Incorporated by
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PILOT PAPER – 2023-2027 SYLLABUS

OL2.1 Cost & Management Accounting

Operational Level

Time allowed: 3 Hours.

Total Marks: 100

Exam Structure

This exam is consisting with three parts:

Part-I

- 20 Multiple Choice Questions (MCQ)
- Each 02 marks and 40 marks in total.

Part-II

- Three Case Based Objective Test Questions.
- Each 10 marks and 30 marks in total

Part-III

- Three Structured Questions.
- Each containing a case which relates to one or more requirement(s).
- Answers are required be provided in spreadsheet on given format.
- Each 10 marks and 30 marks in total

All questions are compulsory.

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Practice Examination – Part I

Exam Structure

- 20 Multiple Choice Questions (MCQ)

Segment A	02 MCQs
Segment B	05 MCQs
Segment C	08 MCQs
Segment D	02 MCQs
Segment E	03 MCQs

- Each 02 marks and 40 marks in total.

Segment A

1. Which of the following statements about management accounts is/are true:
   i. They provide a good source of data for historic costs.
   ii. It is a legal requirement to produce management accounts.
   iii. They are designed to meet the requirements of people inside the business.

   a) i, ii and iii. b) i) and ii.
   c) iii only. d) None of the statements are correct

2. Which of the following is a primary goal of management accounting:
   a) Improving financial reporting for external stakeholders.
   b) Helping managers make better decisions.
   c) Providing information for tax purposes.
   d) Ensuring compliance with regulations.

Segment B

3. The learning curve theory in management accounting is used to:
   a) measure employee performance. b) calculate the cost of raw materials.
   c) estimate future production costs. d) determine the price of a product.

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4. The statement that best describes about variable costs is:
   a) Be constant in total when production volume changes.
   b) Vary, in total, from period to period when production is constant.
   c) Be constant per unit of output.
   d) Vary per unit of output as production volume changes.

5. In a manufacturing organization, the total cost of making 1,500 units is Rs. 180,000 and the total cost of making 4,200 units is Rs. 234,000. Within this range of activity, the total fixed costs remain unchanged. What is the variable cost per unit of the product:

   a) Rs.120/-   b) Rs.55/-   c) Rs.200/-   d) Rs.20/-

6. What is the main difference between joint product costing and by-product costing:

   a) Joint product costing is used when multiple products are produced simultaneously, whereas by-product costing is used when only one product is produced.
   b) Joint product costing is used when products have similar costs, whereas by-product costing is used when products have different costs.
   c) Joint product costing is used when multiple products are produced simultaneously and have significant sales value, whereas by-product costing is used when one of the products has low sales value.
   d) Joint product costing is used when all products are sold at the same price, whereas by-product costing is used when products have different selling prices.

7. The following statements are presented in relation to traditional absorption costing vs. activity-based costing.
   i. Traditional absorption costing is appropriate for manufacturing companies, whereas activity-based costing is appropriate for service companies.
   ii. Traditional absorption costing allocates overhead costs based on volume-related measures, whereas activity-based costing allocates overhead costs based on activity-related measures.
   iii. The cost allocation using the traditional absorption costing is closer to the allocation using the activity-based costing when a company produces multiple products with similar production processes.

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Which of the above statements is/are correct:

a) ii only　　b) ii and iii　　c) i and ii　　d) iii only.

Segment C

8. What does the distance between the total revenue line and the total cost line represent below the break-even point on a break-even chart:

a) Profit.
b) Loss.
c) Contribution margin.
d) Target profit at a given sales quantity.

9. A construction company is considering the profitability of one-year contract which will require three skilled workers. Skilled workers can be hired on a temporary basis for one year at a cost of Rs.240,000 per worker. The company could alternatively train some existing workers who are currently paid Rs.140,000/- each per year and allocate them to this contract. The training would cost Rs.60,000 in total. If these existing workers were used, the company would need to replace them at an annual cost of Rs.160,000/- each.

Which of the following statement is incorrect in relation to the above scenario:

a) The relevant cost of using the existing workers for the one-year contract is Rs.480,000.
b) The company is better off by using trained existing workers rather than hiring skilled workers for the one-year contract.
c) The relevant cost of hiring skilled workers for the one-year contract is Rs.720,000/-.
d) The training cost of Rs.60,000 is relevant when deciding whether hiring skilled workers is cost-effective for the one-year contract.

