} = \frac{\text{Variable Cost per unit}}{\text{Selling price per unit}} = \frac{9.50}{14} = \frac{0.6786}{0.6786}$$

$$\begin{aligned} \text{Contribution Margin Ratio} &= 1 - \text{Variable Cost Ratio} \\ &= 1 - 0.68 = 0.32 \\ &= 1 - 0.6786 = 0.3214 \end{aligned}$$

$$d) \text{ Break-even Sales (in Rs.)} = \frac{FC}{\text{CM Ratio} / \text{PU Ratio}} = \frac{280,000}{0.3214} = \text{Rs. } 8,71,189$$

$$\begin{aligned} \text{Margin of Safety (in Rs.)} &= \text{Actual or budgeted Sales} - \text{BEP sales} \\ &= 31,50,000 - 871,189 \\ &= \text{Rs. } 22,78,811. \end{aligned}$$

$$e) \text{ Sales Revenue to earn an after tax profit of Rs. } 63,000$$

$$= \frac{FC + \frac{DPAT}{1-t}}{\text{CM Ratio}} = \frac{280,000 + \frac{63,000}{1-0.25}}{0.3214}$$

$$= \text{Rs. } 11,32,545.$$

f) Effect on the contribution Margin ratio if the unit selling price and the variable cost each increase by 10%.

$$\begin{aligned} \text{New Contribution Margin} &= \frac{\text{SPPU} - \text{VCPU}}{\text{SPPU}} = \frac{15.40 - 10.45}{15.40} \\ &= 0.3214 \end{aligned}$$

cost each increase by 10 percent? [2+2+2+2+2+2]

TU Exam 2016

Group 'A'

Brief Answer Questions:

[6×1=6]

1. Define opportunity cost.
2. Write in brief any two limitations of cost accounting.
3. What is budgetary control?
4. The following data are given

Variable cost per unit Rs 8
Fixed cost Rs 8,000

Required: Cost for 800 units by using $Y = a + bX$

5. A company is considering the purchase of a new machine at a cost of Rs 42,000. The machine has an expected life of 5 years. Average cash flows during the expected life of the machines is Rs 12,000.
Required: Payback period of the machine.
6. If selling price per unit is Rs 20, variable cost per unit is Rs. 12 and fixed cost is Rs 80,000 find out breakeven point in Rs.

Group 'B'

[6×3=18]

Descriptive Answer Questions:

7. Explain the role of accounting in decision making.
8. Differentiate between product cost and period cost.
9. The following information are presented below:

A company produces two products: X and Y. Both are produced on the same equipment and use similar processes. The information for last period is given below:

	Product X	Product Y
Output in units	6,000	8,000
Machine hours per unit	4	2
Orders handled in the period	12	60
No. of set-up	15	45

Other Information is:

Cost Pool	Total Cost	Cost Driver	Cost Driver Rate
Relating to Production Set-ups	Rs. 180,000	No. of set-up	3,000
Relating to Order Handling	Rs. 72,000	No. of orders handled	1,000
Related to Machine Activities	Rs. 80,000	Machine hours	2
Total	Rs. 332,000		

Required: CPU under Activity Based Costing method

A company manufacture a single product; the operating data for period is given below

Production Units	1,800 units	Fixed Manufacturing Cost	Rs 9,000
Sales Units	1,600 units	Fixed Selling Overhead	Rs 10,000
Prime cost	Rs 25 per unit	Variable Selling Overhead	5% of Sales
Selling Price per Unit	Rs 40		

Required: Income Statement under Absorption Costing

11. The following information has been obtained from the records of a factory:

Opening stock of raw material	40,000
Closing stock of raw material	30,000
Wages	200,000
Factory overhead	90,000
Purchase of raw material	450,000
Opening stock of finished goods	60,000
Closing stock of finished goods	50,000
Selling and distribution overhead	20,000
Administrative expenses	30,000

Required: Cost sheet.

12. The following information are extracted from a book of a company:
Net profit shown by financial account was Rs. 10,000.
Administration expenses was over charged in cost account Rs 7,500.
Interest on investment was Rs. 2,000.
Bad debt written off during the year was Rs 2,000.
Over valuation of closing stock in financial account was Rs 6,000.
Under valuation of opening stock in cost account was Rs 4,000.

Required: Reconciliation statement.

Group 'C'

Problem Solving Questions:

[4×6=24]

- 3. "Management reporting provides adequate business information to various levels of management in the form of reports and statements at regular intervals". Comment.
- 4. "Cost volume profit analysis is an important technique of profit planning and control", discuss.
- 5. Actual and predicted sales in Rs. of a manufacturing company is given below:

	Actual		Budgeted
April	Rs. 100,000	July	Rs. 150,000
May	Rs. 120,000	August	Rs. 120,000
June	Rs. 150,000	September	Rs. 150,000

All sales credit

- a. The firm incurs and pays a monthly rent expense of Rs 6,000.
 - b. Wages and salaries for the coming months are estimated as follows: July - Rs. 20,000; August - Rs. 18,000 and September - Rs. 16,000.
 - c. Of the firm's sales, 40 percent is collected in the month of sales, 30 percent one month after sale, & the remaining 30 percent two months after sales.
 - d. Merchandise purchase is equal to 80 percent of sales and will be paid same month.
 - e. The firm purchase new equipment at the beginning of the July for Rs. 120,000.
 - f. A depreciation expense is Rs 12,000 annually. *Not include*
 - g. The firm issue share capital of Rs 100,000 during September.
- The firms beginning cash balance for the budget period is Rs. 10,000 and this is the minimum desired balance for each month. Determine when and how much the firm will need to borrow during the budget period. The firm has Rs 400,000 line of credit with its bank with interest (12 percent annual) paid at the time of repayment.

Required: Cash budget for the three-month period ended September, 2014.

- 16. A Company purchased a machine 10 years ago for Rs 300,000. The machine had an expected life of 15 years with zero salvage value at the end. Current market value of the old machine is Rs 110,000. The new machine will also cost Rs 400,000 with transportation and installation cost of Rs 10,000. This new machine would produce estimated annual operating cash saving of Rs 120,000. The useful life of the new machine is 5 year and estimated salvage value at the end of 5 years would be Rs 10,000. The company uses straight-line method of depreciation. The investment in the new machinery would required additional working capital of Rs 20,000. The cash salvage value of old and new machinery in 5 years would be Rs 5,000 and Rs 20,000 respectively. The corporate tax rate is 25% and cost of capital is 10%.
- Required: Whether new machine should be acquired or not.

Group 'D' NCO = 317.500

ACFAT = 105,000

CFAT F.Y = 138.750

[1×12=12]

Comprehensive Answer Questions:

- 17. The information of a manufacturing company which produced product XYZ has been given below:

The product XYZ passes through three processes X, Y and Z. The normal wastage of each process was 5%, 8% and 10% for process X, Y and Z which was sold at Rs 2, Rs 4 and Rs 5 per unit respectively. The other expenses were as follows:

	Process X	Process Y	Process Z
Sundry Materials (Rs.)	10,000	-	65,000
Labours (Rs)	50,000	80,000	20,000
Direct Expenses (Rs)	10,500	15,000	-

Input in process X was 10,000 units. Actual output was for Process X 9,500 units, process Y 9,000 units and process Z 7,800 units.

Required: Process X, Y and Z accounts and Abnormal Loss Account, assuming that there was no opening or closing stocks.

[2+4+4+2=12]

TU Exam 2016

Group-A

Q4. Given;

Variable cost per unit (b) = Rs. 8

Fixed cost (FC) = (a) = Rs. 8,000

By using,

$$Y = a + bX$$

$$\Rightarrow 8000 + 8 \times 800$$

$$\Rightarrow 8000 + 6400$$

$$\Rightarrow 14,400$$

\therefore The Total Cost of 800 units = Rs. 14,400 Ans

Q5. Given,

Net cash outlay (NCO) = Rs. 42,000 Life of Machine = 5 years.

Average CFAT = Rs. 12,000 Payback period = ?

We know that,

$$PBP = \frac{NCO}{\text{Average CFAT}} = \frac{\text{Rs. } 42,000}{\text{Rs. } 12,000} = 3.5 \text{ years. Ans}$$

Q6. Given,

SPPU = Rs. 20, VCPU = Rs. 12, FC = Rs. 80,000 BEP in (Rs) = ?

We know,

$$\text{BEP in (Rs)} = \frac{\text{Fixed Cost}}{\text{PlV Ratio}} = \frac{80,000}{0.4} = \text{Rs. } 2,00,000 \text{ Ans}$$

WN:

$$\text{PlV Ratio / CM Ratio} = \frac{\text{SPPU} - \text{VCPU}}{\text{SPPU}} = \frac{20 - 12}{20} = \frac{8}{20} = 0.4$$

Group-B

Q.9 Same as question No. 8 (2015) Q.No. 11

Q.10. Calculation of Income Statement under Absorption Costing.

