INTERMEDIATE EXAMINATION

June 2017

P–8(CAC)
Syllabus 2016

Cost Accounting

Time Allowed: 3 Hours

Full Marks: 100

The figures on the right margin indicate full marks.

All Sections are compulsory. Each section contains instructions regarding the number of questions to be answered within the section.

All working notes must form part of the answer.

Wherever necessary, candidates may make appropriate assumptions and clearly state them.

No present value factor table or other statistical table will be provided in addition to this questions paper.

Section – A

Section A contains Question Number 1. All parts of this question are compulsory.

1. Answer the following questions:

(a) Choose the correct answer from the given alternatives (*You may write only the Roman numeral and the alphabet chosen for your answer*): 1×10=10

(i) In process, conversion cost means

(A) Cost of direct materials, direct labour, direct expenses

(B) Direct labour, direct expenses, indirect material, indirect labour, indirect expenses

(C) Prime cost plus factory overheads

(D) All costs up to the product reaching the consumer, less direct material costs

(ii) At the economic ordering quantity level, the following is true:

(A) The ordering cost is minimum

(B) The carrying cost is minimum

(C) The ordering cost is equal to the carrying cost

(D) The purchase price is minimum

(iii) When a direct worker is paid on a monthly fixed salary basis, the following is true:

(A) There is no idle time lost.

(B) There is no idle time cost.

(C) Idle time cost is separated and treated as overhead.

(D) The salary is fully treated as factory overhead cost.

(iv) The following is an example of direct expenses as per CAS-10:

(A) Special raw material which is a substantial part of the prime cost.

(B) Travelling expenses to site.

(C) Overtime charges paid to direct worker to complete work before time.

(D) Catalogue of prices of finished products.

(v) The following is not treated as a manufacturing overhead:

(A) Lubricants

(B) Cotton waste

(C) Apportioned administration overheads

(D) Night shift allowance paid to a factory worker due to general work pressure.

(vi) When you attempt a reconciliation of profits as per Financial Accounts and Cost Accounts, the following is done:

(A) Add the under absorption of overheads in Cost Accounts if you start from the profits as per Financial Accounts.

(B) Add the under absorption of overheads in Cost Accounts if you start from the profits as per Cost Accounts.

(C) Add the over absorption of overheads in Cost Accounts if you start from the profits as per Financial Accounts.

(D) Add the over absorption of overheads in Cost Accounts if you start from the profits as per Cost Accounts.

(vii) Batch Costing is applied effectively in the following situation:

(A) paper manufacturing

(B) drug manufacturing

(C) designer clothes manufacturing

(D) oil refining

(viii) In the context of Contract a/c, work completed and not yet certified will be shown

(A) at cost plus + 2/3rd of the notional profit under 'Completed Work'.

(B) at cost plus notional profit less retention money under 'Completed Work'.

(C) at cost under 'Completed Work'.

(D) at cost under WIP a/c.

(ix) A certain process needed standard labour of 24 skilled labour hours and 30 unskilled labour hours at ₹ 60 and 40 respectively as the standard labour rates. Actually, 20 and 25 labour hours were used at ₹ 50 and 50 respectively. Then, the labour mix variance will be

(A) Adverse

(B) Favourable

(C) Zero

(D) Favourable for skilled and unfavourable for unskilled

(x) If an organization has all the resources it needs for production, then the principal budget factor is most likely to be

(A) non-existing

(B) sales demand

(C) raw materials

(D) labour supply

(b) Match the following *(You may opt write only the Roman numeral and the matched alphabet instead of copying contents into the answer books)*: 1×5=5

	Column I		Column II
xi	High inventory turnover ratio	A	Works Overhead
xii	Job evaluation	B	Opportunity Cost
xiii	Salary of product designers	C	Co-product
xiv	By product value	D	Sales and Production Budget
xv	Master Budget	E	Administrative Overhead
		F	P & L Budget
		G	Rationality in wage structure
		H	Efficient use of stock
		I	Purchase cost/average inventory
		J	Evaluation of employee performance

(c) State whether the following are 'True' or 'False' *(You may write only the Roman numeral and whether 'True' or 'False' without copying the statements into the answer books):* 1×5=5

(xvi) Uniform Costing is a unique method of costing to determine costs accurately.