10. The following details relate to three products manufactured by XYZ PLC.

	X	Y	Z
Selling price	180	150	220
Unit costs;			
Direct material	45	20	30
Direct labour	30	50	50
Variable overheads	15	30	20
Fixed overheads	40	20	60

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All three products are produced using the same type of direct labour and the same machinery. The fixed overheads are absorbed based on the machine-hour rate of Rs.20 per hour. If the availability of the machine time is a limiting factor, the most and least profitable uses of it are:

	Most profitable	**Least profitable**
a)	Z	Y
b)	Y	Z
c)	X	Y
d)	Y	X

11. A company makes a single product that it sells for Rs.540/- per unit. The fixed costs are Rs.378,000/- per month. The contribution-to-sales ratio is 20%. The company's profit target for the next month is Rs.32,400/-. What sales volume is required to achieve the next month's profit target:

a) 760 units b) 3,500 units c) 3,800 units d) 960 units

12. ABC PLC produces and sells product A for Rs.150 each. The product's unit variable cost is Rs.90. The company expects to achieve a profit of Rs.90,000 over the next financial year. The margin of safety quantity of the uct A is:

a) 1,500 units b) 10,000 units c) 600 units d) 2,400 units

13. Which one of the following is not a relevant cost when deciding an acceptance of one-time special customer order:

a) The replacement cost of raw materials currently in stock which will be used on the special order.
b) The purchase cost of special material required for the order, which is currently in stock and has no other use or sale value.
c) Overtime payments to workers who are currently fully occupied, thus, are worked overtime to carry out the special order.
d) Income earned by hiring the under-utilized machines which will be used on the special order.

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14. What is the break-even point on a break-even chart:

a) The point where fixed costs equal variable costs.
b) The point where marginal revenue equals marginal cost.
c) The point where profit is maximized.
d) The point where revenue equals total costs.

15. Which of the following statement is correct in relation to the relevance of qualitative information for decision-making:

a) It is objective and unbiased, hence useful when making decisions in uncertain business conditions.
b) It provides a detailed description of a situation, hence less time-consuming than quantitative analysis.
c) It takes into account contextual factors, hence can interpret quantitative information.
d) It is always more relevant than quantitative information due to accurate and precise measurements.

Segment D

16. What is the primary advantage of the zero-based budgeting approach:

a) It ensures that all expenses are justified and aligned with organizational objectives.
b) It allows for greater flexibility in adjusting the budget as conditions change.
c) It is easier and less time-consuming than other budgeting approaches.
d) It allows for a higher level of detail in budgeting.

17. Which of the following criticisms is true relating to standard costing:

a) It is too complex and difficult to understand.
b) It is not a useful tool for budgeting and forecasting.
c) It can lead to incorrect decisions if actual costs differ significantly from standard costs.
d) It is only applicable to manufacturing companies.

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Segment E

18. XY PLC has evaluated the following two mutually exclusive projects which have an equivalent effect on the risk profile of the company.

	Project 1	Project 2
Payback	4 years	3 years
Accounting rate of return	20%	15%
Internal rate of return	22%	16%
Net present value	Rs 147,000	Rs 150,000

The cost of capital is 10% per annum. If the company's directors wish to maximize shareholder wealth, which project should the company choose:

a) Project 1 because it has a higher accounting rate of return and internal rate of return than Project 2.

b) Project 1 because it has a higher internal rate of return though the net present value is little lower than Project 2.

c) Project 2 because it has a higher payback period than Project 1.

d) Project 2 because it has a higher net present value than Project 1.

19. Which of the following are issues when using net present value to appraise an investment:

i. The difficulty of estimating future cash flows.
ii. The difficulty of selecting an appropriate discount rate.
iii. It does not take account of taxation.

c) i and ii only   b) iii only   c) All above   d) i and iii only

20. What is the correct statement from the following regarding the capital budgeting techniques:

a) Net present value technique involves comparing the future value of expected cash inflows to the future value of expected cash outflows of an investment project.

b) Internal rate of return is the rate at which the present value of expected cash inflows equals the present value of expected cash outflows of an investment project.

c) Accounting rate of return is the ratio of present value of expected cash inflows to the initial investment.

d) Payback is the amount of time that takes for an investment project to generate enough cash inflows to recover its cash outflows.

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Practice Examination – Part II

Exam Structure

- Three Case-Based Objective Test Questions.
  - Segment B&D 01 Question
  - Segment C 01 Question
  - Segment E 01 Question
- 30 marks in total

Question 01 - each question 02 marks in maximum, total 10 marks - Segment B&D

Harison Manufacturing PLC carries out a business of producing and distributing a variety of household electrical appliances. The followings are some costs incurred in one of the company's divisions: Kitchen appliance division which manufactures Electric cookers.

