MARKS

Q. 2 (a) The Role of the Management Accountant:

The management accountant plays a critical role in providing information to management to assist in planning, decision making and control.

(a) **Planning**

(i) The finance function draws up budgets which direct and allocate resources.

(ii) The finance function also produces forecasts of anticipated future results.

Any one (1) point @ 1 mark each = 1.0

(b) **Decision making**

The finance function is often involved in assessing and modelling the expenditure and cash flow implications of proposed decisions. 1.0

(c) **Control**

(i) Budgets are also used to monitor performance. The finance function regularly provides information comparing budgeted revenues and costs for a period, with actual results and with comparisons from previous months. 1.0

(ii) Management accountants are involved in assessing the contribution which products, services, processes and other operations make to overall profitability. 1.0

(iii) Costing based on predetermined standards provides the information which enables managers to identify weaknesses and look for remedies all in a timely manner. 1.0

(b) Computation of Variable and Fixed Overhead by High-Low Method:

	Units	Cost (Rs.)
High output	20,000	336,000
Low output	12,000	240,000
	8,000	96,000

Variable cost per unit = 96,000 ÷ 8,000 0.5

= Rs.12 per unit 2.0

Substituting in either the High or Low Overhead Costs:

	Rupees	
	High	Low
Total cost	336,000	240,000
Variable cost (20,000 x 12)	240,000	144,000
Fixed overhead cost	96,000	96,000

2.0

Determination of Activity Level at which the Overhead Rate has been fixed:

	Rupees
Standard departmental overhead rate	16
Less: Variable overhead rate	12
Fixed overhead rate	4

0.5

Fixed overhead cost÷ Fixed overhead rate = Rs.96,000 ÷ 4 = 24,000 units 0.5

The standard departmental overhead rate is fixed at Rs.16 based on the activity level of 24,000 units. 0.5

MARKS

Q. 3 (a) (i) Earnings, if an Incentive Plan is used, Providing an Hourly Rate increased of 10%:

Earnings = (Rs. 100 hourly rate + 10% rate increase) x 8 hours x 3 1.0

= Rs. 110 x 24 hours

= Rs. 2,640 1.0

(ii) Earnings, if an Incentive Plan is used, with the worker receiving 75% of the time saved:

Days	Units	Hours (X) Hourly Rate	Units Above Standard	Hours Saved	Value of Time Saved	75% of Value of Time Saved	Earnings (Rs.)	
Monday	70	8 x 100 = 800	70 – 80 = (10)	–	–	–	800	1.0
Tuesday	80	8 x 100 = 800	80 – 80 = 00	–	–	–	800	1.0
Wednesday	100	8 x 100 = 800	100 – 80 = 20	20 ÷ 10 = 2	2 x 100 = 200	150	950	0.5
						Total	2,550	0.5

(iii) Earnings, if the 100% bonus plan is used and 500 units are produced:

Efficiency ratio = $\frac{500}{400}$ = 125% 1.0

Earnings = 125% x Rs.100 hourly rate x 40 hours = Rs.5,000 1.0

(b) Distribution of Expenses of Service Department:

Distribution rates:

Maintenance	4.82
Cafeteria	377.18
Store	0.470

Rupees

	Producing Departments				Service Departments			Total	
	Peeling	Slicing	Frying	Sorting & Packaging	Maintenance	Cafeteria	Store		
Actual expenses	**110,000**	**149,000**	**45,000**	**83,000**	**66,000**	**32,000**	**34,500**	519,500	**0.25 each**
Distribution of service department expenses:									
Maintenance	19,270	8,672	13,971	7,708	(66,000)	7,226	9,153		**0.5 each**
						39,226			
Cafeteria	12,070	7,921	12,447	3,394		(39,226)	3,394		**0.25 each**
							47,047		
Store	14,114	14,114	13,173	5,646(bal)			(47,047)		**0.25 each**
	155,454	**179,707**	**84,591**	**99,748**				519,500	**0.25 each**

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Q. 4 (i) Cost of Joint Products at the Point of Separation:

