

Required:

- Budgeted overhead cost for 25,000 units
- Efficiency variance and capacity variance
- Difference between capacity and efficiency variance [3+2+2=7]

Ans: (i) Rs. 185,000 (ii) Rs. 5,000 (F); Rs. 3,000 (U)

3. 2068 (Old) Q.No. 1 OR

A manufacturing company currently working at 50% capacity and production cost is Rs. 200 per unit is below:

Direct material	Rs. 100
Direct labour	Rs. 40
Factory overhead	Rs. 40 (40% fixed)
Office overhead	Rs. 20 (60% variable)

The factory produces 10,000 units at 50% capacity.

- Required:** (a) Flexible budget under multi-level activity at 60% and 75% capacity.
 (b) "A flexible budget is prepared at different level of activities to get control over the cost." Discuss. [3+3]

Ans: (a) Rs. 23,52,000 (b) Rs. 28,80,000

4. 2066 Q.No. 1

The following flexible budgets data are available for two different levels of activities.

Budgeted costs	Material	Direct labour hours	
		1500	2000
		Rs. 12,000	Rs. 16,000
	Labour	6,000	8,000
	Utilities	3,000	4,000
	Supervision	10,000	10,000
	Depreciation	2,000	2,000
	Tax & insurance	3,000	3,000

The standard direct-labour allowance is 0.25 hour per unit. During the period, the firm produces 7,000 units and actually used 1,700 direct labour hours and material consumed Rs. 14,500.

- Required:** i. Flexible budget for a relevant range of 6,000 and 7,000 units of outputs.
 ii. Direct material cost variance
 iii. "Flexible budget is useful for performance evaluation." Comment [4+1+2=7]

Ans: (i) Rs. 36,000 and Rs. 39,500 (ii) Rs. 600 (U)

5. 2061 (I) Q.No. 7 a

The monthly budget for the manufacturing overhead of a concern for two levels of activity are as follows:

Levels of activity	70%	100%
Indirect wages	Rs. 2,100	Rs. 3,000
Consumable sores	1,400	2,000
Maintenance	1,000	1,300
Power and fuel	650	800
Depreciation	2,000	2,000

Required: Overhead budget for 80% capacity

Ans: Total cost = Rs. 7,800

6. 2060 Q.No. 3

An overhead cost observation of a manufacturing company and other related information have been presented below:

DLH (100)	Overhead Cost (1000)
100	Rs. 300
200	400
300	500
400	600
500	700

Other information:

Normal capacity	20,000 DLH
Actual hours worked	19,000 DLH
Actual hours produced	21,000 DLH
Actual overhead cost incurred.	
Variable manufacturing overhead	Rs. 2,00,000
Fixed manufacturing overhead	Rs. 2,00,000
Total	Rs. 4,00,000

- Required:** a. Segregation of cost by using least square technique
 b. Coefficient of determination c. Overhead cost three variances [2+1+3]
 Ans: (a) FC = 200,000 * VC = Rs. 10 (b) 1 (c) SP = Rs. 10,000 (U); EV = Rs. 20,000 (F); CV = Rs. 10,000 (F)

7. 2059 Q.No. 4

The absorption costing income statement of a manufacturing company has been presented below:

Production in units	60,000
Sales in unit	65,000
Sales revenue @ Rs.10	Rs. 650,000
Less: Cost of goods sold.	
Direct material and direct labour @ Rs.4	240,000
Variable manufacturing overhead @ Rs.2	120,000
Fixed manufacturing overhead @ Rs.1	60,000
Total cost of production @ Rs.7	420,000
Add: Value of beginning inventory 10,000 units @ Rs. 7	70,000
Less: Value of ending inventory 5,000 units @ Rs.7	35,000
Total cost of goods sold @ Rs. 7	455,000
Gross margin before adjustment	195,000
Add: Fixed manufacturing overhead over absorbed	10,000
Gross margin after adjustment	205,000
Less: Selling & distributed cost	150,000
Net Income/BT	55,000

Additional Information:

- Normal capacity 25,000 machine hours
- One unit of output will need 0.5MH
- Actual machine hours worked 28,000 hours
- Actual VMOH paid Rs.1,19,000

- Required:** a. Conversion of income statement under variable costing
 b. Overhead three variances. [3+3]
 Ans: (a) NP = Rs. 60,000; CV = Rs.10,000 (F); EV = Rs. 8,000 (F); SV = Rs. 7,000 (U)

8. 2058 Q.No. 6

A company operates a standard costing system and showed the following data for the month of March, 19x9.

	Actual	Budgeted
No. of working days	22	20
Man-hours	4,300	4,000
Overhead rate per hour	-	Rs.0.50
Hours per unit of output	-	10
Budgeted fixed overhead incurred	Rs.1,800	-
Number of units produced	425	-
Actual overhead incurred	2,100	-

- Required:** Calculated overhead variances using three variance-formulas. [2×3]
 Ans: CV = Rs. 112.50; EV = Rs. 2.5 (U); SV = Rs. 85 (U)

9. 2057 Q.No. 4

The details of overhead cost of a manufacturing company and other information have been provided:

Output in units	10,000	20,000
Indirect material	Rs.10,000	Rs.20,000
Indirect labour	20,000	40,000
Supervision	20,000	30,000
Heat light and power	10,000	15,000
Maintenance cost	10,000	15,000
Depreciation cost	30,000	30,000
	100,000	150,000

Additional information:

Normal capacity 10,000 DLH

DLH required for 1 unit of output 0.50 DLH.

Actual output 22,000 units

Actual hours worked 9,500 DLH

Actual overhead cost paid Rs.146,9000

Required: a. Budget overhead cost for 15,000 units. b. Overhead cost three variances. [3+3]

Ans: (a) Rs. 125,000 (b) c = Rs. 5,000 (F); E = Rs. 15,000 (F); S = Rs. 1,900 (U)

MBA**1. 2064 Q.No. 7 b**

The following particulars are extracted from the records of a manufacturing company for two periods:

Output in units	Period I	Period II
	15,000	20,000
Profit cost	Rs. 45,000	60,000
Overheads :		
Consumable materials	7,500	10,000
Maintenance & repairs	2,000	4,000
Depreciation	3,000	3,000
Salaries	1,500	1,500
Total factory cost	59,000	78,500

Required: Flexible Budget for 18,000 units

[5]

2. 2061 (I) Q.No. 3 a

The flexible budgeting data of a manufacturing company is presented below:

Budgeted allowance = Rs. 1,00,000 @ Rs. 2 per DLH × Total DLH

Normal capacity 50,000 DLH

Standard time allowed 51,000 DLH, for actual production

Actual hours worked 49,000 DLH

Actual overhead incurred Rs. 2,00,000

Required: Overhead three variances.

[10]

Ans: Rs. 2,000 (F); RS. 4,000 (F); Rs. 2,000 (U)

3. 2060 Q.No. 7 c

A company has 200,000 units of annual normal capacity with Rs. 600,000 fixed costs. The production cost per unit is Rs. 10 excluding fixed costs.

Required: Total cost for the production of 75,000 units using flexible budget technique.

[5]

Ans: (Rs. 13,50,000)

4. 2059 Q.No. 3 a

The abstracts from the cost records are provided for necessary analysis.