(xvii) When overtime wages are incurred due to the general policy of the company arising due to lack of capacity, normal wages are treated as direct labour cost and the premium on overtime wages is treated as factory overheads.

(xviii) In marginal and absorption costing, variable factory overhead is treated as direct cost.

(xix) Operation Costing and Operating Costing are interchangeably used for the same technique of costing.

(xx) Standard Costs are costs that are estimated costs that are likely in the future production period.

(d) Fill in the blanks *(You may write only the Roman numeral and the content filling the blank):* 1×5=5

(xxi) Profit volume ratio _____ with increase in fixed cost (indicate the nature of change).

(xxii) In the graph showing the angle of incidence, when the quantity is zero, the total cost line cuts the costs axis (y axis) at _____ . (indicate the value)

(xxiii) A process account is credited with value for _____ loss when scrap value is zero (indicate the type of loss).

(xxiv) When special material is purchased for direct use in a job, _____ account is debited the Integral Accounts System.

(xxv) VED analysis is primarily used for control of _____ (indicate type of material).

Section – B

Answer any five questions from question numbers 2 to 8.

Each question carries fifteen marks.

2. (a) The following summarized information is available from the records of Oil Ltd. for the month of March, 2017:

Sales for the month: ₹ 19,25,000

Opening stock as on 1 March, 2017 : 1,25,000 litres @ ₹ 6·50 per litre

Purchases (including freight and insurance):

March 5	1,50,000 litres @	₹ 7·10 per litre
March 27	1,00,000 litres @	₹ 7·00 per litre

Closing stock as on 31 March, 2017 1,30,000 litres

Expenses for the month is ₹ 45,000. Pricing of material issues is being done at the end of the month after all receipts during the month.

On the basis of above information, calculate the following using FIFO and LIFO methods of pricing:

(i) value of closing stock as on 31 March, 2017.

(ii) Cost of goods sold during March, 2017.

(iii) Profit or loss for March, 2017.

(A detailed stores ledger account is not required. Only relevant figures need to be calculated). 8

(b) A factory has 3 production departments (P_1, P_2, P_3) and 2 service departments (S_1 & S_2). The following overheads and other information are extracted from the books for the month of May 2017:

Expenses	Amount (₹)
Rent	7,200
Plant Repair	3,600
Depreciation	2,700
Lighting	600
Supervision	9,000
Fire Insurance for stock	3,000
Cost of Idle Time	900
Power	5,400

Particulars	P_1	P_2	P_3	S_1	S_2
Area sq ft	400	300	270	150	80
No. of workers	54	48	36	24	18
Wages ₹	18,000	15,000	12,000	9,000	6,000
Value of plant ₹	72,000	54,000	48,000	6,000	
Stock value ₹	45,000	27,000	18,000		
Horse power of plant	600	400	300	150	50

(i) Allocate the overheads among the various departments on the most appropriate basis (primary distribution only).

(ii) If S_1 and S_2 use 10% of each other's facilities, find the total cost of S_1 by the simultaneous equation method. 7

3. (a) From the following particulars calculate the profit as per cost records and also prepare a reconciliation statement, if the profit as per financial accounts for the year ending 31st March, 2017 was ₹ 1,35,525:

