2. MATERIAL COST

ASSIGNMENT SOLUTIONS

PROBLEM NO:1

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

A = Units consumed during year

O = Ordering cost per order

C = Inventory carrying cost per unit per annum

$$EOQ = \sqrt{\frac{2 \times 10{,}000 \times 50}{8\% \text{ on Rs. } 2}} = 2{,}500 \text{ kg.}$$

No. of orders to be placed in a year

=Total consumption of materials per annum/EOQ

=10,000 kg./2,500 kg.= 4 Orders per year

PROBLEM NO: 2

a) $EOQ = \sqrt{\frac{2AO}{C}}$

Where

A = Annual usage of material = 5,000 units

O = Order cost per order = Rs.16

C = Inventory Carrying cost per unit per annum = Rs. 20 x 20% = Rs. 4.

$$EOQ = \sqrt{\frac{2 \times 5000 \text{units} \times Rs16}{Rs4}} = 200 \text{ units}$$

Calculation of Total Variable Cost (Excluding material purchase cost):

Particulars	Amount (Rs.)
Order cost $\left(\frac{\text{Annual usage}}{\text{Order size}} \times \text{Order cost per Order}\right)$	$\left(\frac{5000 \text{units}}{200 \text{units}} \times Rs16\right) = 400$
Add: Inventory carrying cost $\left(\frac{1}{2} \times \text{Order Size} \times IC\right)$	$\left(\frac{1}{2} \times 200 \text{units} \times Rs.4\right) = 400$
Total variable cost (Excluding purchase cost)	**800**

b) If Incorrect price of Rs. 12.80 is used:

Then,

A = 5000 units

O = Rs. 16

C = Rs. 12.80 x 20% = Rs.2.56

$$EOQ = \sqrt{\frac{2AO}{C}} = \sqrt{\frac{2 \times 5000 units \times Rs.16}{Rs.2.56}} = 250 \text{ units}$$

Statement of Total Variable Cost [Excluding material purchase cost]:

Particulars	Amount (Rs.)
Order cost $\left[\frac{5000 units}{250 units} X Rs.16\right]$	320
(+) Inventory carrying cost $\left[\frac{1}{2} \times 250 units \times 2.56\right]$	320
Total variable cost [excluding material purchase cost]	640

Note: In PM purchase cost of raw material is considered while calculating variable cost.

PROBLEM NO: 3

WORKING NOTE: 1 Calculation of EOQ

a) $EOQ = \sqrt{\frac{2AO}{IC}}$

Where,

A = Annual usage of material = 36,000 units

O = Order cost per order = Rs.25

IC = Inventory Carrying cost percent per annum = Rs. 1 x 20% = Rs. 0.2

$$EOQ = \sqrt{\frac{2 \times 36000 units \times Rs 25}{Rs 0.2}} = 3000 \text{ units}$$

WORKING NOTE 2: Calculation of No of orders in EOQ & Existing inventory policy

Order size of existing inventory policy = $\frac{36,000 \text{ units}}{6 \text{ Installments}}$ = 6000 units

No of orders = $\frac{Annual usage}{Order cost}$

For EOQ = $\frac{36,000}{3,000}$ = 12 orders

For existing inventory policy: Orders = $\frac{36,000 units}{6,000 units}$ = 6 orders

Statement showing comparative cost of material **(Amount in Rs.)**

Particulars	EOQ	Existing policy
Purchase Cost (Annual usage x purchase price) (36,000 units x Re.1)	36,000	36,000
Add: Order cost (No. of orders x Cost per order)	(12 orders x 25) 300	(6 orders x 25) 150
Add: Inventory carrying cost $\left(\frac{1}{2} \times Order Size \times C\right)$	$\left(\frac{1}{2} \times 3000 units \times 0.2\right)$ 300	$\left(\frac{1}{2} \times 6000 units \times 0.2\right)$ 600
Total cost of material	36,600	36,750

a) Total **annual cost** of existing Inventory policy = Rs. 750

b) Money can be saved by EOQ = Rs. 36,750 - Rs. 36,600 = Rs. 150

Note: As the unit purchase cost of Rs.1 doesnot change, No need to consider while calculating total cost of inventory for the purpose of savings.