One unit of output needs 10 DLH

Standard overhead rate per DLH is Rs. 9

Fixed overhead fro 5,000 DLH normal capacity is Rs. 20,000

Actual production was 480 units.

Actual hours worked was 4,750 DLH

Actual overhead for the period was Rs. 40,000.

Required: a. Capacity variance b. Efficiency variance c. Spending variance.

[4+3+3]

Ans: a. Rs. 800 (U); b. Rs. 250 (F) c. Rs. 3,750 (F)

5. 2059 Q.No. 7 d)

A campus canteen provides meal at cost plus 10% profit. The cost records exhibited the following data.

	Variable cost per meal (Rs.)	Annual fixed cost (Rs.)
Food items	10	-
Wages for the manpower involved	5	1,20,000
Utility and services	3	60,000

Required: Flexible budget for 20,00 meal for the 1st half and 30,000 for the second half year showing the price to be charged.

[2.5+2.5]

Ans: Rs. 23.76

6. 2058 Q.No. 7 a)

The flexible data of a manufacturing company have been given below:

Budgeted allowance	$FC + (UVC \times LH) = 60,000 + (5 \times LH)$
Normal capacity	20,000 DLH
Actual hours produced	22,000 DLH
Actual hours (paid)	20,500 DLH
Actual overhead incurred	Rs. 1,70,000

Required: Calculate overhead variances by three variances method.

[2+2+1]

Ans: Rs. 6,000 (F); Rs. 7,500 (F); Rs. 7,500 (U)

7. 2058 Q.No. 7 b)

The cost information of two different levels of output is given below:

Output in units	10,000	20,000
Direct material and labor	Rs 50,000	Rs 100,000
Indirect material and labor	Rs 30,000	Rs 50,000
Manufacturing overheads	Rs 50,000	Rs 90,000
Operating costs	Rs 20,000	Rs 20,000
Total costs	Rs. 150,000	Rs. 260,000

Required Budgeted costs for 15,000 units.

[5]

Ans: Rs. 2,05,000

8. 2057 Q.No. 4 a)

The budgeted data for 20,000 labour hours is given below:

Budgeted fixed overhead	Rs. 80,000
Manufacturing overhead	Rs. 10 per DLH
Standard output per hour	2 units
Actual output	42,000 units
Actual direct labour hours	20,800
Actual manufacturing overhead paid	RS. 208,000

Required: Calculate overhead variance based on three variances method.

[3+3+4]

Ans: Rs. 4,000 (F); Rs. 1,200 (F); Rs. 3,200 (U)

9. 2057 Q.No. 7 a)

The output of a company are present is 10,000 units and selling price per unit is Rs. 20. The maximum capacity of the company is 25,000 units. The costs data for 10,000 units and 25,000 units are as under:

	10,000 units	25,000 units
Direct material	Rs 20,000	Rs 50,000
Direct labour	Rs 30,000	Rs 75,000
Overhead	Rs 60,000	Rs 120,000

Required Budgeted costs for 20,000 units.

[5]

Ans: Rs. 2,00,000

10. 2057 Q.No. 7 b

The following information is provides:
 Material required for 100 units of output- 1000 kg
 Actual usage of material for 1000 units of output- 11000 kg
 Actual price paid for the materials - Rs. 99,000
 Standard price per kg Rs. 10

Required: Direct material variances.

Ans: MUV = Rs. 10,000 (U) MYV = Rs. 11,000 (F) MCV = Rs. 1,000 (F)

11. 2056 Q.No. 3 a

The manufacturing overhead cost of a company at different volume of production would be as given below:

Production in units	20,000	40,000
Indirect material	20,000	40,000
Indirect labour	40,000	80,000
Supervision cost	60,000	1,20,000
Heat, light & power	40,000	60,000
Depreciation and other	30,000	50,000
Total MOH cost	2,20,000	3,60,000

Company has normal capacity of 20,00 DLH and one unit of output would need 0.50 DLH.
 The results of working in the previous year were.

Production volume 44,000 units
 Direct labour hour paid 21,000 hrs.

Actual overhead cost incurred Rs. 3,95,000
Required: Overhead three variances.

Ans: Rs. 8,000 (F); Rs. 14,000 (F); Rs. 21,000 (U) [3+3+4]

12. 2056 Q.No. 6 b

The data relating to different activities volume were:

Capacity percentage	50%	100%
Production in units	50,000	1,00,000
Cost	4,00,000	6,00,000

Required: Budget for budget sales volume of 70,000 and 1,15,000 units [5]
 Ans: VC = Rs. 4/ unit; FC = Rs. 2,00,000; Total cost = Rs. 4,80,000; Rs. 6,60,000

13. 2055 Q.No. 5 a

The details regarding manufacturing overhead cost are as under:

- Normal capacity 20,000 DLH
- Fixed overhead cost for a capacity volume is Rs. 80,000
- Variable manufacturing overhead per DLH Rs. 6
- Standard output per DLH 4 units
- Actual output 88,000 units
- Actual overhead expenses Rs. 1,90,000

Required: Overhead three variances.

Ans: Rs. 8,000 (F); 12,000 (F); Rs. 10,000 (F) [3+3+4]

14. 2054 Q.No. 7 a

The information regarding a manufacturing company are as follows:

- i. Normal capacity: 1,00,000 units
- ii. Fixed cost at normal capacity volume: Rs. 5,00,000
- iii. Cost of producing one unit: Rs. 15

Required: Use of flexible budgeting technique to determine cost at production volume of 80,000 units. [5]
 Ans: UC= Rs. 5; UVC = Rs. 10; Production cost = Rs. 13,00,000

15. 2053 Q.No. 4 a

The Kathmandu manufacturer Ltd. provided the following information about manufacturing overhead cost:

- i. Budgeted fixed overhead

Rs. 90,000

- ii. Normal capacity 30,000 labour hours
 iii. Manufacturing overhead Rs. per DLH
 iv. Actual production in 28,000 DLH 48,000 units
 v. Standard output per DLH 1.5 units
 vi. Actual manufacturing overhead paid Rs. 1,60,000

[3+3+4]

Ans: Rs. 6,000 (F); Rs. 8,000 (F); Rs. 14,000 (U)

16. 2052 Q.No. 5 a)

A company has installed a machine with a capacity of producing 1,20,000 units of output annually. To provide responsibility in planning an controlling process it has defined its annual normal capacity as 1,00,000 units. The company's cost structure at two different level of output are given below:

Volume output (units)	50,000	1,00,000
Total cost (Rs.)	5,00,000	8,00,000

- Required: a. Flexible budgeting data by segregating cost.
 b. Budget for the production volume of 70,000 units and 1,10,000 units [10]

Ans: (a) VC = Rs. 6 per units; FC = Rs. 2,00,000; Total cost = Rs. 6,20,000 and Rs. 8,60,000

17. 2051 Q.No. 7 a)

The following are the data relating to overhead expenses of company.

- i. Normal capacity 1,00,000 direct labour hour.
 ii. Standard time for 1 unit of output 4 hours.
 iii. Flexible budget data = Fixed cost + Unit V cost × Unit produced.
 = Rs. 1,50,000 + 10 × Per unit produced
 iv. Unit produced 27,500 units
 v. Labour hours paid 1,05,000 hours
 vi. Total overhead cost paid Rs. 4,23,000.

