

Resitting an exam



**ASSIGN
BUSTER**

Elfunlimited demand Queen1, 500 units King1, 000 units You are required to:

- a) Calculate the product mix that will maximise profit and the amount of the profit.
- b) Determine whether it would be worthwhile paying Type 1 labour for overtime working at time and a half and, if so, to calculate any extra profit for each 1, 000 hours of overtime.
- c) Comment on the principles used to find the optimum product mix in part (a), pointing out any possible limitations.
- d) Explain how a computer could assist in providing a solution for the data shown above.

Question 2. Based on BPP (1996) ACCA Study Text. Professional Paper 9.

Products X, Y and Z are produced in a factory. The factory's capacity is restricted by a bottleneck in the process at stage W. The machine at stage W is expected to operate for 8 hours per day and has the following hourly capacities: Product X 1, 200 units per hour Product Y 1, 500 units per hour Product Z 600 units per hour Selling prices per unit and costs are: Product X? 150 selling price, ? 70 material cost Product Y? 120 selling price, ? 40 material cost Product Z? 00 selling price, ? 100 material cost. Total Factory Cost is ? 720, 000 per day. A) Calculate the profit per day where output is: Product X 6, 000 units per day Product Y 4, 500 units per day Product Z 1, 200 units per day B) Determine the efficiency of bottleneck use. C) Calculate the TA Ratio for each product.

D) Assuming there are no limits on demand for the three products, what should the company do faced with this information? Question Three Previous exam question PART ONE: You are required to: a) Discuss the five steps in the Theory of Constraints (TOC). 8 marks) b) Explain how Throughput Contribution is calculated. (2 marks) PART TWO: The following data is

available for Carveaduck Ltd, a company that employs skilled woodcarvers to make detailed sculptures of attractive ducks. The company makes models of Scaup, Eider and Teal.

The Throughput Contribution for the models is ? 90, ? 80 and ? 50 respectively. There are three woodcarvers employed and the hours they need to work per unit are given below:

	Scaup	Eider	Teal	Labour hours per unit
Brian	2.00	1.0	0.25	
Tim	1.80	2.00	0.50	
Janice	1.50	0.50	0.25	

Estimated demand is 200 sculptures of each duck in the period. Each sculptor is only available to work 480 hours in the period. Total Factory Cost is ? 4,320.

c) Identify which of the three sculptors is the bottleneck; show your workings. (6 marks)

d) Determine the most profitable production schedule considering the limitations on available hours. (6 marks)

e) Calculate the Throughput Accounting (TA) ratio for each of the ducks. (3 marks)

Total 25 marks