Particulars		₹
Opening stock of raw materials		50,000
Opening stock of finished goods		1,50,000
Purchase of raw materials		3,50,000
Direct wages		1,50,000
Factory lighting	3,000	
Factory rent	24,000	
Power and fuel	30,000	
Indirect wages	2,500	
Depreciation on plant & machinery	50,000	
Oil waste etc.	2,000	
Work manager's salary	23,000	
Miscellaneous factory expenses	1,250	1,35,750
Office rent	18,000	
Office lighting	600	
Depreciation on office appliances	2,000	
Office staff salaries	20,000	40,600
Closing stock of finished goods		50,000
Closing stock of raw materials		75,000
Donations		10,000

Factory overhead is charged at 20% on prime cost and office and administrative expenses at 50% of factory overhead. The selling price is fixed by adding 25% on the total cost of manufactured and finished articles sold. Assume no WIP. 9

(b) Fill up the following table in accordance with the principles of Cost Accounting Standards applicable:

Sl. No.	Items of expenses	Employee Cost as per CAS	Disclosure	Element of Cost
		Included/Excluded/Not applicable (NA)	Yes/No/NA	
I	II	III	IV	V
i	Basic Wages to Direct Worker			
ii	Normal Idle time Cost of Direct Worker			
iii	Perquisite paid by company to administration staff			
iv	Late payment fee to PF authorities for delayed remittance of Employer's contribution to Provident Fund			

(You may write only columns I, II, IV and V in your answer books). 6

4. (a) A factory has to produce and supply 48000 units of a component annually to a customer. The carrying cost per unit is ₹ 2 per component per month. The production run set up cost is ₹ 3,600 per production run.

(i) Find out the economic batch size that must be produced to minimize total cost based on the above information.

(ii) If it is found that the dye and hydraulic mechanism get heated up and consequently the dye has to be replaced by a new one at a cost of ₹ 1,200 for each run that has a batch quantity exceeding 1000 units, what batch size would you recommend to minimize overall costs? Substantiate your recommendations with appropriate calculations.

(iii) Between the quantities suggested in (i) and (ii) above, how much would be the amount of savings or incremental expenses in (ii) over (i) with cost of dye replacement? 8

(b) A company produces a product 'M' by three distinct processes before it is ready for sale. From the information given below, work out the selling price of the product if the Management decides to earn a profit of 20% over its works cost. Present the process a/c for each process.

Particulars	Processes		
	A	B	C
1. Input of raw materials @ ₹ 40 per kg. (kg)	10,000	–	–
2. Normal loss of input	5%	5%	5%
3. Delivered to next process (kg)	9,000	8,000	–
4. Total direct labour cost (₹)	15,000	15,750	13,000
5. Variable overhead (%of direct labour)	150%	120%	100%
6. Fixed overhead (% of direct labour)	250%	180%	200%
7. Finished stock held back (kg)	400	400	–

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5. (a) The following information relating to two vehicles is given. Prepare the Operating Cost Statement and determine the cost per running kilometre for each vehicle.

	Vehicle A (₹)	Vehicle B (₹)
Cost of vehicle	25,000	15,000
Road licence fee per year	750	750
Supervision yearly Salary	1,800	1,200
Driver's wages per hour	4·00	4·00
Cost of fuel per litre	1.50	1.50
Repairs and maintenance per km	1·50	2·00
Tyre cost per km	1·00	0·80
Garage rent per year	1,600	550
Insurance yearly	850	500
Kilometres run per litre	6	5
Kilometres run during the year	15,000	6,000
Estimated life of vehicle (km)	1,00,000	75,000

Charge interest at 10% on the cost of vehicle. Each vehicle runs 20 km. per hour on an average. 8

(b) A company undertook a contract for construction of a large building complex.