Required: Overhead cost variance analysis, showing three variances. [10]

Ans: Rs. 15,000 (F); Rs. 12,500 (F); Rs. 10,500 (U)

18. 2050 Q.No. 3)

The Hulas Metals Ltd. uses standard costing system to control its indirect costs. The data relating to standard labour mix and per hour costs are presented as follows:

Skilled labour	2 Nos. @ Rs. 5 per hours	Rs. 10
Semiskilled labour	3 Nos. @ Rs. 4 per hours	Rs. 12
Unskilled labour	5 Nos. @ Rs. 2 per hour	Rs. 10
Total	10 Nos.	Rs. 32

Standard output per gang hour 0.25 galvanized sheets.

Further more the company also defines its plant capacity in terms of direct labour hour. The annual normal plant capacity is 120,000 labour hours per year or 10,000 labour hours per month. The budgeted fixed overhead per year amount to Rs. 3,60,00. All manufacturing overhead are applied to production on the basis of direct labour hour at Rs. 6 hour.

The overall result of the company for the month of Chaitra presented below:
 Output- 2300 galvanized sheets.

Direct labour hour paid 10,000 hours
 Actual labour mix:

Skilled	3 Nos.	@ Rs. 5 per hour	Rs. 15.00
Semiskilled	3 Nos.	@ Rs. 3 per hour	Rs. 9.00
Unskilled	4 No.s	@ Rs. 2.50 per hour	Rs. 10.00
Total	10 Nos.		Rs. 34.00

Actual manufacturing overhead paid in total Rs. 65,000

- Required: a. Calculation of labour cost variance, showing labour efficiency sub variance (yield) labour mix variance, labour rate variance. [20]
 b. Calculation of three variances of manufacturing overhead cost.

Ans: (a) Rs. 45,600 (U); Rs. 55,600 (U); Rs. 55,600 (U); Rs. 30,000 (U);
 Rs. 25,600 (U); (b) Rs. 10,000 (U); Rs. 9,600 (U); Rs. 2,100 (F)

19. 2048 Q.No. 7 a

Determine three various overhead variance from the following information:

Actual hours worked 3,100

Fixed overhead (4,000 hrs) normal capacity Rs. 16,000

Actual production 25 unit

Standard man hour per unit 60

Standard overhead rate per standard man hour Rs. 10

Actual overhead incurred Rs. 32,500

[10]

Ans: (a) OCV = Rs. 10,000 (U); (b) OEV = Rs. 9,600 (U); (c) OSV = Rs. 2,100 (F)

20. 2045 Q.No. 4

Patan Memorial Hospital uses flexible budgeting for all departments that experience fluctuating service demands. One such department is the hospital Cafeteria where the average price of a meal is Rs. 3.00.

The hospital's chief accountant has gathered the following data:

Cost	Fixed costs	Variable cost per rupees of sales
Food costs	Rs. 10,000	Rs. 0.40
Personnel wages	25,000	0.26
Depreciation	6,000	-
Utilities	14,000	0.06
Maintenance	5,000	0.03
Insurance		-

Required: Prepare a flexible budget for the hospital cafeteria using 75,000; 80,000 and 85,000 meals as the activity levels. [20]

Ans: TVC = Rs. 1,68,750; Rs. 1,80,000; Rs. 1,91,250; TFC = Rs. 60,000 for each

21. 2042 Q.No. 3

A company adopts standard cost practices for its direct labour cost and factory overhead cost. The activities level cost per direct labour hours and summarized level below:

Activities level in direct labour hour	25,000	50,000
Direct labour cost in Rs.		
Skilled labour Nos, 4 @ Rs. 1 per hour	1,00,000	2,00,000
Unskilled labour Nos 6 @ 0.50 per hour	75,000	1,50,000
	1,75,000	3,50,000
Factory overhead:		
Indirect material	Rs. 25,000	Rs. 50,000
Indirect labour	37,500	75,000
Supervision cost	22,500	35,000
Heat, light and power	17,500	30,000
Depreciation	53,000	53,000
Rent and taxes	12,000	12,000
	1,67,500	2,55,000
Other data:		
Normal capacities	40,000 direct labour hours	
Hours worked	42,000 direct labour hours	
Actual hours produced	38,000 direct labour hours	
Actual factory overhead cost incurred	Rs. 2,03,000	
Actual wage paid		
Skilled labour	5 Nos. @ 1.10	2,31,000
Unskilled labour	5 Nos. @ 0.40	84,000
	Total Rs.	3,15,000

Required: a. Analysis showing direct labour efficiency, mix and direct labour cost variance.

b. Factory overhead variance analysis i.e., capacity, efficiency and spending variance. [20]

Ans: (a) Rs. 49,000 (U); Rs. 21,000 (U); Rs. 49,000 (U); (b) Rs. 4,000 (U); Rs. 14,000 (U); Rs. 24,000 (U)

22. 2041 Q.No. 5 b

The flexible budgeting data regarding a manufacturing company are presented below:

$$\begin{aligned} \text{Flexible budgeting formula} &= \text{Fixed cost} + \text{Unit variable cost} \times \text{Units} \\ &= 90,000 + \text{Rs. 2.00 per hours} \times \text{hours worked} \end{aligned}$$

Other data:

Normal capacity	30,000 hours
Hours worked	32,000 hours
Hour produced	28,000 hours
Total overhead expenses	Rs. 146,000

Required: Analysis of overhead variance (three variance)

[10]

Ans: (a) OCV = Rs. 6,000 (U) (b) OEV = Rs. 8,000 (U) (c) OSV = Rs. 8,000 (F)

23. 2039 Q.No. 3

The budgeted data for the Himalayan Company at 100% of capacity follows:

Direct labour hours	240,000
Variable overhead costs	Rs. 120,000
Fixed overhead costs	Rs. 180,000

Required: a. Prepare a flexible overhead budget at 90%, 100% and 105% of capacity.

b. Compute the overhead rate at each capacity.

[20]

Ans: Budgeted total overhead cost Rs. 2,88,000; Rs. 3,00,000; Rs. 3,06,000 (b) Rs. 0.50 per DLH

10. DECISION REGARDING ALTERNATIVE CHOICES**A. SPECIAL OFFER****MBS****1. 2070 Old Q.No. 2**

A manufacturing company is producing 2,000 articles for home market at following costs:

Materials	Rs. 40,000
Wages	36,000
Factory overheads	
Fixed	12,000
Variable	20,000
Administrative overhead	
Fixed	18,000
Overheads	
Fixed	10,000
Variable	16,000
Total cost:	Rs. 152,000

The Company has a capacity to produce 5,000 articles. The home market can consume only 2,000 articles at a selling price of Rs. 80 per article. An additional order for the supply of 3,000 articles is received from a foreign country at Rs. 65 per article.

Required:

Should the order be accepted? Support with answer differential income statement.

[6]

Ans: Accept (Profit increase by Rs. 51,000)

2. 2069 Q.No. 3

A company has monthly normal production capacity of 25,000 units of production. The sales price per unit is Rs. 20. The monthly income statement for 20,000 units of sales is given below:

Materials	Rs. 100,000
Labour	140,000
Other variable	40,000
Fixed cost (overall)	30,000

An offer is received at Rs. 16 per unit for supply of 10,000 units on monthly basis.