PROBLEM NO:4

i) Calculation of EOQ = $\sqrt{\frac{2AO}{IC}}$

Where

A = Annual usage of material = $\frac{1,00,000 units}{2.5 kgs}$ = 40000 kgs.

O = Order cost per order = Rs.750 (370 + 380)

IC = Inventory Carrying cost per unit per annum = $[Rs.12 + (0.25 \times 12 month)] = Rs.15$

EOQ = $\sqrt{\frac{2 \times 40000 kgs \times Rs750}{Rs15}}$ = 2000 kgs

ii) No Of Orders = $\frac{Annual usage}{order size} = \frac{40,000 kgs}{2000 kgs} = 20 orders$

Time gap between orders = $\frac{360 days}{No of orders} = \frac{360 days}{20 Orders} = 18 Days$

iii) Comparative cost of material Statement

(Amount in Rs.)

Particulars	EOQ	Proportionately (quarterly basis)
Order size	2,000 kgs	10,000 kgs
Purchase Cost [Annual usage x purchase price] [40,000 kgs x Rs.80]	32,00,000	32,00,000
+ Order cost $\left[\frac{Annual usage}{order size} \times order cost per order\right]$	$\left[\frac{40,000 kgs}{2,000 kgs} \times Rs.750\right]$ = 15,000	$\left[\frac{40,000 kgs}{10,000 kgs} \times Rs.750\right]$ = ,3000
+ Inventory carrying cost $\left(\frac{1}{2} \times Order Size \times C\right)$	$\left(\frac{1}{2} \times 2,000 kgs \times Rs.15\right) = 15,000$	$\left(\frac{1}{2} \times 10,000 kgs \times Rs.15\right)$ = 75,000
Total cost of material	**32,30,000**	**32,78,000**

Extra cost incurred on quarterly basis Rs 48000 [i.e. Rs. 3,278,000 - Rs. 3,230,000] should be asked as discount

$\therefore$ Discount rate = $\frac{discount Amt}{Purchase cost} \times 100 = \frac{Rs.48000}{Rs.32,00,000} \times 100 = 1.5\%$

PROBLEM NO:5

i) EOQ = $\sqrt{\frac{2AS}{C}}$

Where,

A = Annual usage of raw material

= 1,500 units x 12 months = 18,000 units

S = Ordering cost per order = Rs.75

C = Carrying cost per unit per annum

= Purchase price x % of carrying cost

= 1000 x 3% [2%+1%]

= Rs.30

$$EOQ = \sqrt{\frac{2AS}{C}} = \sqrt{\frac{2 \times 18{,}000\ units \times 75}{Rs.30}} = 300\ units$$

ii) Re-order level = Maximum usage x Maximum lead time

= 400 units x 8 weeks

= 3,200 units

Statement showing total cost of raw material

Particulars	**With discount (Order size = 6,000 units)**	**Without discount (EOQ = 300 units)**
Purchase price per unit	Rs.950 (Rs.1,000-5%)	1,000
Carrying cost per unit per annum	28.5 (950 x 3%)	30 (1,000 x 3%)
(a) Total carrying cost p.a [Order size/EOQ x ½ x C]	85,500 [6,000 x ½ x 28.5]	4,500 [300 x ½ x 30]
(b) Total ordering cost p.a $\left[\frac{A}{\text{Order size/EOQ}} \times S\right]$	225 $\left[\frac{18{,}000}{6{,}000} \times 75\right]$	4,500 $\left[\frac{18{,}000}{300} \times 75\right]$
(c) Purchase of raw material (Qty x Price)	1,71,00,000 [18,000 x 950]	1,80,00,000 [18,000 x 1,000]
Total cost of raw material (a+b+c)	**1,71,85,725**	**1,80,09,000**

Total cost is less at discount offer.