Material cost;

The cost of material and components for producing one unit of electric cooker is Rs.2,200. The company currently purchases required material and components from local suppliers on weekly basis.

Machinery rent;

The company uses a fully automated machinery which has the capacity for producing 1,000 electric cookers for a month. The monthly rental for the machinery is Rs.800,000.

Labour cost – manufacturing workers;

The company has employed two permanent workers for operating the machinery and quality inspection of the output for a monthly salary of Rs.100,000 each. The products are packed by three casual workers for a payment of Rs.200 per unit of electric cooker.

Marketing staff salary;

The monthly salary of the company's Marketing Manager is Rs.180,000. The company also hired a Sales Executive who is paid Rs.60,000 per month and a bonus of Rs.50 for every electric cooker sold.

Management accounting plays very important role in modern organizations. There are a number of traditional and modern management accounting techniques used in the practice. Budgetary control and standard costing are two such traditional management accounting techniques still in use. Different types of budgets such as activity-based budgeting, incremental budgeting, and kaizen budgeting are used in budgetary practice. With the technological developments, numerous management accounting techniques MRP, CAM, CIM, TQM, JIT, etc. have evolved during the recent past.

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1. Identify the behaviour of the following cost items as detailed above.

Cost item	**Cost behavior**
Labour cost of manufacturing workers – Permanent	
Labour cost of manufacturing workers – Casual	
Marketing Manager's salary	
Sales Executive's salary	

Variable cost | Fixed cost | Semi-variable cost

2. Calculate the variable cost per unit and total monthly fixed cost of the division.

Variable cost per unit (Rs.)	
Total monthly fixed cost (Rs.)	

3. Develop a linear cost function to estimate the total cost of the division for a month. (Let 'y' be the total cost of the division for a month, and 'x' be the quantity of Electric cookers produced in a month.)

Cost function [ ]

4. Estimate the total cost if the budgeted production and sales of Electric cookers for the next month is 800 units.

Budgeted total cost (Rs.) [ ]

5. State whether the following statements are true or false in relation to the cost function estimated above.

Statement	True/False
It is not appropriate to apply for estimating the total cost in the long run.	
It does not accurately generate the cost estimate cost for the budgeted monthly production and sales quantity of 1,200 units.	
It overestimates the total cost at a lower level of output, whereas underestimates the total cost at a higher level of output.	

True | False

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Question 02 - each question 02 marks in maximum, total 10 marks - Segment C

Kandy Shoes (Pvt) Ltd. currently manufactures and sells a product "Kandy Shoes"- a pair of women's office shoes. The following budgeted figures relate to the manufacturing and sales of 14,000 pairs of Kandy shoes for the next month - April 2023.

Description	**(Rs.'000)**
Sales	49,000
Less: Variable costs;	
Raw material	(15,400)
Direct labor (2 hours per shoe pair)	(8,400)
Variable overheads	(4,200)
Fixed overheads	(11,700)
Profit/(loss)	9,300

The company is also considering launching a new product – a pair of men's office shoes in the name of "Handy Shoes". The following are the estimated selling price and variable costs for the manufacturing and sales of 6,000 pairs of the new product.

	(Rs.'000)
Selling price	2,750
Variable cost per shoe pair;	
Raw material	950
Direct labour (1.5 hours per shoe pair)	350
Other direct expenses	70

The monthly fixed overheads of the company would increase by Rs.2,940,000/- if the new product were introduced.

6. Calculate the margin of safety for the month of April 2023 if the company manufactures and sells only "Kandy Shoes".

[ ] pairs of shoes

7. Calculate the contribution to sales ratio for Kandy Shoes (Pvt) Ltd. if the production of both products will be carried out according to the budgeted quantities during the next month.

[ ] %

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8. State whether the following statements are true or false in relation to Kandy Shoes (Pvt) Ltd.

Statement	**True/False**
Manufacturing of Handy Shoes is more profitable than Kandy Shoes.	
The break-even pairs of Kandy Shoes decreases when the new product - Handy Shoes is introduced.	
The increase in monthly fixed overheads is relevant when determining the company's profitability, but not for the new product introduction decision.	

True False

9. How much is the company's profit if the production of both products will be carried out according to the budgeted quantities during the next month.