	Rupees	
Raw materials (Rs.10,000 x 8)	80,000	0.5
Direct labour (Rs.1,000 x 20)	20,000	0.5
Variable overhead (Re.0.8 x 20,000)	16,000	0.5
Fixed overhead	21,000	0.5
Total cost	137,000	0.5
Less: Sale value of by-product (Rs.4 x 500)	2,000	0.25
Total cost to be distributed between joint products	135,000	0.25

(ii) Profit (loss) If the products are sold without further processing:

Products	Qty. (Kg)	Rs./ Kg	Sale Value (Rs.)	Joint Cost Distributed (Rs.)	Profit (Rs.)	
Alpha	**5,000**	**18**	**90,000**	75,000 (W-1)	**15,000**	**0.5 each**
Beta	**2,500**	**20**	**50,000**	37,500 (W-2)	**12,500**	**0.5 each**
Gamma	**1,500**	**24**	**36,000**	22,500 (W-3)	**13,500**	**0.25 each**
Total	9,000		1,76,000	1,35,000	41,000	

Workings:

W-1:	Rs.[(5,000 ÷ 9,000) x 135,000]	=	Rs. 75,000	1.0
W-2:	Rs.[(2,500 ÷ 9,000) x 135,000]	=	Rs. 37,500	
W-3:	Rs.[(1,500 ÷ 9,000) x 135,000]	=	Rs. 22,500	

(iii) If the incremental revenue earned exceeds the additional cost of further processing and marketing, then further processing will be profitable.

Calculation for decision of further processing:

Product	Further Processing and Marketing Costs	Incremental Revenue	Incremental Revenue less Additional Costs	
			Rupees	
Alpha	(4 + 2) = **6**	(28 – 18) = **10**	**4**	1.0
Beta	(5 + 2) = **7**	(26 – 20) = **6**	**–1**	1.0
Gamma	(6 + 2) = **8**	(34 – 24) = **10**	**2**	1.0
X	(2 + 1) = **3**	(6 – 4) = **2**	**–1**	1.0

Thus, products Beta and X should be sold at the point of separation and products Alpha and Gamma should be sold after further processing. 1.0

MARKS

Q. 5 (a) Advantages of Standard Costing:

- Standard costing is an example of 'management by exception'. By studying the variances, management's attention is directed towards those items which are not proceeding according to plan. Management is able to delegate cost control through the standard costing system knowing that variances will be reported.
- The process of setting, revising and monitoring standards encourages reappraisals of methods, materials and techniques so leading to cost reductions.
- Standard costs represent what the parts and products should cost. They are not merely averages of past performances and consequently they are a better guide to pricing than historical costs. In addition, they provide a simpler basis of inventory valuation.
- A properly developed standard costing system with full participation and involvement creates a positive, cost effective attitude through all levels of management right down to the shop floor.

Disadvantages of Standard Costing:

- It may be expensive and time consuming to install and to keep up to-date.
- In volatile conditions with rapidly changing methods, rates and prices, standards quickly become out of date and thus lose their control and motivational effects. This can cause resentment and loss of goodwill.
- There is research evidence to suggest that overly elaborated variances are imperfectly understood by line managers and thus they are ineffective for control purposes.
- Standards costing concentrates only on a narrow range of financial factors but many other items are of importance e.g., quality, lead times, service, customer satisfaction and so on. By ignoring these, standard costing, at best, only controls part of operations.
- The underlying principles of standard costing i.e., a standard established prior to a period is a satisfactory measure throughout the period and that performance is acceptable if it meets this standard is alien to the spirit of JIT manufacturing. Where JIT principles are adopted there is a climate of continuous improvement and the idea of normal levels of waste and efficiency (conventionally used in standards) is not accepted because there is a drive towards zero waste and ever increasing efficiency. As a consequence it is possible that standard costing will become less useful in modern factories.

Any two (2) advantages and disadvantages @ 2 mark each = 4.0

(b) (i) Calculation of Actual Output Units:

Material cost variance	=	Material price variance + Material Usage Variance	0.5
	=	Rs. 585 (A) + Rs. 375 (F)	0.5
	=	Rs. 210 (A)	
Material cost variance	=	{std. cost of materials for actual output – actual cost of materials for actual output}	0.5
Rs. (210)	=	Rs. 15 x X units – Rs. 6,435	
(210)	=	15X – 6,435	
(210) + 6,435	=	15X	
X	=	6,225 ÷ 15	
X	=	415 units	0.5

Where X = Actual output units

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(ii) Calculation of Actual Price of Material per Unit:

Material usage variance	=	std. Cost of materials per unit {std. Qty. for actual output – Actual Qty. for Actual Output}	0.5
Rs. 375 (F)	=	Rs. 1.50 x (415 x 10 Units – Y Units)	
375 ÷ 1.5	=	4,150 – Y	
250 – 4,150	=	–Y	
Y	=	3,900 units	0.5

Where Y = actual Qty. of material (units) used.

