Q.8 Overhead Apportionment/Job Costing **80**

(a) **26**

Overhead	**Basis**		**Total**	**Prod X**		**Prod Y**		**Service 1**		**Service 2**	
Indirect materials	Given		480,000	265,000		215,000					
Indirect labour	Given		420,000	280,000		140,000					
Machine maintenance	Machine hours	**[1]**	18,000	10,800	**[1]**	7,200	**[1]**				
Dep - buildings	Book value	**[1]**	36,000	18,000	**[1]**	9,000	**[1]**	6,000	**[1]**	3,000	**[1]**
Factory L & H	Volume	**[1]**	24,000	12,000	**[1]**	6,000	**[1]**	4,000	**[1]**	2,000	**[1]**
Factory cleaning	Floor area	**[1]**	10,000	5,000	**[1]**	3,000	**[1]**	1,000	**[1]**	1,000	**[1]**
Canteen	No. of employees	**[1]**	8,750	3,750	**[1]**	3,750	**[1]**	1,250	**[1]**	-----	
			996,750	594,550	**[1]**	383,950	**[1]**	12,250	**[1]**	6,000	**[1]**

(b) **8**

		Production X		**Production Y**		**Service 1**	**Service 2**
Overhead Costs		594,550		383,950		12,250	6,000
Apportion Service 1	[60%/40%]	7,350	**[2]**	4,900	**[2]**	(12,250)	
Apportion Service 2	[55%/45%]	3,300	**[2]**	2,700	**[2]**		(6,000)
		605,200		391,550			

(c) **12**

Overhead Rate Production X - (Machine Hours)

605,200 = €12.61 per machine hour **[6]**
48,000 hours

Overhead Rate Production Y - (Labour Hours)

391,550 = €13.05 per labour hour **[6]**
30,000 hours

Or based on Machine Hours

391,550
32,000 hours = €12.24 per machine hour

(d) **22**

Selling price of Job No. 925	€		€	
Direct materials	(8,500 + 3,800)		12,300.00	**[3]**
Direct labour	(3,000 + 4,900)		7,900.00	**[3]**
Prime cost			20,200.00	
Overheads:				
Production X	(100 machine hours × €12.61)		1,261.00	**[4]**
Production Y	(200 labour hours × €13.05)		2,610.00	**[4]**
Cost of job no. 925			24,071.00	
Margin of 20%			6,017.75	**[2]**
Selling price of job no. 925			30,088.75	**[6]**

Selling price of Job No. 925	€		€	
Direct materials	(8,500 + 3,800)		12,300.00	**[3]**
Direct labour	(3,000 + 4,900)		7,900.00	**[3]**
Prime cost			20,200.00	
Overheads:				
Production X	(100 machine hours × €12.61)		1,261.00	**[4]**
Production Y	(120 machine hours × €12.24)		1,468.80	**[4]**
Cost of job no. 925			22,929.80	
Margin of 20%			5,732.45	**[2]**
Selling price of job no. 925			28,662.25	**[6]**

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(e) (i) Service departments cannot recover costs because no production takes place in these departments. Service departments are secondary to production departments and as a result, service department costs must be transferred to production departments on an equitable basis e.g. machine hours. Overheads can only be recovered through production i.e. they are included as a cost of production.

(ii) Allocation is where overhead costs can be specifically identified and charged to a particular department or cost centre. These overheads are allocated to that department.

Apportionment is where overheads cannot be specifically identified but are shared or divided between departments using an appropriate basis of apportionment.

Absorption is the method by which costs are charged to cost units/units of products in order to be recovered. An overhead absorption rate for each department can be calculated using a suitable basis such as rate per unit, per labour hour and per machine hour.