Q.11. Solution.

Particulars	Amount
Opening stock of Raw Material	40,000
Add: purchases of Raw material	4,50,000
less: Closing stock of raw material	(30,000)
Cost of material consumed	4,60,000
Add: Wages	2,00,000
Prime cost →	6,60,000
Add: Factory OH	90,000
Factory / Work cost →	7,50,000
Add: Office and administrative OH	
Administrative Expenses	30,000
Cost of production	7,80,000
Add: Opening stock of finished goods	60,000

Q. 12	Less: closing stock of finished goods	(50,000)
	Cost of goods sold →	7,90,000
	Add: Selling and distribution OH	20,000
	Total Cost:	<u>8,10,000</u>

Q. 12 Reconciliation Statement.

	Particulars	Details	Amount
	Net profit as per financial a/c		10,000
Add:	Bad debt written off	2,000	
	Under valuation of opening stock in cost a/c	4,000	6,000
Less:	Administrative Exp. was over charged in cost a/c	7,500	
	Interest on investment	2,000	
	Over valuation of closing stock	6,000	(15,500)
	Net profit as per cost a/c		<u>500</u>

Q. 15. Group-C

Working Note

	April	May	June	July	August	September
Cash Collection						
Same month (40%)	40,000	48,000	60,000	60,000	48,000	60,000
Next month (30%)		30,000	36,000	45,000	45,000	36,000
Following Next Month (30%)			30,000	36,000	45,000	45,000
				141,000	138,000	141,000

Cash Budget
For the three month period
Ended September, 2014

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Items.	July	August	September
1. Opening Cash Balance	10,000	10,000	10,048
2. Cash Receipts:			
2.1 Cash Collection from debtors (WN)	141,000	138,000	141,000
2.2 Issue of Share Capital	-	-	1,00,000
Total Cash Receipt	141,000	138,000	241,000
3. Total Cash Available (1+2)	151,000	148,000	251,048
4. Cash Payments:			
4.1 Rent Expenses	6,000	6,000	6,000
4.2 Wages and Salaries	20,000	18,000	16,000
4.3 Merchandise Purchases (80% of sale)	120,000	96,000	120,000
Total Cash payment	266,000	120,000	142,000
5. Minimum Cash Balance	10,000	10,000	10,000
6. Total Cash Needed (4+5)	276,000	130,000	152,000
7. Surplus or Deficit (3-6)	(125,000)	18,000	99,048
8. Financing:			
8.1 Short term borrowing	125,000	-	-
8.2 Repayment of borrowing	-	(17,600)	(96,000)
8.3 Interest payment of borrowing	-	(352)	(2880)
9. Surplus from Financing (7+8.1) - (8.2+8.3)	-	48	168
10. Closing ^{Cash} Balance (5+9)	10,000	10,048	10,168

Q.16. Solutions. (2016) (2016)

	New	Old	Diff.
1) Salvage value:			
BSV (now)	X	(?) 1,00,000	
CSV (now)		110,000	
BSV (end)	10,000	0	10,000
CSV (end)	20,000	5,000	15,000
2) Purchase price	3,30,000	3,00,000	
3) Transportation and installation	10,000	-	
4) Life of Machine	5 yrs	15-10 = 5 yrs.	
5) Working Capital	(20,000)		
6) Tax = 25%			
7) Cost of Capital (k = 10%)			
8) For CFAT			
Sales			
- Operating Cost			
Diff. EBIT			120,000

Working Note:

$$\begin{aligned}
 \text{i) Depn of new Machine} &= \frac{(\text{Purchase price} + \text{Trans. and Instn.}) - \text{BSV (end)}}{\text{total life}} \\
 &= \frac{(3,00,000 + 0) - 0}{15 \text{ yrs.}} \\
 &= \frac{3,00,000}{15} \\
 &= \text{Rs. } 20,000
 \end{aligned}$$

$$\begin{aligned}
 \text{ii) BSV (now)} &= \text{Purchases price} - \text{total accumulated depn} \\
 &= 3,00,000 - (10 \text{ yrs} \times 20,000) \\
 &= 3,00,000 - 2,00,000 \\
 &= 1,00,000
 \end{aligned}$$

Now,

1) Calculation of NCO (new machine)

i) purchases price	(3,90,000)
ii) Transportation and Installation	(10,000)
iii) Working Capital	(20,000)
iv) CSV (now) of old machine	110,000
v) Investment tax credit	-
vi) Tax adjustment	

BSV (now) of old Machine 100,000

CSV (now) " 110,000

Gain/profit 10,000

vii) Tax paid 25% of 10,000 (2,500)

(31,500)

2) Calculation of differential depn

New Machine

$$\text{depn} = \frac{(\text{P.P} + \text{T and I}) - \text{BSV (end)}}{\text{Life}} = \frac{3,90,000 + 10,000 - 10,000}{5}$$

$$= \text{Rs. } 78,000 \text{ p.a.}$$

old Machine

$$\text{depn} = \frac{\text{BSV (now)} - \text{BSV (end)}}{\text{Remaining Life}} = \frac{100,000 - 0}{5} = 20,000 \text{ p.a.}$$

$$\text{Diff. depn} = 78,000 - 20,000 = 58,000 \text{ p.a.}$$

3) Calculation of differential CFAT.

	Differential EBDT	120,000
less:	Diff annual dep ⁿ step(2)	58,000
	Diff EBT	62,000
less:	Tax @ 25%	15,500
	Diff EAT	46,500
Add:	Back diff annual dep ⁿ	58,000
	Diff. annual CFAT	<u>1,04,500</u>

4) Calculation of diff final year CFAT.

particulars	Amount
i) Tax adjustment:	
Diff BSV(end)	10,000
Diff CSV(end)	15,000
gain/profit	5000
Tax paid @ 25%	(1250)
ii) Diff CV(end)	15,000
iii) Working capital	20,000
iv) Diff. annual CFAT	1,04,500
Final year CFAT	<u>1,38,250</u>

5) Calculation of NPV

Years	CFAT	PVIFA @ 10%	PV
1-4	1,04,500	3.1699	3,31,254.55
5	138,250	0.6209	8,58,39.43
		TPV	4,17,093.97
		- NCO	3,12,500
		PV	<u>1,04,594</u>

Group - D

Process-x account

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Q. 17

Particulars	Units	Amount	Particulars	Units	Amount
To input materials	10,000	-	By Normal loss (5%) @ 2	500	1,000
To Sundry material	-	10,000	By transfer to process-y @		
To labour		50,000	7.3158	9,500	69,500
To direct Exp.		10,500			
	10,000	70,500		10,000	70,500

WN: 1) Actual output = 9500

2) Standard output = 9500

3) No gain / No loss

4) NCPU (Net Cost per unit) = $\frac{10,000 + 50,000 + 10,500 - 1,000}{(50) 9,500} = \text{Rs. } 7.3158$

Process-Y account

Particulars	Units	Amount	Particulars	Units	Amount
To process-x @ 100%	9,500	69,500	By normal loss (8%) @ 4	760	3,040
To labour		80,000	By transfer to process-z @		
To direct Exp.		15,000	18.4737	9,000	1,66,263
To abnormal gain @	260	4,803			
18.4737					
	9,760	1,69,303		9,760	1,69,303

Working Note: 2

1) AO = 9000

2) SO = 8740

3) Abnormal gain = 9000 - 8740 = 260 units

4) NCPU = $\frac{69,500 + 80,000 + 15,000 - 3,040}{8,740} = \text{Rs. } 18.4737$

Process - Z account

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Particulars	Units	Amount	Particulars	Units	Amount
To process - Y %	9000	1,66,263	By Normal loss % (10%) @ 5	900	4500
To labour		65,000	By Abnormal loss @ 30.9646	300	9289
To direct Exp.		20,000	By Sales % @ 30.9646	7800	2,41,584
To P/L (gain %)		4050			
	9000	2,55,313		9000	2,55,313

Abnormal loss Account.

Particulars	Units	Amount	Particulars	Units	Amount
To process - Z %	300	9289	By bank/cash % @ 5	300	1500
			By P/L % (Net abnormal loss %)		7789
	300	9289		300	9289

TU Exam 2017

Group 'A'

Brief Answer Questions:

[6×1=6]

1. Write any two objectives of management accounting.
2. Define break-even point.
3. What is period cost?
4. If the profit volume ratio is 40% and profit is Rs 40,000, find out the margin of safety.
5. A manufacturing company has a normal capacity of 5,000 units. The cost details at normal capacity are:

Prime cost per unit	Rs 6
Fixed cost	Rs 5,000
Repair and maintenance	Rs 10,000 (60% of variable)

Required: Cost for 6,000 units

6. The company purchase new machinery costing Rs 50,000 and transportation costs of Rs 10,000. Life of the machine is 10 years with salvage zero. Average net profit after tax for ten years and be Rs 6,000.

