

Mars Electronics produces four products used in hospitals. The four products are assembled and tested in batches by the skilled employees of the company. All four products are assembled using the same set of machines and equipment. There are four departments namely Assembly, Testing, Maintenance and Administration. The budgeted details related to these four departments and product details for the first quarter are given below:

	Production Department		Service Department		
	Assembly	Testing	Maintenance	Administration	Total
Department cost	7200000	750000	600000	288000	8838000
Number of Employees	80	10	10	8	108
Support Centres Effort to other departments					
Maintenance	60%	35%	-	5%	
Administration	70%	20%	10%	-	
Note: Department costs include salary, rent, power and other expenses					
Product Details	P1	P2	P3	P4	Total
Number of Units	300	200	50	10	560
Machine Hours	1800	800	400	120	3120

Required

1. Allocate the service department costs to production departments using step-wise method. First allocate maintenance department costs and then administrative department costs.
2. Allocate assembly department costs to products on the basis of machine hours

3. Allocate testing department costs to products on the basis of number of units.
4. Find the total production overhead for each product.
5. In allocating the service department costs, if we follow administration department first and then maintenance department, how will affect the final production overhead to each product.