Actual Price of material per units	=	Actual direct material cost ÷ Actual output	0.5
	=	6,435 ÷ 3,900	
	=	Rs. 1.65	0.5

(iii) Calculation of Actual Wage Rate per Labour Hour:

Rate wage variance	=	Actual hrs. for actual output [std. rate per hr. – actual rate per hr.]	0.5
Rs. 636 (F)	=	Z hr. X Rs. 8 – Rs. 16,324	
Z	=	2,120 hrs.	0.5

Where Z = Actual hrs. for actual output

Actual wage rate per labour hr.	=	Actual direct wages ÷ Actual hours	0.5
	=	16,324 ÷ 2,120	
	=	7.70 per hour	0.5

(iv) Calculation of Amount of Production Overhead incurred:

Total fixed overhead cost variance	=	[Expenditure variance + Volume variance]	0.5
	=	[fixed O.H. absorbed on actual output – Amount of prod. overhead incurred on actual output]	0.5
415 units x Rs. 50 – P	=	Rs. 400 (F) + Rs. 750 (F)	0.5
P	=	Rs. 19,600	0.5

Where P = Amount of production Overhead incurred

(v) Production overhead efficiency variance:

Efficiency variance	=	std. overhead rate per hr. [std. hrs. – Actual hrs.]	1.0
	=	Rs. 10 {415units x 5 hr. – 2,120 hrs.}	0.5
	=	450 (A)	0.5

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Q. 6 Cost of Production Report by using FIFO Method:

Quantity Schedule:

	Units	Units	
Units in process at beginning (75% complete)	1,800		0.5
Units received from preceding department (balancing figure)	8,475		0.5
		10,275	
Units transferred to next department	9,300		0.5
Units still in process (25% complete)	600		0.5
Abnormal units lost in process at end	375		0.5
		10,275	

Cost charged to the department:

	Amount in Rs.	Cost per unit	
Opening inventory	6,988,800		0.5
Goods received	24,987,690	2,948.40	0.25 each
Cost incurred:			
- Material	6,180,300	729.239	0.25 each
- Labour	8,221,500	970.088	0.25 each
- FOH	1,190,700	140.500	0.25 each
	47,568,990	4788.227	0.25 each

Cost accounted for as follows:

Transferred out				
From opening stock				
- Preceding department		6,988,800		0.5
Current cost:				
- Material (450 x 729.239)	**328,158**			0.5
- Labour (450 x 970.088)	**436,540**			0.5
- FOH (450 x 140.500)	**63,225**	827,923	7,816,723	0.5
Cost from current production (7,500 x 4788.227)			35,911,668	0.5
Total cost of 9,300 units transferred to next deptt.			4,3728,391	0.5
Abnormal loss charged to overhead (375 x 4788.227)			1,795,585	
Closing stock				
- Preceding (600 x 2,948.400)		1,769,040		0.5
Current cost:				
* Material (150 x 729.239)	**109,386**			0.5
* Labour (150 x 970.088)	**145,513**			0.5
* FOH (150 x 140.500)	**21,075**	275,974	2,045,014	0.5
Total cost accounted for			47,568,990	0.5

Note: To avoid a decimal discrepancy Rs.35 is deducted from the amount of cost transferred to the next department.

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Equivalent Production Units

	Units Material	Units Conversion	
Transferred out	9,300	9,300	0.50 each
Less: Opening units	1,800	1,800	0.25 each
Started & completed	7,500	7,500	0.25 each
Work this period on opening (1,800 x 25%)	450	450	0.25 each
Work this period ending (600 x 25%)	150	150	0.25 each
Abnormal loss	375	375	0.25 each
Total	**8,475**	**8,475**	0.25 each

THE END