The construction work commenced on 1st April 2016 and the following data are available for the year ended 31st March 2017:

Particulars	(₹'000)
Contract price	35,000
Work certified	20,000
Progress payments received	15,000
Materials issued to site	7,500
Planning and estimating costs	1,000
Direct wages paid	4,000
Materials returned from site	250
Equipment hire charges	1,750
Wage related costs	500
Site office costs	678
Head office expenses apportioned	375
Direct expenses incurred	902
Work not certified	149

The contractor owns a plant which originally cost ₹ 20 lakhs and has been continuously in use only in this contract throughout the year. The residual value of the plant after 5 years of life is expected to be ₹ 5 lakhs. Straight line method of depreciation is in use. As on 31st March 2017, the direct wages due and payable amounted to ₹ 2,70,000 and the materials at site were estimated at ₹ 2,00,000

(i) Prepare the contract account for the year ended 31st March 2017. Present figures in (₹ '000)

(ii) Compute the amount of profit/loss to be taken to the profit and loss account of the year ending 31-3-2017. 7

6. (a) ABC Ltd. has furnished the following data for the two years:

Particulars	2015-16	2016-17
Sales (₹)	10,00,000	?
Profit/Volume Ratio	50%	37·5%
Margin of safety sales as a % of total sales	40%	21·875%

There has been substantial savings in the fixed cost in the year 2016-17 due to the restructuring process. The company could maintain its sales quantity level of 2015-16 in 2016-2017 by reducing the selling price.

You are required to calculate the following values (in ₹):

(i) Sales for 2016-17

(ii) Break-even sales for 2016-17

(iii) Fixed cost for 2016-17 8

(b) A firm can produce three different products from the same raw material using the same production facilities. The requisite labour is available in plenty at ₹ 8 per hour for all products. The supply of raw material, which is imported at ₹ 8 per Kg is limited to 10,400 kg. for the budget period. The variable overheads are ₹ 5·60 per hour. The fixed overheads are ₹ 50,000. The selling commission is 10% on sales.

From the following information, you are required to suggest the sales mix which will maximize the firm's profits. Also determine the profit that will be earned at the level:

Product	Market Demand (units)	Selling Price Per unit (₹)	Labour (Hours Required per unit	Raw Material (Kg) Required per unit)
X	8,000	30	1	0·7
Y	6,000	40	2	0·4
Z	5,000	50	1·5	1·5

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7. (a) The standard material inputs required for 1,000 kgs. Of a finished product are given below:

Material	Quantity (in kgs.)	Standard rate per kg (in ₹)
A	450	20
B	400	40
C	250	60
	1,100	
Less: Standard loss	100	
Standard output	1,000	

Actual production in a period was 40,000 kgs. of the finished product for which the actual quantities of material used and the prices paid thereof are as under:

Material	Quantity(in Kg)	Purchase price per kg. (in ₹)
A	20,000	19
B	17,000	42
C	9,000	65

Compute the following variances giving materialwise break up and indicate whether Favourable(F) or Adverse (A):

(i) Material cost variance (ii) Material price variance

(iii) Material usages variance (iv) Material Mix variance

(v) Material yield variance 8

(b) A glass manufacturing company requires you to calculate and present the Master Budget for the year 2017-18 from the following information:

Annual Sales : Toughened glasses A		₹ 30,00,000
Toughened glasses B		₹ 50,00,000
Direct material cost		60% of sales
Direct wages	20 workers @	₹ 1,500 p.m.
Factory overheads & indirect labour:		
Works manager		₹ 5,000 p.m.
Foreman		₹ 4,000 p.m.
Stores and spares		2·50% of sales
Depreciation on machinery		₹ 1,26,000
Light and power		₹ 50,000
Repairs and maintenance		₹ 80,000
Other sundries		10% of direct wages
Administration, selling & distribution expenses		₹ 1,40,000 p.a.

(Present the fixed and variable overheads separately showing itemwise breakup) 7

8. Answer *any three* out of the following four questions: 5×3=15

(a) List three items included and two items excluded under the Cost Accounting Standards for Direct Expenses.

(b) State why and under what conditions will profits under absorption costing be

(i) higher than

(ii) equal to and

(iii) lower than the profits under marginal costing.

(c) Differentiate between Financial Accounting and Management Accounting.

(d) How would you classify costs based on behaviour? Give an example to explain each class.