Required:

- Differential income statement to show the desirability of offer
- Opportunity cost of accepting offer, if any

[5+2=7]

Ans: Net income decreased Rs. 10,000; Reject

3. 2068 (Old) Q.No. 2

Nepal Soft Drink Co. having capacity to produce 200,000 bottles a year furnishes the following information:

Production & sales	110,000 bottles 90,000 bottles at local market @ Rs. 10 per bottle 20,000 bottle to a starless hotel @ Rs. 9 per bottle
Expenses incurred	Manufacturing variable cost Rs. 550,000 Overhead charges Rs. 370,000 (Fixed Rs. 150,000) Sales commission 2.5% on sales

Company has received an offer for 100,000 bottles from a Star Hotel at Rs. 8 per bottle for which it needs not to pay sales commission but should pay Rs. 25,000 for transportation. [6]

Required: Should the company accept the offer? [6]

Ans: Yes, increase profit by Rs. 47,500

4. 2066 Q.No. 2

A manufacturing company produces and sells its product at Rs. 10 per unit. The company produces and sells 250,000 units and cost per unit of product at the production level of 250,000 units given below:

Variable manufacturing cost per unit	Rs. 5
Fixed manufacturing cost per unit	Rs. 3
Total manufacturing cost	Rs. 8

The company received an offer to supply 100,000 units at Rs. 8 per unit. The fixed selling and administration expenses total Rs. 100,000 per annum and variable selling expenses of 0.50 per unit. There would be no variable selling expenses for the offer because of bulk order.

The company has a capacity to produce only 300,000 units per year therefore, the company has to give up the regular sales of 50,000 units to accept the offer of 100,000 units.

Required: a. Differential income statement to recommend the offer
b. Opportunity cost of accepting the offer.

[5+2=7]

Ans: (a) If accept profit increased by Rs. 75,000 (b) Rs. 225,000

5. 2066 Partial Q.No. 2

A pencil manufacturing factory received a special order from a school. The special order requires supply of 20,000 pencils a year at Rs.8 per pencil at least for 10 years subject to renewal of negotiation on 5 yearly bases with an adjustment of price based on the market index that will prevail.

The accountant of the factory collected the costs incurred in manufacturing pencil under regular production at 80% of normal capacity

Direct material cost per pencil	Rs. 3.00
Direct labour and other direct cost per pencil	Rs. 2.75
Variable overhead	Rs. 1.50
Fixed overhead	Rs. 1.25
	Rs. 8.50

The normal capacity output is 90,000 pencils in a year.

The factory can in no way produce more than the normal capacity, therefore, needs to curtail regular sales. Such a move will save Rs.10,000 out of the existing regular advertisement expenses.

Required: a. Income statement showing profit on regular sales and with special order and differential cost.

- Whether the special order should be accepted or rejected?

[2+2+1+1]

[Assume regular SPPU = Rs. 10]

Ans: (a) Rs. 108,000, Rs. 127,500 and Rs. 19,500 (b) accepted

6. 2064 Q.No. 2

Nesco Company is presently operating at 75% of normal capacity. The normal capacity of plant is 20,000 DLH per year. Nesco Company recently received an offer from a company in Biratnagar to purchase 15,000 units at Rs. 38 per unit. The regular marketing price is Rs. 50 per unit. The current manufacturing and marketing costs for one unit of output are:

Direct material	Rs. 10
Direct labour (0.50 hour)	Rs. 12
Manufacturing overhead (0.50 hour)	Rs. 12
Marketing cost	Rs. 7
Total cost	Rs. 41

The budgeted fixed manufacturing cost for normal volume capacity would be Rs. 320,000.

- Required:** (a) Should the company accept the special order? Give your answer by showing differential cost analysis
 (b) For earning the same amount of profit at present what should be the selling price per unit of special order?

[5+1]

Ans: (a) Yes, Profit increases by Rs. 95,000 (b) Rs. 31.67

7. 2062 Q.No. 4

The detail regarding a manufacturing company have been provided below:

Normal capacity	50,000 units volume
Production volume	40,000 units
Sales volume	40,000 units
Selling price	Rs 25 per unit
Direct material cost	Rs. 6 per unit
Direct labor	Rs. 7 per unit
Variable manufacturing overhead	Rs. 3 per unit
Variable selling and distribution cost	Rs. 2 per unit
Fixed manufacturing overhead	Rs. 200,000
Fixed selling and distribution cost	Rs. 50,000

The company received an offer to supply 15,000 units at a price of Rs. 20 per unit.

- Required:** a. Income statement under absorption costing.
 b. Cost statement to evaluate the offer and its desirability.
 c. Opportunity cost of an offer.

[3+2+1]

Ans: (a) Net profit = Rs. 30,000 (b) Profit increase = Rs. 25,000 (c) Rs. 35,000

8. 2060 Q.No. 2

The Income Statement of Nepal Thai Food Ltd., Has been presented below:

Products	Lovely	Fancy	Total
Sales unit	3,000	2,000	5,000
Sales revenue	Rs.60,000	Rs.20,000	Rs.80,000
Less: Variable cost of goods sold	30,000	10,000	40,000
Contribution margin	30,000	10,000	40,000
Less: Fixed cost			
Joint cost	10,000	5,000	15,000
Departmental fixed cost	8,000	2,000	10,000
Total fixed cost	18,000	7,000	25,000
Net income/BT	12,000	3,000	15,000

Company received a special offer to supply 2000 units of Lovely product in a different brand name, at Rs.16 per unit. The special product would need material cost of Rs.5 per unit, direct labour cost of Rs.4 per unit and the variable manufacturing overhead cost of Rs.2 per unit. The company has been able to utilize its capacity in the past and production of special product would be possible only if, the production and sales of Fancy product could be curtailed by 1,000 units. However, the special product would need investment in special device a sum of Rs.4,000 and would have to spend Rs.2,000 for set-up cost.

- Required:** a. Sales volume to company break-even.
 b. Differential cost analysis to decide whether the company should accept order.

c. Opportunity cost of order if any.

[2+2+2]

Ans: (a) 3,125 units (b) Profit decreased by Rs. 1,000; if accepted (c) Rs. 5,000

MBA**1. 2064 Q.No. 7 c**

Firm products 40,000 cans of cold drinks selling at Rs. 30 per can. Their last operating statement for 80% capacity or 40,000 cans was:

Sales: 40,000 cans @ Rs. 30 each	Rs. 12,00,000
Less: Variable cost @ Rs.18 each	7,20,000
Contribution margin	4,80,000
Less : Fixed Cost	2,40,000
Net income	2,40,000

A contract has been offered to sell additional units for idle capacity at Rs. 20 each.

Required Suggest whether the contract should be accepted or not.

2. 2060 Q.No. 3 a

A company has monthly normal production capacity of 30,000 metal decoration pieces. The sales price per piece is Rs. 20. The annual income statement for 25,000 metal decoration piece sales is given below:

Materials	Rs. 75,000
Labour	60,000
Coal	45,000
Other supplies	30,000
Fixed cost (overall)	30,000
Total cost	<u>2,40,000</u>

An offer is received at Rs. 16 per piece for the supply of 10,000 metal decoration pieces on monthly basis.

- Required:** a. Income statement showing profit for regular supply sales and regular sales plus offer sales.
b. Desirability of the offer.