Required: Average Rate of Return.

Group 'B'

Descriptive Answer Questions:

[6×3=18]

7. Explain the different features of job costing.
8. Budgeting means "accounting in the future", explain.
9. The profit from financial accounting is Rs 20,000. On reconciliation of cost and financial accounts of a company, the following difference are noticed.

Works overhead under recovered in cost account	- Rs 4,000
Bank interest credited	- Rs 3,000
Value of opening stock	- Rs 40,000
Value of closing stock	- Rs 50,000
Loss on sales of equipment	- Rs 1,000

Required: Reconcile between Cost and Financial Accounts.

10. Following information is provided to you:

Fixed manufacturing overhead (Rs)	90,000
Normal capacity units	18,000
Different in units of closing and opening inventory	4,000
Profit from absorption costing (Rs)	60,000

Required: Reconcile net income under variable costing.

11. The following information of process 2 account are given below:

Output from preceding process @ Rs 10	- 10,000 units
Normal loss in the process @ Rs 2	- 5% of input
Output to next process	- 9,400 units
Other expenses	- Rs 34,000

Required: Process 2 account.

12. Income statement of a Manufacturing Company is as follows:

Production and Sales Units:	10,000
Sales Revenue @ Rs 20 per unit	Rs 200,000
Less: Variable Cost @ Rs 12 per unit	Rs 120,000
Contribution Margin	Rs 80,000
Less: Fixed Cost	Rs 40,000
Net Income before Tax	Rs 40,000

Required: (a) BEP in units and Rs. (b) Sales units to earn Rs. 60,000

Problem Solving Questions:

Group 'C'

[4×6=24]

13. "The break-even analysis is a useful device of profit planning." Discuss.
 14. Differentiate between financial account and cost account with suitable example.
 15. The following information of sales, purchase and expenses are given below:

a. Historical and predicted sales Rs.

	Historical		Predicted
April	100,000	July	130,000
May	110,000	August	120,000
June	120,000	September	150,000
		October	120,000

- b. The firm incurs and pays a monthly rent expenses of Rs 6,000.
 c. Wages and salaries for the coming months are estimated as follows:
 July - Rs 18,000; August - Rs 20,000 and September - Rs 22,000.
 d. Of the firm's sales, 40 percent is collected in the month of sales, 30 percent one month after sale, & the remaining 30 percent two months after sales.
 e. Merchandise purchase is equal to 80 percent of sales and paid same month.
 f. Utilities for the firm average 2 percent of sales & are paid in the month of their incurrence.
 g. A depreciation expense is Rs 12,000 annually.
 If the firm's beginning cash balance for the budget period is Rs 5,000 and this is the minimum desired balance. Determine when and how much the firm will need to borrow during the budget period. If required, the firm can borrow from bank with 12 percent interest per year paid at the time of repayment.

Required: Cash budget for three months starting July.

16. A firm is considering the acquisition of equipment costing Rs 400,000. The equipment expected to have a useful life of five years. The transportation and installation charges for project required an additional of Rs 20,000 each. At the end of 5th year the machine would have book and cash salvage value of Rs 40,000 and Rs 60,000 respectively. The project yields annual surplus of Rs 80,000 after charging depreciation before tax. The corporate tax is 25% and the minimum required rate is 10%.

Required:

- a. Initial cash outlay.
 b. Annual cash flow after tax.
 c. Final year cash flow after tax. | Terminal year
 d. Net present value.
 e. Desirability of the project.

[1+2+1+1+1]

Group 'D'

[1×12=12]

Comprehensive Answer Questions:

17. A company produces three products: A, B and C. All products are produced on the same equipment and use similar processes. It exports its product to USA, China, India, Europe and Japan. The information for last period are given below:

Products	Output Units	Labour Hour per Unit	Machine Hour per Unit	Material per Unit (Rs)	Production Run
A	2,000	3	2	10	10
B	5,000	4	3	12	15
C	10,000	2	4	11	20

Direct Labour Cost per Hour is Rs 4.

The costs of the activities are as follows:

Items	Costs	Cost Drivers
Schedule Costs	Rs 90,000	Production Run
Repairs Costs	Rs 118,000	Machine Hours
Set-up Costs	Rs 135,000	Production Runs
Indirect Labour	Rs 138,000	DLH

Required: As a chief financial analyst of the company, you have been asked by the Chairman of the Company to answer on the following issues:

- Cost per unit under Conventional Method using machine hours
- Cost per unit under Activity Based Costing Method
- Profit per unit if selling price per unit of Rs 40, Rs 55 and Rs 60 for products A, B and C respectively from both method.
- Comment on the results.

[3+5+2+2]

Solution,

Q.7 Given, PIV Ratio = 40%, Profit = Rs. 40,000, Margin Safety = ?

We know,

$$\text{Profit} = \text{Margin of Safety} \times \text{PIV Ratio}$$

$$\text{or, Margin of Safety} = \frac{\text{Profit}}{\text{PIV Ratio}} = \frac{40,000}{0.4} = \text{Rs. } 1,00,000$$

Q.5. Calculation of cost for 6,000 units.

Particulars	Amount	
	Capacity in (units) 5000 units	6000 units.
Variable fixed cost:		
prime cost @ 6	30,000	36,000
Repair and Maintenance (60% Variable) $\frac{6000}{5000} \times 1.20$		7,200.
Fixed cost:		
Fixed cost	5000	5000
Repair and Maintenance (40% fixed)	4000	4000
Total cost of 6000 units		Rs. 52,200

Solution,

Q.6. Total Net cash outlay/ Investment = 50,000 + 10,000 = 60,000.

∴ Average investment = $\frac{60,000}{2} = 30,000$.

Average net profit after tax = Rs. 6,000.

We know

$$\text{ARR} = \frac{\text{Average net profit}}{\text{Average Investment}} \times 100\% = \frac{6,000}{30,000} \times 100\%$$

Group-B
Reconciliation Statement:

Q9	Particulars	Details	Amount.
	Net profit as per Financial a/c		20,000
Add:	Work off under recovered in cost a/c	4,000	
	Value of opening stock	40,000	
	Loss on sales of equipment	1,000	45,000
less:	Bank interest credit	3,000	
	Value of closing stock	50,000	(53,000)
			12,000
	Net profit as per Cost a/c		12,000

Q11.

Process - 2 account.

Particular	Unit	Amount	Particular	Unit	Amount.
To process-1 a/c @ 10	10,000	1,00,000	By Normal loss @ 5% of 2	500	1000
			By Abnormal loss @ 10.4211	100	1042
			By transfer to ^{next} process @ 10.4211	9400	97988
	10,000	1,00,000		10,000	1,00,000

Q.10. Reconcile Net income under VC

Q.11 = Working Note

Particulars	Amount.	Notes
Net income under VC (Bal. fig)	(80,000)	1) Actual output = 9400 unit
Net Income under AC	60,000	2) Standard output = 9500 "
Difference in net Income	(20,000)	3) Abnormal loss = 100 "
Difference in unit of closing and opening inventory	(4000)	4) NCPU = $\frac{100,000 - 1000}{9500}$
x FMC	5	= 10.4211
Difference in net income	(20,000)	FMC = $\frac{FMC}{NC}$
		= $\frac{90,000}{18,000}$
		= Rs. 5.

Q 12 Solution,

a) BEP in units and Rs. = ?

$$\text{BEP in (units)} = \frac{\text{Fixed cost}}{\text{Marginal cost per unit}} = \frac{\text{Rs. } 40,000}{\text{Rs. } 8} = 5,000 \text{ units.}$$

b) BEP in (Rs.) = $\frac{\text{Fixed cost}}{\text{P/V Ratio}} = \frac{40,000}{0.40} = \text{Rs. } 1,00,000.$

Working Note

$$\text{MEPU} = \frac{\text{MC}}{\text{Output}} = \frac{80,000}{10,000} = \text{Rs. } 8$$

$$\text{P/V Ratio / CM Ratio} = \frac{\text{CM}}{\text{Sales}} = \frac{80,000}{2,00,000} = 0.40$$

c) Sales units to earn Rs. 60,000 = ?

$$\text{Required sales} = \frac{\text{FC} + 60,000}{\text{P/V Ratio}} = \frac{40,000 + 60,000}{0.40} = 12,500 \text{ units.}$$

Group - C

Q 15 Working Note:

	April	May	June	July	August	September	October
Cash collection from Debtors							
Same Month (40%)	40,000	44,000	48,000	52,000	48,000	60,000	48,000
Next month (30%)		30,000	33,000	36,000	39,000	36,000	45,000
Following Month (20%)			30,000	33,000	36,000	39,000	36,000
Bad debt							
				121,000	123,000	135,000	129,000