Therefore, it is advised to accept the discount offer.

PROBLEM NO: 6

i) Calculation of $EOQ = \sqrt{\frac{2AO}{IC}}$

Where

A = Annual usage of material =60,000 pack x 12 months = 7,20,000 packs

O = Order cost per order = Rs.240

IC = Inventory Carrying cost per unit per annum = Rs. 228 x 10% = Rs. 22.8

$$EOQ = \sqrt{\frac{2 \times 7{,}20{,}000\ packs \times Rs240}{Rs22.8}} = 3894\ paks.$$

ii) **Calculation to no of orders:-**

$$\text{No of orders} = \frac{\text{Annal usage}}{\text{order size}} = \frac{7{,}20{,}000\ Paks}{3894\ packs} = 185\ orders$$

iii) Calculation of order cost and carrying cost

Particulars	Amount (Rs)
Order Cost $\left[\frac{\text{Annual usage}}{\text{Order size}} \times \text{order cost per order}\right]$ $\left[\frac{720{,}000 \text{ packs}}{3894 \text{ packs}} \times 240\right]$	44376
Inventory carrying cost = $\left(\frac{1}{2} \times \text{order size} \times \text{IC}\right) = \left[\frac{1}{2} \times 3894 \text{ packs} \times 22.8\right]$	44392
Total	88768

iv) No of Packs per day = $\frac{720{,}000 \text{ packs}}{360 \text{ days}}$ = 2000 Packs per day

Next order to be placed = Present stock – lead time stock

= 10,033 – (2000 x 5days)

= 33 packs

∴ Next order to be placed "Immediately"(since Units Used per day = 2000 units)

PROBLEM NO:7

a) Statement showing total comparative cost of material

Particulars	Orders				
a) Order size (say) (Tonnes)	40	50	100	200	300
b) Purchase price (Rs)	9,600	9360	9120	8880	8640
c) No of orders = $\frac{\text{Annual usage}}{\text{Order size}} = \frac{500 \text{ kgs}}{(a)}$	13	10	5	3	2
d) Purchase cost = (Annual usage x Purchase price)(500kgs x b) (Rs.)	48,00,000	46,80,000	45,60,000	44,40,000	43,20,000
e) Order cost = (No. of orders x cost per order) (c x 12,500) (Rs.)	1,62,500	1,25,000	62,500	37,500	25,000
f) Inventory carrying cost per unit per annum = (Purchase price x 25 %) (b x 25%) (Rs.)	2,400	2,340	2,280	2,220	2,160
g) Total inventory carrying cost = $\left(\frac{1}{2} \times 24000 \text{kgs} \times\right)$ = (1/2) x a x f (Rs.)	48,000	58,500	1,14,000	2,22,000	3,24,000
Total cost (d + e + g) (Rs.)	**50,10,500**	**48,63,500**	**47,36,500**	**46,99,500**	**46,69,000**

Since cost is least in order size of 300 kgs, it is most economic purchase level

Theoretically number of orders may be in fractional numbers

Note: Number of order rounded off to the nearest whole number

b) EOQ = $\sqrt{\frac{2 \times 500 \text{tonnes} \times \text{Rs.}12{,}500}{\text{Rs.}2{,}625}}$ = 69 Tonnes

PROBLEM NO: 8

a) Re order quantity = Economic order quantity = $\sqrt{\frac{2AO}{IC}}$

Where A = Annual consumption = 7,500 units x 12 months = 90,000 units

O = Ordering cost per order = Rs.500

IC = Inventory carrying cost p.a. = Rs.60 x 10% = Rs.6

$\therefore$ Re-order quantity = $\sqrt{\frac{2(90,000) \times Rs.500}{Rs.6}}$ = 3,873 units (Approx.)