[4+4+2]

Ans: Accept. Profit income = Rs. 18,000

3. 2058 Q.No. 2 a

Mr. Pradhan, a sales manager of Neico Co. Ltd. has been approached by a overseas company to purchase 10,000 units of outputs @ Rs. 24 per unit. Neico Co. at present is on 70% capacity to meet the local, demand and producing 14,000 units of output. It is selling at Rs. 35 per unit. The overseas company has made it clear that it will not accept less than 10,000 units; therefore, if its offer is accepted it will be necessary for the Neico Co. to give up some portion of local sales.

The cost data for producing 14,00 units at present are as under:

Direct material per unit	Rs. 10
Direct labour per unit	Rs. 5
Variable overhead per unit	Rs. 3
Fixed overhead per unit	Rs. 10

The alternative available to management are

Alt 1. Continue the domestic sale and reject the order.

Alt 2. Accept the order and curtail the local sales for demand of export order.

- Required:** a. Statement showing the cost and profit to decide whether the company should or should not accept the order.
b. For earning the same amount of profit equal to current local sales, what should be the selling price per unit of special order?

[8+2]

Ans: (a) Should not accept. Decrease in profit by Rs. 8,000 (b) New SPPU = Rs. 24.80

4. 2057 Q.No. 3 a

A company has received a special order for a product, which it does not normally produce. Currently it is producing the commodity A and B. The company is working at capacity volume and would have to give up some other business to take the special order. For this

purpose it can reduce the output of product B by about one half and cannot curtail the product A, as it is highly demanded in the market.

The costs required for special produced C are:

Direct material	Rs. 20 per unit
Direct labour	Rs. 10 per unit
Additional fixed cost	Rs. 2,000

Price, cost and production data for the product A and B are shown below:

	Product A	Product B
Sales units	5,000	
Selling price per unit	Rs. 20	Rs. 25
Cost per unit:		
Direct material	4	8
Direct labour	8	9
Overhead apportioned to the product	Product A	Product B
Depreciation	Rs. 5,000	3,000
Power	1,000	400
Rent	6,000	1,000
General expenses	1,000	900

The following information is available for apportionment of fixed overhead.

i. The depreciation charge is for machine used in the respective product line.

ii. The power charge is apportioned on the basis of power consumed.

iii. Rent is apportioned to the product line based on area of floor space occupied.

- Required:**
- Statement showing the cost and profit of product A and B, prior to accepting the special order.
 - Statement showing the full cost charged to all products and profit by accepting the special order. The acceptable selling price per unit or special order is Rs. 40 and ordering unit is 800.
 - Should the company accept the special order and why? [3+5+2]

Ans: NP = Rs. 37,700 (c) Should not accept. Loss = Rs. 40

5. 2056 Q.No. 2 b

A company with a normal capacity of 25,000 DLH has been able to utilize only 80% of its capacity in the past. The company received an offer to supply 30,000 units of its product but in the other brand name at a price of Rs. 15 per unit. The regular selling price and cost of manufacturing one unit of output have been detailed below:

Selling price per unit	Rs. 20
Direct material	Rs. 5
Direct labour 0.25 hours	Rs. 5
Manufacturing overhead cost 0.25 hour	Rs. 6
Total manufacturing cost	Rs. 16

The selling and distribution cost would be Rs. 2 per unit and budget fixed manufacturing cost for normal capacity volume would be Rs. 3,00,000.

- Required:**
- Differential cost analysis
 - Desirability of offer
 - Opportunity cost of offer if any [6+2+2]

Ans: Accept the offer, Profit = Rs. 10,000 Opportunity cost = Rs. 50,000

6. 2055 Q.No. 7 c

The manufacturing cost abstracts of a company are as under:

Direct material	Rs. 6.00 per unit
Direct labour	Rs. 3.00 per unit
Manufacturing overhead	Rs. 6.00 per unit
(Fixed cost Rs. 4 per unit)	
Total cost	Rs. 15.00 per unit

Company received an offer to supply 10,000 units at a price of Rs. 13 per unit, and company has sufficient capacity to accommodate the offer.

- Required: a. Analysis of changes in profit of the company after accepting the offer.
 b. Should the company accept the offer?

[3+2]

Ans: Accept the offer, Profit Rs. 20,000

7. 2053 Q.No. 2 b

A company has installed capacity of 30,000 Direct machine hour (DMH). The production and sales volume at present have been given below:

i. Production and sales in unit	1,00,000 units
ii. Cost of producing one unit.	
Direct material	Rs. 6.00
Direct labour 0.5 hours	Rs. 6.00
Manufacturing overhead 0.25 DMH	<u>Rs. 4.00</u>
Total cost	Rs. 16.00
iii. Selling price per unit	Rs. 20
iv. Budgeted fixed overhead at capacity volume	Rs. 3,60,000

The company received an offer to supply 60,000 units at a price of Rs. 15 per unit.

- Required: a. Statement showing differential cost analysis to decide whether the company should or should not accept the offer. [8]
 b. The opportunity cost of offer if the company accepts the offer. [2]
 Ans: (a) Should not accept, decreased in profit by Rs. 1,60,000 (b) Opportunity cost = Rs. 80,000

8. 2050 Q.No. 1

The Kathmandu Product Ltd., a company engaged in production of specialized goods called "Kath Craft" has been utilizing its capacity only by 80% of its available capacity.

The company received a special offer to supply 25,000 units of its product most similar to one the company at present is selling in the market, but under different brand name. The price offered is Rs. 100 per unit. The data relating to produce one unit of regular product are presented below:

Direct material cost 4 units @ Rs. 10	Rs. 40.00
Direct labour cost 3 hours @ Rs. 10	Rs. 30.00
Manufacturing overhead 3 hours @ Rs. 15	Rs. 45.00
(based on direct labour hour)	
Total cost per unit	<u>Rs. 115.00</u>

The company at present is selling its product at Rs. 150 per unit. The company has adopted a policy of defining its capacity in direct labour hour. The annual normal budgeted hour is 3,00,000 hours and the budgeted fixed overhead for the period is Rs. 15,00,000. All manufacturing overheads are applied to production on the basis of direct labour hour at Rs. 15 per hour. The special offer will have no other cost than regular production cost.

- Required: a. Should the company accept this offer and also show how total profit of the company would change by accepting this offer?
 b. Would the company have any opportunity cost of the offer? [20]

Ans: Reject. Loss = Rs. 2,50,000 (b) Opportunity cost = Rs. 2,50,000

9. 2046 Q.No. 2

The waterbed company manufactures several types of waterbeds. Expecting a jump in demand for its product, the company built a large plant that currently is being utilized at 60% of capacity. A salesman brings in an offer from a large motel chain to purchase 100 heated king-size waterbeds for a price of Rs. 450 each. Normal selling price for the bed is Rs. 800 each. The schedule of the present costs of the king-size waterbeds for the current year's production was as follows: Acceptance for the order would cause no increase in any fixed cost. [20]

	Costs for 1,000 units	Unit cost
Direct materials	Rs. 2,60,000	Rs. 260
Direct labour	80,000	80
Manufacturing overhead (40% variable)	1,60,000	160
Marketing (1/3 variable)	1,20,000	120
Administrative (10% variable)	1,00,000	100
Total	Rs. 7,20,000	Rs. 720

- Required:** a. Should the company accept the offer? Support your answer.
 b. Would your answer to a change in sales commission from Rs. 20 a desk could be eliminated on this special order?
 c. Assume that 75% of the variable marketing costs can be eliminated. What would be the effect on the net income from accepting this order?