Cash Budget For the three months Starting from July

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	Items	July	August	September
1.	Opening Cash Balance	5000	5000	5000
2.	Cash Receipts:			
	2.1 Cash Sales			
	2.2 Cash Collection from Debtors (WN)	121,000	123,000	135,000
	Total Receipt (Cash)	121,000		
3.	Total Cash Available (1+2)	126,000	128,000	140,000
4.	Cash Payments:			
	4.1 Rent Expenses	6,000	6,000	6,000
	4.2 Wages and Salaries	18,000	20,000	21,000
	4.3 Merchandise Purchase (80% of sales)	101,000	96,000	120,000
	4.4 Utilities (2% of sales)	2600	2400	3000
	Total Cash payment	130,600	124,400	151,000
5.	Minimum Cash Balance	5000	5000	5000
6.	Total Cash Needed (4+5)	135,600	129,400	156,000
7.	Surplus or Deficit (3-6)	(9600)	(1400)	(16,000)
8.	Financing:			
	8.1 Short-term borrowing	9600	1400	16,000
	8.2 Repayment of borrowing	-	-	-
	8.3 Interest payment of borrowing	-	-	-
9.	Surplus from financing (7+8.1)-(8.2+8.3)	0	0	0
10.	Closing Cash Balance (5+9)	5000	5000	5000

2017 0.16

Given,

price of Machine = Rs 4,00,000

Life of Machine = 5 year

Transportation and installation charge = 20,000 each.

BSV (end) = 40,000

CSV (end) = 60,000

EBT = Rs 80,000

tax @ = 25%

Required Rate = 10%

We know,

a) Initial cash outlay (NCO) = Price of Machine + transportation + Installation
 = (4,00,000) + (20,000) + (20,000)
 = (4,40,000) Ans

b) Calculation of annual cash flow after tax (CFAT)

	Earning before tax (EBT)	80,000
less:	tax @ 25%	(20,000)
	EAT	60,000
add:	Back depn	80,000
	Annual CFAT	<u>140,000</u>

W.N. Calculation of depn

$$\text{depn} = \frac{\text{PP} + \text{T} + \text{I} - \text{BSV end}}{\text{Life}} = \frac{4,00,000 + 20,000 + 20,000 - 40,000}{5}$$

$$= 80,000 \text{ p.a}$$

c) Calculation of final year CFAT

1) Tax Adjustment

BSV (end)	40,000
CSV (end)	60,000
gain	<u>20,000</u>

Amount

Tax paid @ 25%

(5,000)
60,000
140,000

2) CSV (end)

3) Annual CFAT

195,000

Final year CFAT

d) Calculation of NPV

Year	CFAT	Factor @ 10% i	PV
1-4	140,000	3.1699	4,43,786
5	195,000	0.6209	1,21,075.5

TPV 5,64,861.5
 - NCO 4,40,000
NPV 1,24,861.5

∴ The project is desirable, because its NPV is positive.

Group - D

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Working Note

Q 17

i)	Direct Material Cost Output X MCPU	ii) Direct Labour Cost Output X LHPU X LCPU	iii) Total Machine Hour Output X MH
A =	2000 X 10 = 20,000	A = 2000 X 3 X 4 = 24,000	A = 2000 X 2 = 4,000
B =	5000 X 12 = 60,000	B = 5000 X 4 X 4 = 80,000	B = 5000 X 3 = 15,000
C =	10,000 X 11 = 110,000	C = 10,000 X 2 X 4 = 80,000	C = 10,000 X 4 = 40,000

iv) Overhead cost per MH = $\frac{\text{Total Overheads}}{\text{Total Machine Hour}} = \frac{481,000}{59,000} = \text{Rs. } 8.1525 \text{ per MH}$

9) Calculation of CPU under Conventional Method using MH.

Particulars	A	B	C
Direct Material Cost	20,000	60,000	110,000
Direct Labour Cost	24,000	80,000	80,000
prime cost →	44,000	140,000	190,000
Add: Overhead cost per MH @ 8.1525	32,160	122,288	326,100
Total Cost (TC)	76,160	262,288	516,100
cpu = $\left(\frac{\text{TC}}{\text{output}}\right)$	38.30	52.46	51.61
Add: profit	1.70	2.54	8.39
Sales price	40	55	60

b) Calculation of CPU under ABC Method:

Items	Cost Drive	Total Cost	Products			Total Activities	CDR $\frac{x}{y}$
			A	B	C		
Schedule Cost	90,000 Prod ⁿ Run	90,000	10	15	20	45	2000
Repairs costs	118,000 MH	118,000	4000	15000	40,000	59,000	2
Set-up costs	135,000 Prod ⁿ Run	135,000	10	15	20	45	3000
Indirect labour	138,000 DLH	138,000	6,000	20,000	20,000	46,000	3

Step: 2

Particulars	A	B	C
prime cost	44,000	140,000	190,000
Overhead cost:			
Schedule cost @ 2000	26,000	30,000	40,000
Repair cost @ 2	8,000	30,000	80,000
Set-up cost @ 3000	30,000	45,000	60,000
Indirect labour cost @ 3	18,000	60,000	60,000
Total cost (TC)	120,000	305,000	430,000
© CPU ($\frac{TC}{\text{output}}$)	60	61	43
Additional: profit/loss	(20)	(6)	17
Selling price	40	55	60

d. Comment on the results.

[10 marks]

TU Exam 2018

Group 'A'

Brief Answer Questions:

[6x1=6]

1. What is cost accounting?
2. Write the meaning of product cost.
3. Write in brief any two limitations of financial accounting.
4. The difference in total cost is Rs 4,500 and difference in unit 450. The fixed cost for the period is Rs 5,750. Calculate the total cost for 7,000 units.
5. The following information of manufacturing company are provided:

Prime Cost	Rs 150,000
Work Overhead	Rs 75,000
Opening Stock of W-I-P	Rs 25,000
Closing Stock of W-I-P	Rs 30,000

Required: Factory cost

6. The company purchase new plant costing Rs 250,000 with its life 5 years. Average NIAT for 5 years will be Rs 75,000.

Required: Accounting rate for return (ARR).

Group 'B'

Descriptive Answer Questions:

[6x3=18]

7. Distinguish between fixed overhead and variable overhead.
8. Define Job Order Costing and give any two examples of job order costing.
9. The following information are provided:

Particulars	Cost account (Rs)	Financial account (Rs)
Work overhead	50,000	60,000
Administrative overhead	20,000	15,000
Interest on investment	-	20,000
Income tax paid	-	25,000
Closing stock	40,000	45,000
Net profit	150,000	-

Required: Reconciliation statement

10. The profit and total cost of a company during two years were as follows:

Year	Total cost (Rs)	Profit (Rs)
2016	740,000	60,000
2017	920,000	80,000

Required:

- a. Profit volume ratio
- b. Fixed cost
- c. Breakeven point in Rs.

d. Comment on the results.

[3+5+2+2]

TU Exam 2018

Group 'A'

Brief Answer Questions:

[6×1=6]

1. What is cost accounting?
2. Write the meaning of product cost.
3. Write in brief any two limitations of financial accounting.
4. The difference in total cost is Rs 4,500 and difference in unit 450. The fixed cost for the period is Rs 5,750. Calculate the total cost for 7,000 units.
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Work Overhead	Rs 75,000
Opening Stock of W-I-P	Rs 25,000
Closing Stock of W-I-P	Rs 30,000

Required: Factory cost

6. The company purchase new plant costing Rs 250,000 with its life 5 years. Average NIAT for 5 years will be Rs 75,000.

Required: Accounting rate for return (ARR).

Group 'B'

Descriptive Answer Questions:

[6×3=18]

7. Distinguish between fixed overhead and variable overhead.
8. Define Job Order Costing and give any two examples of job order costing.
9. The following information are provided:

Particulars	Cost account (Rs)	Financial account (Rs)
Work overhead	50,000	60,000
Administrative overhead	20,000	15,000
Interest on investment	-	20,000
Income tax paid	-	25,000
Closing stock	40,000	45,000
Net profit	150,000	-

Required: Reconciliation statement

10. The profit and total cost of a company during two years were as follows:

Year	Total cost (Rs)	Profit (Rs)
2016	740,000	60,000
2017	920,000	80,000

Required:

- a. Profit volume ratio
- b. Fixed cost
- c. Breakeven point in Rs.

