**Question 29**

Trish Formantine owns a manufacturing firm which makes 4 different products using machines. At full capacity, the machines work for 140,000 hours. The total fixed costs for the factory are £79,600.

Sales demand for the four products is expected to be:

Special 4,000 units

Standard 6,000 units

Deluxe 7,000 units

Premier 3,000 units

The following information is also available (all figures are per unit):

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Product** | **Selling Price** | **Machine Hours** | **Labour Hours** | **Materials** |
| Special | £50 | 20 | 1·5 | 10 |
| Standard | £40 | 10 | 1 | 11 |
| Deluxe | £31 | 8 | 0·5 | 10 |
| Premier | £46 | 10 | 1 | 11 |

Additional Information:

* Labour is charged at £10 per hour
* Materials are charged at £1 per kg
* Variable overheads are charged at £0·50 per machine hour

1. Calculate how many machine hours are necessary to meet current demand for  
   each product and in total. **5**
2. Using the information above, you are asked to calculate for each product:
3. Variable Costs per unit **4**
4. Contribution per unit **4**
5. Contribution per Machine Hour **4**
6. State the order of production required to maximise profits. **1**
7. Calculate how many units of each product should be produced in order to maximise profits. **4**
8. Using the units from (d), calculate the total overall profit. **4**
9. **(i)** State two duties of a Management Accountant. **2**

**(ii)** Describe two advantages of a Management Accountant using a spreadsheet package. **2**

**Total marks 30**

|  |  |  |  |
| --- | --- | --- | --- |
| **Question** | **Expected answer(s)** | **Max mark** | **Additional guidance** |
| **29 (a)**  **29 (b) (i)**  **29 (b) (ii)**  **29 (b) (iii)**  **29 (c)** | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | **Special** | **Standard** | **Deluxe** | **Premier** | | Demand | 4,000 | 6,000 | 7,000 | 3,000 | | Machine Hours per unit | 20 | 10 | 8 | 10 | | Machine hours | 80,000 **(1)** | 60,000 **(1)** | 56,000 **(1)** | 30,000 **(1)** | | Total = 226,000 **(1)** |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | Wages | £15 | £10 | £5 | £10 | | Materials | £10 | £11 | £10 | £11 | | Overheads | £10 | £5 | £4 | £5 | | Total | £35 **(1)** | £26 **(1)** | £19 **(1)** | £26 **(1)** |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | Selling Price | £50 | £40 | £31 | £46 | | Total Variable Cost | £35 | £26 | £19 | £26 | | Contribution per unit | £15 **(1)** | £14 **(1)** | £12 **(1)** | £20 **(1)** |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | Machine Hours | 20 | 10 | 8 | 10 | | Contribution per Machine Hour | £0·75 **(1)** | £1·40 **(1)** | £1·50 **(1)** | £2·00 **(1)** | |  |  |  |  |  | | Priority order | 4th | 3rd | 2nd | 1st | | **5**  **4**  **4**  **4**  **1** |  |
| **Question** | **Expected answer(s)** | **Max mark** | **Additional guidance** |
| **29 (d)** | Hours available 140,000  Hours for Premier (30,000)  Hours for Deluxe (56,000) **(1)**  Hours available for Standard 54,000 **(1)**  Hours per unit (A) ÷10 **(1)**  Units of Standard **5,400**  Units of Premier 3,000  Units of Deluxe 7,000 **(1)** | **4** |  |
| **29 (e)** | |  |  |  |  | | --- | --- | --- | --- | |  | **Standard** | **Deluxe** | **Premier** | | Units | 5,400 | 7,000 | 3,000 | | Contribution per unit | £14 | £12 | £20 | | Total Contribution | £75,600 **(1)** | £84,000 **(1)** | £60,000 **(1)** | | Total = £219,000  Less Fixed Costs = £79,600 **(1)**  Profit = £140,000 | | | | | **4** |  |
| **Question** | **Expected answer(s)** | **Max mark** | **Additional guidance** | |
| **29 (f) (i)** | Duties of a Management Accountant:   * Prepare cash budgets. **(1)** * Provides management with information to enable decision-making. **(1)** * Responsible for the collection, processing and classification of costs. **(1)** * Supplies data to make the most efficient use of limiting factors. **(1)** * Provides management with data for internal use. **(1)** * Accountable for the planning and control of production. **(1)** * Manages cost accounting systems and determines which system is most appropriate. **(1)** * Prepares break-even statements, charts, etc. **(1)** | **2** | Accept any two appropriate duties for  **1 mark each**.  Accept any other relevant answer. | |
| **29 (f) (ii)** | Advantages of a Management Accountant using a spreadsheet package:   * Can use multiple sheets — information changes all sheets with use of formulae. **(1)** * Speed — transactions can be processed much faster than in a manual system with the use of formulae. **(1)** * Accuracy — use of formulae will make calculations more accurate than a manual  system. **(1)** * Use of templates — these can be created with formulae to use from year to year, eg cash budget. **(1)** * With the use of formulae, if one figure is changed, the change will ripple through the rest of the spreadsheet. **(1)** * Multiple access. **(1)** | **2** | Accept any two appropriate descriptions for **1 mark each.**  Accept any other relevant answer. | |