Profit for April 2023 (Rs'000)

10. If the production department of Kandy Shoes (Pvt) Ltd. faces a problem of manufacturing the budgeted quantities of both shoe pairs during the next month due to a shortage of manufacturing workers, which of the following statement is correct in this situation.

(a) The priority should be given for manufacturing the Kandy shoe pair to maximize the company's profit as it gives the highest contribution per shoe pair.

(b) The budgeted production quantity of Handy Shoes should be less than 6,000 pairs to maximize the company's profit.

(c) The quantity of Kandy Shoes be manufactured should be less than 14,000 pairs to maximize the profit.

(d) The priority should be given for manufacturing the shoe pair with the highest selling price to maximize the company's profit.

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Question 03 - each question 02 marks in maximum, total 10 marks - Segment E

Techno Ltd. is considering an investment in a new project which involves developing and selling of a new mobile phone. The initial investment of this project involves Rs.150 million for a machinery and Rs.5 million for working capital requirement. It is expected that this new product would have a market for a period of five years.

The following estimates have been made in respect of the new product.

Sales and advertising cost;

Year	Production and sales quantity (units)	Selling price (Rs.)	Advertising cost (Rs.)
1	5,300	12,500	6,000,000
2	8,500	14,000	8,000,000
3	12,400	10,000	5,000,000
4	10,000	9,500	3,000,000
5	4,200	8,000	1,000,000

The variable production cost is estimated to be Rs.3,000/- per unit. With manufacturing of the new product, the company's fixed manufacturing overhead cost including depreciation on machinery is expected to be increased by Rs.40 million per annum.

The company uses the straight-line basis to depreciate machineries. The machinery has a lifetime of 5 years.

Techno Ltd's cost of capital is 15% per annum.

In the financial analysis, the net present value and internal rate of return of the project were determined as approximately Rs.16 million and 20% respectively.

11. How much is the annual fixed manufacturing overheads relevant for calculating the net present value of the project:

Relevant annual fixed overheads (Rs'000) [ ]

12. How much is the initial investment value considered when calculating the Net Present Value of the project:

Initial investment (Rs'000) [ ]

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13. State whether the following statements are true or false in relation to the project under the consideration of Techno Ltd.

	True/False
The internal rate of return of the project represents the probability of making a profit on investment	
When calculating the net present value, applicable discount rate is 15%.	
Since the depreciation is not a cash flow, it should not be considered for calculating the accounting rate of return.	
The advertising cost is a selling and distribution overhead, which, therefore is not relevant in calculating the net present value.	

True   False

14. Match the discount rate with the appropriate Net Present Value.

Discount rate	**Net Present Value**
22%	
18%	
20%	
12%	

> Rs 16 million   < Rs 16 million   Zero   Negative

15. In a comparison of the Net Present Value and the Internal Rate of Return of the project under the consideration of Techno Ltd., which of the following statements is true:

a) The financial feasibility of the project should be analysed based on the Net Present Value rather than the Internal Rate of Return.

b) The use of either the Net Present Value or the Internal Rate of Return is acceptable to analyse the financial feasibility of the project.

c) Both the Net Present Value and the Internal Rate of Return should be analyzed to find the financial feasibility of the project.

d) Since the Internal Rate of Return is appliable when comparing different projects, the financial feasibility of the project should be analyzed based on the Net Present Value.

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Practice Examination – Part III

Exam Structure

- Three Structured Questions.

  Segment B 01 Question

  Segment C 01 Question

  Segment D 01 Question

- Each containing a case that relates to one or more requirement(s).
- Answers are required to be provided in a spreadsheet in the given format.
- Each 10 marks and 30 marks in total.

Question 01 - Total 10 Marks - Segment B

ABC PLC, a garment factory, is now considering acceptance of a special job offered by a retail customer – XY (Pvt) Ltd. The job involves manufacturing 1,000 t-shirts for the employees of XY (Pvt) Ltd for a price of Rs.1,600 each. The following is an estimate of resources required for the job.

- Raw material:

Material	Total quantity required	Units already in inventory	Current price of material
Fabric –Type A	1,000 meters	600 meters purchased at Rs.300 each	Rs.450 per meter
Fabric – Type B	700 meters	500 meters purchased at Rs.700 each	Rs.950 per meter

Fabric - Type A is regularly used in the garment factory. However, Fabric - Type B are in inventory due to the previous over-buying, which has no other use. If this stock of fabric does not use for this job, it can be sold for another garment factory at the price of Rs.750 per meter. All other material required for this job is to be purchased for a cost of Rs.150,000.