11. A company manufacturing a single product, the opening data for period is given below:

Selling price per unit	
Prime cost per unit	Rs 60
Fixed manufacturing cost	Rs 25
Fixed selling overhead	Rs 100,000
Variable selling overhead	Rs 80,000
Normal capacity	5% of sales
Production units	10,000 units
Sold unit	8,000 units
Closing stock unit	9,000 units
	3,000 units

Required: Income statement under absorption costing

12. Consider the following information:

Direct material	Rs 4,000
Direct labour charge	Rs 6,000
Factory overhead	20% of prime cost
Office overhead	50% on factory overhead
Selling overhead	40% of cost of goods sold
Opening stock	300 units
Closing stock	400 units
Sales	2500 units
Selling price per unit	Rs 20 per unit

Required: Statement of cost and profit.

Group 'C'

[4×6=24]

Problem Solving Questions:

13. "Management account is concerned with accounting information, which is useful to management decision making." Explain.
14. "Cost volume profit analysis is an important technique of profit planning, control and decision making". Discuss.

15. The Nepal Everest Company wants to replacement one of the old machine by new machine. The current machine was purchased at Rs 100,000 five years ago with a useful life ten years. Company would receive zero value at the end of the life but it is sold today will be realized at Rs 60,000.

The new machine will be purchased at a cost of Rs 220,000. It has an estimated resale value at the end of life is Rs 20,000. The new machine has greater capacity and it is expected the sales would increase from Rs 100,000 to Rs 120,000. The new machine will save operating cost of Rs 20,000 per year. Depreciation is charged at straight line method. The cost of capital is 10% and the rate is 25%.

Required:

- a. NCO
- b. CFAT
- c. Final year CFAT
- d. Should the company replace the machine or not using NPV criteria?
16. A Company has been a following a policy of selling 40% in cash and remaining 60% on credit. Experience has shown that 50% of credit sales would be collected in the month of sales, 30% in the following month of sales and remaining 20% in the next following month of the sale. The actual and forecasted sales of the Company have been given below:

Baishakh (Actual)	Rs 100,000	Shrawan (Forecasted)	Rs 100,000
Jestha (Actual)	Rs 150,000	Bhadra (Forecasted)	Rs 200,000
Asadh (Actual)	Rs 150,000	Aswin (Forecasted)	Rs 250,000

Creditors and expenses would be paid in the month of purchase and the expenses incurred. The forecasted for three months would be

Particulars	Shrawan	Bhadra	Aswin
Expenses	Rs 30,000	Rs 30,000	Rs 30,000
Purchase	Rs 40,000	Rs 80,000	Rs 100,000

The company would like to purchase a computer at a cost of Rs 80,000 in the month of Shrawan. The company would like to maintain uniformly cash balance of Rs 20,000, which the company has been maintaining in the past.

The company would borrow loan and pay back in a multiples of Rs 10,000 from the commercial bank at an interest rate of 12% p.a. The interest would be paid only for the amount of loan repaid in nearest Rs 100.

Required: Cash budget for three months ending Ashwin.

Group 'D'

Comprehensive Answer Questions:

[1×12=12]

17. A manufacturing company provided the following particulars.

Particulars	Process-I (Rs)	Process-II (Rs)	Finished product (Rs)
Opening Stock	2,000	5,000	10,000
Direct Material	9,000	15,000	-
Direct Labor	5,000	12,000	-
Direct Expenses	4,000	8,000	-
Manufacturing Overhead	4,000	7,000	-
Closing Stock on <u>prime cost</u>	4,000	8,000	15,000
Inter process profit in Opening Stock	-	1,000	4,000
Profit on <u>transfer Price</u> (%)	20	20	-
Sales	-	-	100,000

Required:

- Process Accounts
- Finished Stock Account
- The value of Actual realized profit

- Q4. Given,
 Difference in total cost = Rs. 4500
 Difference in units = 450
 Fixed cost = Rs. 5750 (a)
 Calculate the total cost for 7000 units.

We know,

$$\text{Variable cost (b)} = \frac{\text{diff. in total cost}}{\text{diff. in total units}} = \frac{\text{Rs. 4500}}{450} = \text{Rs. 10}$$

Now,

$$\begin{aligned} Y &= a + bx \\ &= \text{Rs. 5750} + (\text{Rs. 10} \times 7000) \\ &= \text{Rs. 5750} + 70000 \\ &= \text{Rs. 75,750} \text{ Ans.} \end{aligned}$$

- Q5. Calculation of Factory Cost:

particulars	Amount
prime cost	150,000
Add: Work overhead	75,000
Factory cost incurred	<u>2,25,000</u>
Add: opening stock of W-I-P	25,000
less: closing stock of W-I-P	(30,000)
Factory cost	2,20,000

Q6. ~~Soln~~ Average Investment = $\frac{\text{Net investment}}{5} = \frac{2,50,000}{5} = 50,000$

Average Net Income = ~~total~~ net income 75,000.

Group - B
Reconciliation Statement:

Q.9	Particulars	Details	Amount
	Net profit as per cost a/c	150,000	150,000
Add:	Administrative OH more than financial a/c	5,000	
	Interest on investment	20,000	
	Closing stock valuation more in financial a/c	5,000	30,000
less:	Work OH less than financial a/c	10,000	
	Income tax paid	25,000	(35,000)
	Net profit as per financial a/c		<u>145,000</u>

Q.10. ~~SOA~~ Wrong

a)
$$PIV \text{ Ratio} = \frac{\text{difference in profit}}{\text{difference in Sales}} = \frac{80,000 - 60,000}{720,000 - 740,000} = 0.12$$

b)
$$\text{Fixed cost} \Rightarrow \text{Sales} \times PIV \text{ Ratio} - \text{Profit} \Rightarrow 740,000 \times 0.12 - 60,000$$

$$\Rightarrow \text{Rs. } 28,800.$$

c)
$$BEP \text{ in (Rs)} = \frac{FC}{PIV \text{ Ratio}} = \frac{\text{Rs. } 28,800}{0.12} = \text{Rs. } 2,40,000 \text{ Ans}$$

Q.11 Solutions,

Income Statement under Absorption Costing.

Particulars	Amount
Sales Revenue (9000 x 60) (A)	5,40,000
less: Total mfg. cost:	
prime cost @ 25 x 8000	2,00,000
fixed mfg. OH 10 x 8000	80,000
Add: opening stock @ 35 x 4,000	1,40,000
less: Closing stock @ 35 x 3,000	(1,05,000)

Total mfg. cost before adjustment	815,000
Add: Under Absorption	20,000
less: Over Absorption	0
Total mfg cost After adj. (B)	835,000
Gross profit (C = A - B)	2,25,000
less: Total Non-mfg cost:	
Variable selling OH (5% of sale)	27,000
Fixed selling OH	80,000
Total Non-mfg. cost (D)	107,000
Net Income (E = C - D)	118,000

Working Note:

Opening Stock = 4,000	FMCR = $\frac{FMC}{NC}$
+ production units = 8,000	NC
Total units = 12,000	= $\frac{100,000}{10,000}$
- Selling units = 9,000	
closing stock = 3,000	= Rs. 10.

Q12.

Solution,

Statement of cost and profit

particulars	Amount
Direct material	4,000
Direct labour charge	6,000
prime cost →	10,000
Add: Factory OH (20% of p.c)	2,000
factory/work cost →	12,000

Add:	Office and administrative O/H (50% of Factory O/H).	1,000
	Cost of goods sold →	13,000
Add:	Selling and distribution O/H (40% of COGS)	5,200
	Total cost →	18,200
Add:	Profit	31,800
	Sales Revenue (20 × 2500)	<u>50,000</u>

Group C

Q 15.6 (2018)

$$\text{Average investment} = \frac{\text{Net Investment}}{2} = \frac{2,50,000}{2} = 1,25,000$$

$$\text{Average net Income} = \frac{\text{Total net Income}}{\text{No. of year}} = 75,000 \text{ (given)}$$

Now,

$$\text{ARR} = \frac{\text{Average Net Income}}{\text{Average investment}} \times 100\%$$

$$= \frac{75,000}{1,25,000} \times 100\%$$

$$= 60\% \quad \text{Ans}$$

Q. 10.

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Soln Here,

$$\begin{aligned}\text{Total Sales (2017)} &= \text{total cost} + \text{profit} \\ &= 920,000 + 80,000 = 10,00,000\end{aligned}$$

$$\begin{aligned}\text{Total Sales (2016)} &= \text{total cost} + \text{profit} \\ &= 740,000 + 60,000 \\ &= 8,00,000.\end{aligned}$$