Ans: (a) Reject. Loss = Rs. 400 (b) Accept. Profit = Rs. 1,600. (c) Accept. Profit = Rs. 2,600

10. 2045 Q.No. 2

Purna Enterprises manufactures a variety of office furniture items, including a beautiful mahogany desk. A representative of a Middle Eastern nation approaches the firm with an offer to buy 200 desks at a price of Rs. 450 each. Normal prices are Rs. 600. The production of the 200 desks would not require the addition of any production facilities or other fixed costs. The following schedule presents cost data pertaining to the production and sales of mahogany desks:

	Total Costs for 5,000 desks	Unit Cost
Direct materials	Rs. 12,50,000	Rs. 250
Direct labour	5,00,000	100
Manufacturing overhead (40% variable)	7,50,000	150
Variable selling (all commission)*	2,40,000	48
Fixed selling	50,000	10
Administrative (all fixed)	75,000	15
Allocated corporate expenses	1,00,000	20
	29,65,000	593

* The sales commission is based on a flat fee of Rs. 48 per desk sold.

- Required:** a. If there is no commission expenses, should Purna accept this special order?
 b. If the order is accepted, what would be the effect on company profitability?
 c. Should the order be accepted if a commission fee must be paid to the sales representative covering the Middle East?

Ans: (a) Accept, profit = Rs. 8,000; (b) Accept increased by 22% (c) Reject the offer loss = Rs. 1,600 [20]

11. 2041 Q.No. 3

The Kathmandu Soap & Chemical Company produces and sells toilet soap. The income statement at two different levels of activities are summarized below: [20]

Sales in boxes	50,000 boxes	1,00,000 boxes
Sales revenue	Rs. 25,00,000	Rs. 50,00,000
Less: Cost		
Direct material	Rs. 5,00,000	Rs. 10,00,000
Direct wages	5,00,000	10,00,000
Indirect wages	2,50,000	5,00,000
Heat, light & power	2,50,000	3,50,000
Supervision	2,50,000	3,50,000
Depreciation	5,00,000	5,00,000
Sales commission	1,25,000	2,50,000
Packing cost (Wrapper)	50,000	1,00,000
Carriage outwards	50,000	1,00,000
Advertising	50,000	75,000
Administration & other	1,00,000	1,00,000
Net income	Rs. 47,50,000	Rs. 43,25,000

The sales for 1983 was 75,000 boxes and which was only 75% of the capacity available. On January 1st 1984, the Kathmandu Hotel (P) Ltd. approached the company with a special offer to supply 20,000 boxes of special brand toilet soap at Rs. 40.00 per box. The soap was to bear special hotel monogram and was to have appealing fragrance to the taste of Hotel guest.

The special device to print hotel monogram will cost additional Rs. 2,00,000 and special fragrance will increase the material cost by Rs. 1 per box. All other fixed cost and material cost will remain unchanged

Required: Should the company accept this special offer?

Ans: Accept, Profit = Rs. 12,000

12. 2039 Q.No. 2

The Long Company is currently operating at its full capacity of 2,00,000 units annually. Costs are as follows:

Direct materials	Rs. 640,000
Direct labour	320,000
Variable overhead	160,000
Fixed overhead	96,000
Variable selling and administrative expenses	64,000
Fixed selling and administrative expenses	48,000

The product is sold under Long Company brand for Rs. 10. Hari distributors offers to purchase 80,000 unit annually for the next five years at Rs. 6.60 a unit. This offer, if accepted, will not affect the current selling price, because Hari distributors will sell under its own brand name. Acceptance of the offer will have the following results:

- Labour costs on the additional 80,000 units will be 1½ times the regular rate.
- Variable selling and administrative expenses will increase by Rs. 0.08 paise a unit on the additional unit only.
- The required additional materials can be purchased at 5% volume discount.
- All other cost factors will remain the same.

Required: Should Long Company accept the offer? Show all your computations in support of your conclusion. [20]

Ans: should not accept. It is because accepting offer decreases the profit by Rs. 3,200

B. MAKE OR BUY

MBS

1. 2069 (Old) Q.No. 2

A company at present has been buying a component; used in its finished product. Purchasing cost of component is Rs. 100 per unit. The company has enough unutilised capacity. The sale price of finished product is Rs. 400 per unit. The detailed manufacturing cost for one unit of finished product at 5,000 units of the normal capacity is as under:

	Cost per units (Rs.)
Direct material	120
Direct labour	80
Variable manufacturing overhead	40
Fixed manufacturing overhead	10
Total	250

The company has been considering to manufacture its own component. The cost estimation for one unit of production component is as under:

Direct material	Rs. 60
Direct labour	Rs. 30
Variable manufacturing overhead	Rs. 20
Fixed manufacturing overhead	Rs. 10
Total	Rs. 120

Required: ① Differential cost statement to decide whether the company should make or buy the components ② Should the company manufacture the components? [3+1+1+1=6]

Ans: Buy save cost by Rs. 50,000

2. 2067 (II) (Old) Q.No.2

A manufacturing company at present purchases a component called 'X' at a price of Rs. 5 per unit and one unit of finished product produced would need 2 of component 'X'. The cost of producing one unit of finished product including the purchasing cost of component 'X' would be:

Direct material cost	Rs. 25 per unit
Direct labour cost	Rs. 10 per unit

Manufacturing overhead cost: One machine Hr. (MH) at Rs. 7.5	Rs. 7.5 per unit
Total	Rs. 42.5

The company has been able to utilize only 50% of the capacity out of normal capacity of 40,000 machine hours (MH) and fixed manufacturing overhead cost per year would be Rs. 200,000. The company would like to produce its own company came along with the design and the following cost estimates.

Direct material cost	Rs. 1 per unit
Direct labour cost	Rs. 1.5 per unit
Manufacturing overhead cost (0.5 MH)	Rs. 3.75 per unit
Total	Rs. 6.25

The company has sufficient unutilized capacity to produce the component 'X'. The selling price per unit of finished product would be Rs. 50.

Required:

- Differential Income statement to show whether the company should continue to buy or make the component 'X'.
- Opportunity cost of making the component 'X', if any. [5+1=6]

Ans: (a) Increase Rs. 50,000, accept (b) Nil

3. 2065 Q.No. 2

A manufacturing company produces 10,000 units of component F - 33 annually which the company uses in one of its product - Lekhal. The Controller of the company has furnished the following costs information relating to the part F - 33.

Variable manufacturing cost:	
Materials	Rs. 80,000
Direct labour	Rs. 60,000
Variable manufacturing overhead	Rs. 90,000
Fixed overhead	Rs. 120,000
	Rs. 350,000

A producer offer to supply an equivalent part for Rs. 29.50 per unit. And if the company accepts the offer, it will be able to rent out the facilities occupied for making the part to another company for Rs. 15,000 annually and also be able to cut down its fixed overhead cost by Rs. 40,000.

Required: i. Should the company accept the offer? The maximum price the company should offer to pay for the equivalent component. [3+3]

Ans: (i) No, if accept, cost increased by Rs. 10,000 (ii) Rs. 28.50

4. 2063 Q.No. 2

The Nepal Toys Ltd.; has been buying a component called 'Gear' used in electronic toys. The purchase price of one unit of 'Gear' would be Rs. 10. One unit of finished product would need two units of 'Gear'. The costs of producing one unit of toy have been given below:

Direct material (including two units of component Gear)	Rs. 50
Direct labour 2 DLH @ Rs. 12	Rs. 24
Manufacturing overhead 2 DLH @ Rs. 10	Rs. 20
Total cost of goods sold	Rs. 94

Selling price of toys would be Rs. 120 per unit.