- The job requires a special cutting machine for a period of one week, which can be obtained for a hire charge of Rs.10,000/- per day.
- All the sewing machines operators available in the factory are currently fully occupied for the regular operations of the company, which earn a contribution of Rs.300/- per hour. The special order requires 200 labour hours. Presently, the workers are being paid at the rate of Rs.500 per hour. The variable production overhead is incurred at Rs.300/- per hour.
- The depreciation of sewing machines used for this special job is Rs.750/- per hour.

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1. You are required to calculate the profit from the special job to ABC PLC.

Description	**Rs.**
Sales	
Less: Costs	
Raw material cost– Fabric A	
Raw material cost– Fabric B	
Raw material cost– Other	
Direct labour cost	
Other direct expenses	
Variable production overheads	
Fixed production overheads	
Profit/ (Loss)	

Question 02 - Total 10 Marks - Segment C

PQ PLC produces and sells two products, P and Q. The followings are the estimates of their demand and costs for a typical month of the company's operations.

Description	**Product P**	**Product Q**
Demand in units per month	7,000	10,000
Direct material cost per unit (Rs.)	26	37
Direct labour hours per unit	5 minutes	7 minutes
Direct labour cost per hour (Rs.)	1,200	

Both products are mainly manufactured using machineries with the aid of three supportive activities – machine setup, material purchasing, and quality control. The company has estimated the expected usage and cost of each activity to meet the estimated demand of the two products as follows.

Activity	**Overhead (Rs)**	**Expected usage for;**	
		Product P	**Product Q**
Machine setup	200,000	15 production runs	25 production runs
Material purchasing	210,000	9 purchase orders	5 purchase orders
Manufacturing	450,000	2 machine hours per unit	1 machine hour per unit
Quality control	110,000	30 inspections	25 inspections
Total	970,000		

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2. You are required to calculate the cost per unit of Product P and Product Q using the activity-based costing.

	Product P	Product Q
Overheads allocation;		
Machine setup		
Material purchasing		
Manufacturing		
Quality control		
Total overheads		
Overheads per unit		
Direct material cost per unit		
Direct labour cost per unit		
Total cost per unit		

Question 03 - Total 10 Marks - Segment D

Gloom PLC manufactures and sells Product X. The following information has been extracted from the standard cost card of Product X.

Direct Material;	**Per unit (Rs.)**
Material: Alpha (2 kgs at Rs 300/- per kg)	600
Material: Beta (3 kgs at Rs 150/- per kg)	450
Direct Labour;	
Grade I (15 minutes per unit at Rs 800/- per hour)	200
Grade II (30 minutes per unit at Rs 600/- per hour)	300
Variable overheads (Rs 200 per hour)	150
	1,700
Selling price	2,000
Contribution	300

For the financial year ending 31st March 2023, the budgeted sales quantity and fixed overheads were 5,000 units and Rs.550,000 respectively. However, the company produced and sold 4,600 units during the period. The financial results for the year together with the variances calculated by the management are provided below:

Description	Rs.
Sales	9,522,000

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Direct Material: Alpha (8,550 kgs)	2,479,500	
Direct Material: Beta (15,200 kgs)	2,736,000	
Direct Labour: Grade I (1,424 hours)	1,246,000	
Direct Labour: Grade II (1,900 hours)	1,121,000	
Variable overheads	720,000	
Fixed overheads	620,000	
Variances;		
Direct material price: Alpha	85,500	Favourable
Direct material price: Beta	456,000	Adverse
Direct labour rate: Grade I	106,800	Adverse
Direct labour rate: Grade II	19,000	Favourable
Variable overheads cost	30,000	Adverse
Fixed overheads expenditure	70,000	Adverse
Sales price	322,000	Favourable
Sales volume contribution	120,000	Adverse

3. You are required to calculate direct material and direct labour mix and yield variances for the financial year ending 31st March 2023.

Direct Material	**Alpha**	**Beta**
Direct material mix variance		
Direct material yield variance		
Direct Labour	**Grade I**	**Grade II**
Direct labour mix variance		
Direct labour yield variance		

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4. You are required to reconcile the budgeted profit with actual profit for the financial year ending 31st March 2023.

Description	**Rs.**
Budgeted profit	
Variances:	
Direct material – Price	
Direct material – Usage	
Direct labour – Rate	
Direct labour – Efficiency	
Variable overheads cost	
Fixed overheads expenditure	
Sales price	
Sales volume contribution	
Actual profit	

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