Now,

$$\begin{aligned}\text{a) PIV Ratio} &= \frac{\text{Difference in profit}}{\text{Difference in Sales}} = \frac{80,000 - 60,000}{10,00,000 - 8,00,000} = 0.1 \\ &= 10\%.\end{aligned}$$

$$\begin{aligned}\text{b) FC} &= (\text{Sales} \times \text{PIV ratio}) - \text{profit} \\ &= (8,00,000 \times 0.10) - 60,000 \\ &= \text{Rs. } 20,000.\end{aligned}$$

$$\begin{aligned}\text{c) Break even point in (Rs)} &= \frac{\text{fixed cost}}{\text{PIV ratio}} \\ &= \frac{20,000}{0.1}\end{aligned}$$

$$= \text{Rs. } 2,00,000.$$

Ans

Q. ¹⁵ ~~16~~ (2017) (2018)

	New	Old	Diff.
1) <u>Salvage value:</u>			
BSV (now)	X	(?) 50,000	
CSV (now)		60,000	
BSV (end)	20,000	-	20,000
CSV (end)	0	0	0
2) purchase price	2,20,000	1,00,000	
3) Installation and transportation	-	-	
4) Life of Machine	5 yrs.	10-5=5 yrs	
5) Working Capital	20,000		
6) Investment tax credit			
7) Tax @ 25%			
8) Cost of Capital (K) = 10%			
9) For CFAT			
Sales			
- Operating Cost			
EBDT / CFBT			20,000

Working Note:

$$\text{depr} = \frac{(\text{pp} + \text{T and I}) - \text{BSV (end)}}{\text{total life}} = \frac{1,00,000 + 0 - 0}{10}$$

$$= \frac{1,00,000}{10} = 10,000 \text{ p.a.}$$

$$\text{BSV (now)} = \text{P.P} - \text{total accumulated depr}$$

$$= 1,00,000 - (5 \times 10,000)$$

$$= \text{Rs. } 50,000$$

Step 1) Calculation of NCO

i)	purchase price	(2,20,000)
ii)	Trans. and Int	-
iii)	Working Capital	20,000
iv)	CSV (now) of old Machine	60,000
v)	Investment tax credit	-
vi)	Tax adjustment:	
	BSV (now) of old Machine	50,000
	CSV (now) of old "	60,000
	Gain/profit	10,000
vii)	Tax @ 25% of 10,000	(2,500)
	NCO	(1,42,500)

Step 2: Calculation of diff. annual depn.

New Machine

$$\text{depn} = \frac{(\text{P.P.} + \text{Trans. \& Int.}) - \text{BSV (end)}}{\text{Life}} = \frac{2,20,000 + 0 - 20,000}{5} = \frac{2,00,000}{5} = 40,000 \text{ p.a.}$$

Old Machine

$$\text{depn} = \frac{\text{BSV (now)} - \text{BSV (end)}}{\text{Remaining life}} = \frac{50,000 - 0}{5} = \text{Rs. } 10,000 \text{ p.a.}$$

$$\therefore \text{Diff depn} = 40,000 - 10,000 = 30,000.$$

Step 3) Calculation of annual differential CFAT:

particulars	Amount
Diff EBDT	20,000
less: Diff annual deph	30,000
Diff EBT	(10,000)
Add: Tax @ 25%	2500 (save)
Diff. EAT	(7500)
add: Back diff annual deph	30,000
Diff annual CFAT	22,500

Step 4: Calculation of final year CFAT:

particulars	Amount
i) Tax adjustment:	
Diff BSV (end)	20,000
Diff CSV (end)	0
loss	20,000
Tax save @ 25%	5000
ii) Diff CSV (end)	0
iii) Working Capital tied up	(20,000)
iv) Diff. annual CFAT	22,500
Final year CFAT	7,500

Step 5: Calculation of NPV:

Year	CFAT	Factor @ 10%	PV
1-4	22,500	3.1699	71,322.75
5	7500	0.6830	5,122.5

$$\begin{aligned}
 TPV &= 76445.25 \\
 - NCO &= (142,500) \\
 \hline
 NPV &= (66,054.75)
 \end{aligned}$$

Q16. Working Note

	Baisakh	Jestha	Asadha	Shrawan	Bhadra	Aswin
Cash Sales (40%)	40,000	60,000	60,000	40,000	80,000	100,000
Credit Sales (60%)	60,000	90,000	90,000	60,000	120,000	150,000
Total Sales	1,00,000	1,50,000	1,50,000	1,00,000	2,00,000	2,50,000
Cash Collection from debtors:						
Same month (50%)	30,000	45,000	45,000	30,000	60,000	75,000
Next month (30%)		18,000	27,000	27,000	18,000	36,000
Following Next month (20%)			12,000	18,000	18,000	12,000
Bad debt	-	-	-	-	-	-
Total cash collection from debtors				75,000	96,000	1,23,000 1,23,000

Cash Budget For the three months Ending Ashwin

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	Items	Shrawan	Bhadra	Ashwin
1.	Opening Cash Balance	20,000	25,000	50,200
2.	Cash Receipts			
	2.1 Cash Sales	40,000	80,000	100,000
	2.2 Cash Collection from debtor	75,000	96,000	123,000
	Total Cash Receipt	115,000	176,000	223,000
3.	Total Cash Available (1+2)	135,000	201,000	273,200
4.	Cash Payment:			
	4.1 Purchases	40,000	80,000	100,000
	4.2 Expenses	30,000	30,000	30,000
	4.3 Purchases of Computer	80,000	-	-
	Total Cash payment	150,000	110,000	130,000
5.	Minimum Cash Balance	20,000	20,000	20,000
6.	Total Cash Needed (4+5)	170,000	130,000	150,000
7.	Surplus or Deficit (3-6)	(35,000)	71,000	123,200
8.	Financial			
	8.1 Short-term borrowing	40,000	-	-
	8.2 Repayment of borrowing	-	(40,000)	-
	8.3 Interest payment of borrowing	-	(800)	-
9.	Surplus from Financing (7+8.1)-(8.2+8.3)	5,000	30,200	123,200
10.	Closing Cash Balance (5+9)	25,000	50,200	143,200

Solution,

Group - D

Process - I Account

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Q.17
a)

Particular	Total	Cost	Profit	Particular	Total	Cost	Profit
To opening stock	2,000	2,000	-	By process - II	25,000	20,000	5,000
To direct material	9,000	9,000	-	Account			
To direct labour	5,000	5,000	-				
To direct expenses	4,000	4,000	-				
Total	20,000	20,000	-				
less: Closing stock	(4,000)	(4,000)	-				
prime cost	16,000	16,000	-				
To Mfg. OH	4,000	4,000	-				
Total cost	20,000	20,000	-				
add: profit 20%	5,000	-	5,000				
Transfer price	25,000	20,000	5,000		25,000	20,000	5,000

Working Note: Process - I

$$\text{Profit} = \frac{20,000}{100 - 20} \times 20 = \text{Rs. } 5,000.$$

Process - II Account

Particular	Total	Cost	Profit	Particular	Total	Cost	Profit
To process - I 9/c	25,000	20,000	5,000	By finished	80,000	58,738	21,262
To opening stock	5,000	4,000	1,000	9/c			
To direct material	15,000	15,000	-				
To direct labour	12,000	12,000	-				
To direct expenses	8,000	8,000	-				
Total	65,000	59,000	6,000				
less: Closing stock	(8,000)	(7,262)	(738)				
prime cost	57,000	51,738	5,262				
To Mfg. OH	7,000	7,000	-				
Total cost	64,000	58,738	5,262				

Add: profit (20%)	16,000	-	16,000				
Transfer price	80,000	58,738	21,262		80,000	58,738	21,262

Working Note: process-II

$$i) \text{ profit} = \frac{64,000}{100-20} \times 20 = \text{Rs. } 16,000$$

$$ii) \text{ Cost of closing stock} = \frac{\text{Cost}}{\text{Total}} \times \text{closing stock} = \frac{59,000}{65,000} \times 8,000 = 7,261.5 \approx 7,262$$

b) ^{Stock} Finished Account

Particular	Total	Cost	Profit	Particular	Total	Cost	Profit
To process-II 91c	80,000	58,738	21,262	By Sales 91c	100,000	53,948	46,052
To opening stock	10,000	6,000	4,000				
Cost of goods available	90,000	64,738	25,262				
Less: Closing stock	(15,000)	(10,790)	(4,210)				
Cost of goods sold	75,000	53,948	21,052				
Add: profit	25,000	-	25,000				
Sales	100,000	53,948	46,052		100,000	53,948	46,052

Working Note: Finished stock 91c

$$i) \text{ Cost of closing stock} = \frac{\text{Cost}}{\text{Total}} \times \text{closing stock} = \frac{64,738}{90,000} \times 15,000 = 10,790$$

$$e) \text{ ARP} = \text{opening's stock profit} + \text{process's profit} - \text{closing stock}$$

c) The value of Actual realized profit (ARP) \Rightarrow ?