Manufacturing overheads would be applied to product on the basis of direct labour hours used in production. Fixed manufacturing overhead cost for the year would be Rs. 600,000 and which would be divided over the normal capacity volume of 100,000 DLH. The Nepal Toys Ltd had been able to utilize only 60% of the capacity in the pasts and it would remain the same for the coming year. As an alternative use of the capacity the company would like to see the possibility of producing its own component 'Gear'. The company would have opportunity to sell excess quantity of 'Gear' produced in the market at a price fixed by the company. The engineering department of the company designed the Gear and prepared

the cost of producing it. According to cost estimates, cost of producing one unit of Gear would be:

Direct material	Rs. 5.00 per unit
Direct labour cost 0.25 DLH	Rs. 3.00 per unit
Manufacturing overhead 0.25 DLH	Rs. 2.50 per unit
Total manufacturing cost	<u>Rs. 10.50</u>

- Required: a. Should the company make its own 'Gear' [4]
 b. What would be the mark up percentage on variable cost of producing 'Gear', if the company would like to earn a profit of Rs. 80,000. [2]

Ans: (a) Make the product Ger which decrease cost by Rs. 60,000 (b) Mark up = 8.89%

5. 2059 Q.No. 3

The Mettle Industry Ltd. has been purchasing a component called 'X' from the supplier at a cost of Rs.10 per unit. The need of component 'X' for every unit of its production will be 4 units. The selling price and the details of cost have been summarized below:

Selling price per unit	Rs.125
Direct labour @ Rs.60 per DLH	Rs.30
Other variable expense	10
Direct material cost (including cost of component)	<u>60</u>
Total variable cost per unit	Rs.100

The annual fixed cost for the capacity volume of 20,000 machine hours will be Rs.500,000.

Each unit of finished product will need 0.50 machine hours. The industry had been able to utilize only 75% of the capacity in the past, therefore it would like to see the possibility of producing of its own component 'X' required for the finished product. If it does to the company should have to divert additional capacity of 2000 machine hours over and above the unutilized excess capacity for the production of component. The engineering product designing departments have prepared the production cost details of the component 'X' as under.

Direct material cost	Rs.3 per unit
Direct labour cost	Rs.3 per unit
Other variable expenses	Rs.2 per unit

- Required: a. Differential cost analysis of the alternative.
 b. Opportunity cost of alternative if any [5+1]
 Ans: (a) Buying = Rs. 10,40,000 and Making = Rs. 932,000 (b) Opportunity cost = Rs. 100,000

6. 2058 Q.No. 4

A company is now producing small subassemblies that are used in the production of one of the company's main product lines. The company's accounting department reports the following cost of producing the subassembly internally.

	Per Unit	8,000 units
Direct materials	Rs.3	Rs.24,000
Direct labour	4	32,000
Variable overhead	1	8,000
Supervisor's salary	3	24,000
Depreciation of equipment	2	16,000
Allocate general overhead	5	40,000
	18	144,000

The company has just received an offer from an outside supplier who will provide 8,000 subassemblies a year at a firm price of Rs.15 each.

- Required: a. Should the company stop producing the subassemblies internally and start purchasing from the outside supplier?
 b. Would the decision made in (i) above change if case the space being used to produce subassemblies would generate a segment margin of Rs.50,000? [3+3]

Ans: (a) Total cost: Make = Rs. 88,000; Buy = Rs. 120,000; Cost saved by Make = Rs. 32,000;
 (b) Cost saved by Buy = Rs. 18,000 (c) Yes

MBA**1. 2064 Q.No. 2 a**

You have been engaged in assisting the management of ABC Co. in arriving at certain decisions. The company produces a single product, which passes through successive departments D₁, D₂ and D₃. The management of ABC Co. has provided the following projection of operation for coming year:

	Output : 10,000 units		
	Dept. D ₁	Dept D ₂	Dept D ₂
Direct Material	Rs. 50,000	Rs. 20,000	Rs.....
Direct Labour	40,000	50,000	20,000
Manufacturing overhead	1,00,000	90,000	40,000
Total	1,90,000	1,60,000	60,000

The fixed manufacturing overhead is 150 % of direct labour. The marketing manager informed that it can purchase a semi-finished product at a price of Rs. 12 per unit. Department D₂ can directly use this product instead of the basic raw material processed in Department D₁. However, in Department D₂ would be more by 10% and 20% respectively, because of changes in operations necessitated by the introduction of the semi-finished product into the department.

Required

Suggest the management of ABC Co. in determining whether it should purchase the semi-finished product or continue its existing practice of producing it in department D₁. [10]

2. 2059 Q.No. 1

A company at present is buying a component using in its final product the annual need of the component is 20,000 units and the purchase price per unit is Rs. 20. The costs of producing one unit of finished product are: Direct material cost including one unit of component is Rs. 40. The direct labour cost per unit is Rs. 40. The variable manufacturing cost per unit is Rs. 20 and the annual fixed cost is Rs. 200,000. The sales unit is 20,000 units. The selling price of the product is Rs. 200. The company is considering manufacturing its own component. The cost estimates for production of one unit of component are as follows:

Material cost	Rs. 10
Labour cost	5
Variable manufacturing cost	2
Fixed manufacturing cost	5
Total	Rs. 22

The company has enough unutilized capacity.

[7+7+6]

Required: Should the company manufacture the component?

(Differential cost statement is compulsory)

Ans: Make it. Cost saving = Rs. 60,000

3. 2057 Q.No. 7 d

A company has prepared the following cost estimates for the manufacturing of a part.

	Per unit
Material	Rs. 10
Direct labour	8
Variable overhead	8
Depreciation and other fixed costs	4
Total cost	30

The same part is available in the market at Rs. 27 each. One-half of fixed cost represents executive salaries, rent and other expenses continue regardless of the decision.

Required: Should the company make or buy the product.

[5]

Ans: Buy. Profit = Re. 1 per unit

4. 2056 Q.No. 6 c

A company has enough unutilized capacity therefore, it would like to see the possibility of manufacturing a component used in its main products. The buying cost of the component for the next year would be Rs. 10 per unit. The other data have been presented below:

Annual need of component	40,000 units
Cost estimate for production:	
Direct material	Rs. 3
Direct labour	Rs. 4
Manufacturing overhead (Rs. 3 for fixed)	Rs. 5
Total cost	Rs. 12

Required: Differential cost analysis to consider the desirability options. [5]

Ans: Make. cost decrease = Rs. 40,000

5. 2055 Q.No. 2 a

A company at present has been buying a component called 'x', used in its finished product. Purchasing cost of component X is Rs. 7 per unit. The company has a normal capacity of 40,000 machine hours, and the budgeted fixed cost for the period is Rs. 160,000. The detailed manufacturing cost of one unit of finished product is as above.

Direct material cost of the company includes cost of four units of component X used in the finished product. Purchasing cost of component X is Rs. 7 per unit. The company has been considering to manufacture its own component X.

