

**St. Mira's College for Girls,  
(Autonomous-Affiliated to Savitribai Phule Pune University)**

**Class: SYBCOM**

**Subject**

**- Cost and Works Accountancy - I**

**Subject Code: C31611**

**SEM III**

**(2018-2019)**

**Unit :3**

**Skill Development –Problem Solving Skills –Calculation of Stock levels**

ST. MIRAS COLLEGE FOR GIRLS  
SYBCOM  
SEMESTER-III (2018-19)  
COSTING I  
FLEXI TEST II

TOTAL MARKS: 10  
NAME: \_\_\_\_\_ DATE: 11-09-18  
ROLL NO.: \_\_\_\_\_

Q A. Atlantic Ltd. uses two types of materials X and Y for producing a final product. The relevant monthly data for the components are as follows:

Particulars	X(units)	Y(units)
Normal Usage	400	150
Minimum Usage	200	100
Maximum Usage	600	250
Reorder Quantity	750	900
Reorder period	2 to 3 months	3 to 4 months

Calculate for each component:

(a) Re-order level  
(b) Minimum level  
(c) Maximum level  
(d) Average stock level

(07 marks)

**B. Calculate Economic Order Quantity from the following information:**

i. Quarterly consumption of material: 2000kgs  
ii. Cost of placing one order: ₹50  
iii. Cost per unit: ₹40  
iv. Storage and Carrying cost: 8% of average inventory

Also calculate the number of orders required to be placed in the year. (03 marks)

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St. Mira's College For Girls, Pune 1.

11/9/18

Q.A.

ROQ [Reorder Quantity] = 'X' = 750  
'Y' = 900

a) Re-order level = Maximum consumption x maximum period of 'X'

$$= 600 \times 3$$

$$= 1800 \text{ units}$$

Reorder level = Maximum consumption x maximum period of 'Y'

$$= 250 \times 4$$

$$= 1000 \text{ units}$$

b) Maximum level = ROQ + ROQ - (Minimum consumption x minimum period) of 'X'

$$= 1800 + 750 - (200 \times 2)$$

$$= 2550 - 400$$

$$= 2150 \text{ units}$$

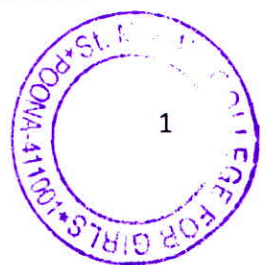
Maximum level = ROQ + ROQ - (Minimum consumption x minimum period) of 'Y'

$$= 1000 + 900 - (100 \times 3)$$

$$= 1900 - 300$$

$$= 1600 \text{ units}$$

*Dimple Banche*  
(Dimple Banche)  
Subject teacher



*Pr*  
Principal Incharge  
St. Mira's College for Girls

Minimum level =  $ROL - \left( \frac{\text{Average Consumption} \times \text{Period of Review}}{\text{Normal Period of Review}} \right)$

of 'x'

$$= 1800 - (400 \times 2.5)$$

$$= 1800 - 1000$$

$$= 800 \text{ units}$$

Minimum level =  $ROL - \left( \frac{\text{Average Normal Consumption}}{\text{Average Normal Period}} \right)$

of 'y'

$$= 1000 - (150 \times 3.5)$$

$$= 1000 - 525$$

$$= 475 \text{ units}$$

Average stock level =  $\frac{\text{Maximum level} + \text{Minimum level}}{2}$

of 'x'

$$= \frac{2150 + 800}{2} = 1475$$

$$= 1475 \text{ units}$$

Average stock level =  $\frac{\text{Maximum level} + \text{Minimum level}}{2}$

of 'y'

$$= \frac{1600 + 475}{2} = 1037.5$$

$$= 1037.5 \text{ units i.e. } 1038$$

Annual consumption =  $2000 \text{ kgs} \times 4 = 8000 \text{ kgs}$

A = 2000 kgs (Quarterly consumption = 2000 kgs)

C = ₹ 50

$C = ₹ 40 \times 8.1 = \frac{8}{100} \times 40 = 3.2 ₹$

EOQ =  $\sqrt{\frac{2AC}{C}}$

$$= \sqrt{\frac{2 \times 8000 \times 50}{3.2}}$$

$$= \sqrt{\frac{8,00,000}{3.2}}$$

$$= \sqrt{250,000}$$

$$= ₹ 500$$

Number of orders =  $\frac{A}{EOQ}$

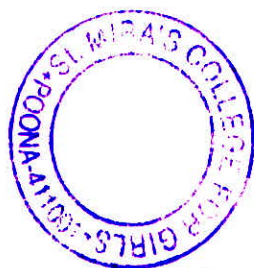
$$= \frac{8000 \text{ kgs}}{₹ 500}$$

$$= \text{No. of orders } 16 \text{ orders}$$

Name and Signature of the Faculty:

Dr. Dimple Buche

*Dimple Buche*



*[Signature]*  
Principal Incharge  
St. Mira's College for Girls