ARP = Opening stock realised profit + Inter process profit - closing
Stock realised profit

$$\text{process-I} \Rightarrow 0 + 5000 - 0 \Rightarrow 5000$$

$$\text{" II} \Rightarrow 1000 + 16,000 - 738 \Rightarrow 16,262$$

$$\text{finished stock} \Rightarrow 4000 + 25,000 - 4210 \Rightarrow 24,790$$

$$\text{Total: } 46,052 \quad \underline{\text{Ans}}$$

~~Sunil~~ - Sunil Rauniyar
Nec 4th Sem

c. The value of Actual realized profit

TU Exam 2019

Group 'A'

[6 × 1 = 6]

Brief Answer Questions

1. Write in brief any two limitations of financial accounting.
2. Write in brief any two importance of cost accounting.
3. Define the meaning of cost sheet.
4. The following cost and output details are provided to you:

Cost (Rs)	60,000	90,000
Output units	4,000	7,000

Required: Total cost for 5000 units. Using $Y = a + bx$

5. The following information of a manufacturing company is available:

- Profit from variable costing Rs. 40,000.
- Profit from absorption costing Rs. 52,000.
- Opening stock of finished goods were 3,000 units.
- Closing stock of finished goods were 5,000 units.
- Fixed manufacturing expenses (at normal capacity 10000 units) Rs. 60,000.

Required: Reconciliation of profit between variable and absorption costing.

6. The cash flows during the expected life of the machine are given below:

Years	0	1	2	3	4
Cash flows (Rs.)	(30,000)	10,000	12,000	11,000	10,000

Required: Payback period.

Descriptive Answer Questions:

Group 'B'

[6 × 3 = 18]

7. Define job order costing. Mention which business organization uses this costing.
 8. "Activity based costing system is more relevant in determining the cost of product in a wide range of products" comment.
 9. The following information is provided to you:

Particulars	Job 1	Job 2
Materials	Rs. 4,000	Rs. 6,000
Labour charges	Rs. 9,600	Rs. 9,600

Factory overhead is charged 50% of Labour charges.
 Office overhead 20% of Factory cost.

Required: Job order cost sheet showing total cost of each job.

10. The following information provided to you:

Year	2072	2073
Sales (Rs.)	58,000	65,000
Profit (Rs.)	5,300	8,100

Required: (a) PV ratio (b) Total Fixed Cost (c) Break even sales in rupees.

11. A manufacturing company provided the following data:

- Raw material consumed Rs. 60,000
- Direct wages Rs. 22,000
- Opening stock of finished goods (5000 units) Rs. 20,000
- Factory overhead Rs. 10,000
- Office and administrative overhead 20% of work cost.
- Selling overhead Rs. 2 per unit.
- Units produced 20,000 units
- Units sold 22,000 units @ Rs. 10 per unit.

Required: Cost sheet showing profit per unit.

12. The following information is provided to you:

- Direct material Rs. 12 per unit
- Direct labour Rs. 6 per unit
- Factory overhead: Variable Rs. 5 per unit
- : Fixed Rs. 40,000
- Office and administrative overhead fixed 10% of sales.
- Selling and distribution overhead: Variable Rs. 4 per unit.
- : Fixed Rs. 15000
- Opening stock of finished goods were 2,000 units
- Closing stock of finished goods were 4,000 units
- Sales 26,000 units with selling price per unit Rs. 40

Required: Income statement under variable costing.

Group 'C'

[4 × 6 = 24]

Problem Solving Questions:

13. "Cost volume profit analysis is an important technique of profit planning and control". Discuss.
 14. What is process costing? What are the differences between Job Order Costing and Process Costing?
 15. A company wants to buy a machine. Two machines are available costing Rs. 50,000 each with life 5 years of both machines. The cost of capital is 10%. The net cash flow during the expected life of both machines are as below:

Years	1	2	3	4	5
Machine A	30,000	25,000	22,000	20,000	23,000
Machine B	20,000	20,000	20,000	20,000	20,000

Required: Which machine should be purchased according to the following methods?

(a) Payback period (b) NPV.

The following information of sales, purchase and other details are given below:

Months	December	January	February	March
Sales (Rs.)	400,000	500,000	600,000	650,000
Purchases (Rs.)	350,000	470,000	455,000	350,000

Purchases are paid after one month of purchase.

The firm has a policy of maintaining minimum cash balance of Rs. 20,000 and opening balance of cash is Rs. 20,000. It was reached with an agreement with bank for 12% interest p.a. on loan. All the borrowing and repayments are to be made in the multiple 5,000 and 1,000 respectively. Amount of interest due are paid with loan repaid.

80% of sales are in cash. Credit sales will be realized after one month of sales.

Administrative expenses of Rs. 35,000 every month and selling expenses 5% of sales in each month, which will be paid in the same month. Furniture will purchase for Rs. 122,000 on February.

Required: Cash budget for three months ending March.

Group 'D'

Comprehensive Answer Question:

[1 × 12 = 12]

17. A product passes through two distinct processes A and B and there after it transferred to finished stock account. The results of each operation for the last month are as follows:

Particulars	Process A	Process B
Main materials 10,000 units @ Re.1 each	Rs. 10,000	-
Direct materials	Rs. 10,000	Rs. 15,000
Direct labour	Rs. 60,000	Rs. 70,000
Manufacturing overhead	Rs. 15,450	Rs. 15,895
Normal wastage in inputs	3%	5%
Actual output	9,500 units	9,100 units
Normal wastage realized per unit	Rs. 2.50	Rs. 5.50

Required: (a) Process Accounts, (b) Abnormal loss, Abnormal gain and Normal loss accounts.

[3+3+2+2+2]

Q.4. Total cost for 5000 units: ?

Now,

$$\text{Total cost (Y)} = a + bx \Rightarrow \text{Rs. } 20,000 + (10 \times 5000) \Rightarrow \text{Rs. } 70,000 \text{ Ans.}$$

Working Notes:

$$\text{Variable cost per unit (b)} = \frac{\text{High cost} - \text{Low cost}}{\text{High unit} - \text{Low unit}} = \frac{90,000 - 60,000}{7000 - 4000} = \text{Rs. } 10$$

$$\text{Fixed cost (FC)} = \text{Total cost} - b \times \text{units} \Rightarrow 90,000 - 10 \times 7000 = \text{Rs. } 20,000$$

Q.5 Reconciliation of profit between variable and absorption costing:

Particulars	Amount (Rs.)
Net profit as per variable costing	40,000
Net profit as per Absorption Costing	52,000
Difference in net profit / loss (A)	(12,000)
Opening stock in units	3,000
Closing stock in units	5,000
Change in stock units	(2,000)
(x) Standard fixed overheads rate	Rs. 6
Changes in stock valuation (B)	(12,000)
∴ A = B	

Working Note:

$$\text{FMC} = \frac{\text{FMC}}{\text{MC}} = \frac{\text{Rs. } 60,000}{10,000} = \text{Rs. } 6$$

Q.6. Calculation of payback period (uneven)

Years	Cash Flows (CFAT)	Cumulative CFAT (Rs.)
0	(30,000)	(30,000)
1	10,000	(20,000)
2	12,000	(8,000)
3	11,000	3,000
4	10,000	13,000

Now,

$$\text{Payback period (PPP)} = \text{Minimum year} + \frac{\text{Amount to be Recovered}}{\text{Next year CFAT}}$$

$$= 2 + \frac{8,000}{11,000}$$

$$= 2.73 \text{ years. Ans}$$

Group-B

Q.9

Solution,

Particulars	Job 1	Job 2
Materials	4,000	6,000
labour charge	9,600	9,600
prime cost →	13,600	15,600
Add: Factory o/H (50% labour charge)	4,800	4,800
Factory 1 work cost	18,400	20,400
Add: Office o/H (10% of factory cost)	3,680	4,080
Total cost of each job:	22,080	24,480

Q 10.

$$a) \text{ PIV Ratio} = \frac{\text{difference in profit}}{\text{difference in sales}} = \frac{\text{Rs. } 8100 - \text{Rs. } 5300}{65,000 - 58,000}$$

$$\Rightarrow \frac{2800}{7000} = 0.40$$

\therefore PIV Ratio = 0.40 Ans

$$b) \text{ Total Fixed Cost (FC)} = \text{Sales} \times \text{PIV Ratio} - \text{profit}$$

$$\Rightarrow 65,000 (2073) \times 0.40 - 8100 (2073)$$

$$\Rightarrow 26,000 - 8100$$

$$\Rightarrow \text{Rs. } 17,900 \text{ Ans}$$

$$c) \text{ Break even Sales in Rupees.}$$

$$\text{BEP (Rs)} = \frac{\text{Fixed Cost (FC)}}{\text{PIV Ratio}} = \frac{17,900}{0.40} = \text{Rs. } 44,750 \text{ Ans}$$

Q 11. Solution,

Cost sheet showing profit per unit:

particulars	Amount
Raw Material consumed	60,000
Direct wages	21,000
<u>prime cost</u>	<u>81,000</u>
Add: Factory O/H	10,000
Factory/work O/H	32,000
Add: Office and Administration O/H (20% of w.c)	18,400
<u>Cost of production</u>	<u>140,400</u>

Add: Opening stock of finished goods (5000 units)	20,000
less: closing stock of " (3000 ")	(12,100)
Cost of goods sold	118,400
Add: Selling and dist. @ 11% B. & 2 per units (22,100 x 2)	44,000
Cost of Sales or total cost	162,400
Add: profit	57,600
Sales Revenue (22,100 x 10)	<u>2,20,000</u>

$$\text{profit per unit} = \frac{57,600}{22,100} = \text{Rs. } 2.62 \text{ per unit.}$$

Working Note:

Opening Stock	= 5,000
+ production units	= 20,000
Total units	= 25,000
- Sales units	= 22,000
Closing Stock	= 3,000

~~2.22~~

8.12 (2019)

Income Statement under variable costing.