The product designating department has prepared the following estimation of cost of producing one unit of component 'X'.

Direct material	Rs. 3.00 per unit
Direct labour	
0.25 DLH @ Rs.	Rs. 2.00
Manufacturing overhead 0.25 machine hours @ Rs. 10	Rs. 2.50
Total	Rs. 7.50

The company has been able to utilize only 80% of its capacity in the past and it does not expect a change in the situation in future.

Required: Differential cost analysis to see whether the company should make its own component x or not. [9]

Ans: Buy the component. cost saving Rs. 96,000

6. 2053 Q.No. 7 c

A company has enough unutilized capacity. The company would like to see the possibility of manufacturing a component called 'Y' which it has been buying at a price of Rs. 10 per unit. The engineering department prepared the following costs of producing 10,000 units of component 'Y'.

Direct materials	Rs. 30,000
Direct labour	40,000
Variable manufacturing overhead	10,000
Fixed manufacturing overhead	30,000
Total cost of products	Rs. 1,10,000

Required: Should the company continue to buy or make its own component Y? [5]

Ans: Continue to buy the component Y, cost of buying is less by Rs. 20,000

7. 2051 Q.No. 1

The Nepal Casting Ltd. a company specialized in casting at present is producing a component called X used in the casting process. The annual need of component X is 50,000 units. The data relating to produce one unit of component X are presented below:

Direct materials	Rs. 2
Direct labour 0.5 hours @ Rs. 6 per hour	Rs. 3
Manufacturing overhead based on direct labour hour 0.5 hours @ Rs. 4/hour	Rs. 2.00
Total unit cost of production	Rs. 7.00

The company received an offer from a company showing willingness to supply 50,000 units of component at a unit price of Rs. 5 per unit. The company has followed a system of defining its plant capacity in terms of direct labour hours. The normal operation is 1,00,000 direct labour hour per year. The budgeted fixed overhead per annum is Rs. 2,50,000. All manufacturing overheads are applied to production on the basis of direct labour at Rs. 4 per hour.

The company at present has sufficient excess capacity unutilized and a subcontracting of the component will further render idle unutilized capacity having no alternative uses.

- Required:** a. Should the company start purchasing component X from the supplier or continue to produce its own?
b. Would your answer be different if the excess capacity thus, available could be rented out at an annual rent of Rs. 1,00,000?

[20]

Ans: (a) Purchase, Profit = Rs. 37,500 (b) Purchase from outside. profit = Rs. 1,37,500

8. 2048 Q.No. 3

Kathmandu Kastha Udyog Ltd. is considering two courses of action:

- a. Completely replacing the old equipment with new equipment or
b. Buying subassemblies from outside. The purchasing price of the subassemblies is Rs. 30 each. Cost records for the past two-years reveal the following unit cost of manufacturing the subassembly.

Direct materials	Rs. 7.50
Direct labour	Rs. 12.00
Variable overhead	Rs. 3.00
Fixed overhead	Rs. 7.50
	<u>Rs. 30.00</u>

The fixed overhead includes Rs. 3 for depreciation and Rs. 3 for supervision. The new equipment will cost Rs. 56,40,000. The life of the equipments is 7 years and will have disposal value of Rs. 6,00,000. The current disposal value of the old equipment is Rs. 3,00,000. The sales man for the new equipment has summarized his position as follows: The increase in machine speeds will reduce direct labour and variable overhead by Rs. 10.50 per unit. Consider last year's experience of one of your major competitors with identical equipment. They produce 1,00,000 units under operating conditions very comparable to yours and showed the following units costs.

Direct materials	Rs. 7.50
Direct labour	Rs. 3.00
Variable overhead	Rs. 1.50
Fixed overhead (includes Rs. 7.20 for depreciation)	Rs. 12.00
	<u>Rs. 24.00</u>

- Required:** a. Comparison of the alternative on a total annual cost basis and on a per unit basis for annual needs of 60,000 units which alternative seems more attractive.
b. Would your answer to require change if needs were 70,000 units. Show your computation.

For your computation, assume that any idle facilities cannot be put to alternative use. Also assume that Rs. 1.5 of the old unit cost is allocated fixed overhead that will be unaffected by the decision.

[20]

Ans: (a) Replace, cost saving Rs. 1,80,000 (b) Replace the machine, cost saving = Rs. 5.14 per unit

9. 2040 Q.No. 2

The Extra Bright Manufacturing Company has shown the following costs for the production of 10,000 units Torch Light.

	Rs.
Steel sheet	50,000
Labour charges	30,000
Administrative salaries	8,000
Rent of building	8,000
Mechanics salaries	5,000
Miscellaneous overhead	11,000

The factory uses 3 volt bulbs purchases from India at Rs. 0.90 each.

The factory management is considering to establish a bulb manufacturing section within the factory facilities. The production engineers have worked out for this establishment and estimated the likely cost per unit as follows:

Materials (Metal)	Rs. 0.80
Labours	Rs. 0.25
Fixed Overhead	Rs. 0.20

The waste material of torchlight can be used in the bulb making and this will reduce the bulb materials cost by 50 percent. 25 percent of fixed overhead apportioned to bulb is not extra burden to the factory.

Required: The factory management requires your help in matters of cost analysis and decision-making. So the following problems are forwarded to you for solution.

- Would the factory be benefited by establishing the bulb manufacturing section? Give your decision in your own way.
- What would be the unit cost of Torch Light?
 - When bulb is purchased from India?
 - When bulb is manufactured in factory?

Ans: (a) Make it, making the bulb decreases the per unit cost by Rs. 0.10 (b) (i) Rs. 12.10 (ii) Rs. 12.00 [20]

C. DROP OR CONTINUE

MBS

1. 2071 Q.No. 2

The following income statement of ABC Company with multiple products X and Y is provided:

Product	X	Y	Total
Sales units	5,000	7,000	12,000
Sales revenue (Rs.)	120,000	231,000	351,000
Less variable cost:			
Direct material Rs. 3/kg	30,000	63,000	93,000
Direct labour Rs. 4/hour	20,000	56,000	76,000
Variable overhead	40,000	42,000	82,000
Total variable cost	90,000	161,000	251,000
Contribution margin	30,000	70,000	100,000
Less fixed cost:			
Departmental fixed cost	20,500	24,000	44,500
Joint fixed cost	16,000	22,000	38,000
Total fixed cost	36,500	46,000	82,500
Net profit	(6,500)	24,000	17,500

The company is suffering loss from product X for many years. So it is considering dropping the product X from the segment.

- Required:** a. Differential analysis to find whether the company should drop product X.
b. Overall Break Even sales units of a company.

Ans: (a) Profit decrease by Rs. 9,500; should be continued (b) 9,900 units [5+2=7]

2. 2070 Q.No. 3

The Furniture Co. makes Sofa sets, Tables and Beds. The following sales and cost information are available.

	Sofa sets	Tables	Beds	Total
Sales revenue Rs.	750,000	500,000	1,000,000	2,250,000
Costs: Materials	300,000	220,000	400,000	920,000
Labour	75,000	60,000	80,000	215,000
Variable Mfg Overheads	45,000	40,000	60,000	145,000
Variable selling Overheads	75,000	60,000	120,000	255,000
Depreciation on machine & tools	50,000	48,000	72,000	170,000
Allocated administrative costs	150,000	100,000	200,000	450,000