Particulars	Amount
Sales (26,000 x 40) (A)	10,40,000
less: Total variable cost	
Direct materials (12 x 28,000)	3,36,000
Direct labour (6 x 28,000)	1,68,000
Variable factory OH (5 x 28,000)	1,40,000
Variable mfg. cost (@ 23 x 28,000)	6,44,000
Add: Opening stock (2,000 x 23)	46,000
less: Closing stock (4,000 x 23)	(92,000)
Total Variable mfg. cost	5,98,000
Add: Variable Non-mfg.	
office and distn @ 4 x 26,000	104,000
Total variable cost (B)	7,02,000
Contribution Margin (A - B) = C	3,38,000
less: Total fixed cost:	
Factory OH	40,000
Selling and distn OH	15,000
office and administration OH	1,04,000
Total fixed cost (D)	159,000
Net Income (E = C - D)	1,79,000

Working Note:

Opening stock + production unit - closing stock = sales units.

$$\Rightarrow 2,000 + PU - 4,000 = 26,000$$

$$\Rightarrow PU = 26,000 + 4,000 - 2,000 = 28,000 \text{ units.}$$

Q15.

Given,

Two machines costing Rs. 50,000 each \Rightarrow NCOLife of both machines \Rightarrow 5 yearsCost of Capital \Rightarrow 10%

We know that,

9) \rightarrow For Machine - A (uneven case)

$$\text{Payback period (PBP)} = \text{Minimum year} + \frac{\text{Amount to be Recovered}}{\text{Next year CFAT}}$$

$$\Rightarrow 1 + \frac{20,000}{25,000}$$

$$= 1.8 \text{ years. Ans}$$

Working Note:

Years	CFAT	Cumulative CFAT
1 0	(50,000)	(50,000)
2 1	30,000	(20,000)
3 2	25,000	5,000
4 3	22,000	27,000
5 4	20,000	47,000
5 5	23,000	70,000

 \rightarrow For Machine - B (even case)

$$\text{Payback period (PBP)} = \frac{\text{NCO}}{\text{Annual CFAT}}$$

$$= \frac{\text{Rs. } 50,000}{20,000}$$

$$= 2.5 \text{ years. Ans}$$

b) Net present value (NPV) = ?

→ For Machine - A (uneven case)

Years	CFAT	PVIF@10%.t	Present value (PV)
1	30,000	0.9091	27,273
2	25,000	0.8264	20,660
3	22,000	0.7513	16,528.6
4	20,000	0.6830	13,660
5	23,000	0.6209	14,280.7
			TPV = 92,402.3
			less: NCO = (50,000)
			NPV = 42,402.3

∴ Net present value (NPV) = Rs. 42,402.3 Ans

→ For Machine - B (even case)

Years	CFAT	PVIFA@10%,5	Total present value (PV)
1-5	20,000	3.7908	Rs. 75,816
			less: NCO 50,000
			NPV = Rs. 25,816

∴ Net present value (NPV) = Rs. 25,816.

Conclusion:-

According to this method, it is better to purchase Machine - A because its payback period is lesser than PBP of Machine B as well as higher positive net present value.

Cash Budget For the three months ending March.

Q. 16

	Items	January	February	March
1.	Opening Cash Balance	20,000	90,000	23,000
2.	Cash Receipts			
	2.1. Cash Sales (80% of sales)	4,00,000	4,50,000	5,20,000
	2.2. Cash collection from debtor (WN-1)	80,000	1,00,000	1,20,000
	Total Cash Receipt	4,80,000	5,80,000	6,40,000
3.	Total cash Available (1+2)	5,00,000	6,70,000	6,63,000
4.	Cash payments:			
	4.1 Purchases	3,50,000	4,70,000	4,55,000
	4.2 Administrative Expenses	35,000	35,000	35,000
	4.3 Selling Exp. (5% of sales)	25,000	30,000	32,500
	4.4 purchase of Furniture	-	1,22,000	-
	Total Cash payment	4,10,000	6,57,000	5,22,500
5.	Minimum Cash Balance	20,000	20,000	20,000
6.	Total Cash Needed (4+5)	4,30,000	6,77,000	5,42,500
7.	Surplus or deficit (3-6)	70,000	(7,000)	1,20,500
8.	Financing:			
	8.1 Short-term borrowing	-	10,000	-
	8.2 Repayment of borrowing	-	-	(10,000)
	8.3 Interest payment of borrowing	-	-	(200)
9.	Surplus from Financing (7+8.1) - (8.2+8.3)			
10.	Closing Cash Balance (5+9)	90,000	23,000	1,30,300

Working Note: 1

	December	January	February	March
Cash sales (80%)	3,20,000	4,00,000	4,80,000	5,20,000
Credit sales (20%)	80,000	1,00,000	1,20,000	1,30,000
Total sales	4,00,000	5,00,000	6,00,000	6,50,000
Cash Collection				
From Debtors:				
Same Month	-	-	-	-
Next Month	-	80,000	1,00,000	1,20,000
Bad debt				
Cash Collection				
From Debtors		80,000	1,00,000	1,20,000

Working Note: 2

$$\text{Interest Amount} = \frac{10,000 \times 12}{100} = \text{Rs } 12,000 \text{ per year}$$

$$\Rightarrow \frac{12,000}{12} \text{ per month}$$

$$\Rightarrow \text{Rs. } 100 \text{ per month}$$

$$\Rightarrow 100 \times 2 \text{ month. (February and March)}$$

$$\Rightarrow \text{Rs. } 200$$

Group - D

Q. 17

Process - A account

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Date _____
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9)

Particular	Units	Rs.	Particular	Units	Rs.
To main materials @ Re 1 each	10,000	10,000	By normal loss (3%) @ 2.50	300	750
To direct material		10,000	By Abnormal loss @ 9.7629	200	1952.58
To direct labour		60,000	By transfer to process 91c @ 9.7629	9500	92747.5
To Manufacturing OH		15,450			
	10,000	95,450		10,000	95,450

Working Note: Process - A

- 1) Actual output (AO) = 9500 units
- 2) Standard output (SO) = 9700 units
- 3) Abnormal loss = 200 units (SO - AO)
- 4) Net Cost per unit (NCPU) = $\frac{10,000 + 10,000 + 60,000 + 15,450 - 750}{(SO) 9700}$
 $= \frac{94700}{9700} = \text{Rs. } 9.7629$

Process - B account

Particular	Units	Rs.	Particular	Units	Rs.
To process - A 91c	9500	92747.55	By normal loss (5%) @ 5.5	475	2612.5
To direct material		15,000	By finished 91c @ 21.1668	9100	192617.88
To direct labour		70,000			
To Manufacturing OH		15,895			
To abnormal gain @ 21.1668	75	1587.5			
	9575	195230.38		9575	195230.38

Working Note: Process-B account

- 1) Actual output = 9100 units
- 2) Standard output (SO) = 9025 units
- 3) Abnormal gain = $9025 - 9100 - 9025 = 75$ units
- 4) $NCPU = \frac{191030.05}{9025} = \text{Rs. } 21.1668 //$

b) Normal loss Account.

Particulars	Units	Rs.	Particulars	Units	Rs.
To process-A 9/c	300	750	By Abnormal gain		
To process-B 9/c	475	2612.5	at e 5.5	75	412.5
			By Bank (Bal. fig)	700	2950
	775	3362.5		775	3362.5

Abnormal Gain Account

Particulars	Units	Rs.	Particulars	Units	Rs.
To Normal loss 9/c @ 5.5	75	412.5	By process-B 9/c	75	1587.5
To Costing PIC 9/c (Bal. fig)		1175			
(Net abnormal gain)					
	75	1587.5		75	1587.5

Abnormal Loss Account

Particulars	Units	Rs.	Particulars	Units	Rs.
To process-A 9/c	200	1952.58	By bank 9/c		
			process-A @ 50	200	500
			By PIC (Bal. fig)		1453
	200	1952.58	(Net abnormal loss)	200	1952.58