b) Re-order level = Maximum consumption x Maximum re-order period

= 75 units x 8 weeks

= 6,000 units

c) Minimum stock level = Re-order level – (Average consumption x Average Re-order period)

= 6,000 units – (500 units x $\frac{5+8}{2}$ weeks)

= 6,000 units – 3,250 units = 2,750 units

d) Maximum stock level = (Reorder level + reorder quantity) – (Minimum consumption x minimum Reorder period)

= 6,000 units + 3,873 units – (250 units x 5 weeks)

= 9,873 units – (1,250 units) = 8,623 units

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

= $\frac{2,750 \text{units} + 8,623 \text{units}}{2}$

= 5,687 units

PROBLEM NO: 9

Maximum Level = Re-order level + Re-order Quantity- (Min. usage × Min. Re-order Period)

Re-order Level = Maximum Level – [Re-order Quantity – (Min. usage × Min. Re-order Period)

= 8,000 kg. – [5,000 kg. – (400 kg* × 4 days)] = 8,000 kg. – 3,400 kg. = 4,600 kg.

Hence, Re-order level is 4,600 kg.

*Minimum usage per day = 50 kg. × 8 hours = 400 kg.

PROBLEM NO: 10

(i) Reorder Quantity (ROQ) = 1,100units *(Refer to working note)*

(ii) Reorder level (ROL) = Lead time consumption + Safety stock

= 500 units + 1,000 units.

= 1,500 units.

(iii) the inventory level (ideally) immediately before the material order is received be the safety stock is 1,500 units

Working Note

i) Annual consumption of raw material (A) = 12,000units

Cost of placing an order (O) = Rs.1

Carrying cost per kg. Per annum (c × i) = Rs.1x24% = Rs.0.24

Economic order quantity (EOQ) $= \sqrt{\frac{2AO}{C \times i}} = \sqrt{\frac{2 \times 12,000 \times 12}{Rs.0.24}}$ = 1,100 units. (Approx)

ii) Lead time consumption = Annual consumption/ no. of days in a year x Normal lead time

=12,000 units / 360 x 15 days

= 500 units.

iii) Safety stock= Annual consumption / no. of days in a year x 30 days

= 12,000 units / 360 x 30 days

= 1,000 units

PROBLEM NO: 11

i) Re-order quantity (ROQ) = Economic Batch Quantity

$\therefore$ EOQ = $\sqrt{\frac{2AO}{C}}$

Where, A = Annual usage of Raw Material = Normal Consumption per week x No. of weeks in a year

= 250 kgs. X 52 weeks = 13,000 kgs.

O = ordering cost per order = Rs. 1,500

C = Carrying cost per unit per annum = Rs. 100 x 9.75 % = Rs. 9.75

$\therefore$ EOQ = $\sqrt{\frac{2 \times 13,000 \text{ kgs.} \times Rs.1,500}{Rs.9.75}}$ = 2,000 kgs.

ii) Re-order level = Maximum Consumption per week x Maximum lead time = 300 kgs. x 7 = 2,100 kgs.

iii) Maximum level = ROL + ROQ - (Minimum consumption per week x Minimum lead time)

= 2,100 + 2,000 - (200 x 5) = 3,100 kgs.

iv) Minimum level = ROL - (Normal Usage per week x Normal lead time) = 2,100 kgs. (250 kgs. x 6) = 600 kgs.

v) Average Stock Level = $\frac{\text{Minimum Stock Level} + \text{Maximum Stock Level}}{2} = \frac{600 \text{ Kgs} + 3,100 \text{ kgs}}{2}$ = 1,850 kgs.

(or) = Minimum level + ½ of ROQ = 600 + ½ of 2,000 = 1,600 kgs.

PROBLEM NO 12

Working Notes:

(i) Computation of Annual Consumption & Annual Demand for raw material; Dee;

Sales forecast of the product 'Exe'	10,000 units
Less: Opening stock of Exe	900 units
Fresh units of 'Exe' to be produced	9,100 units
Raw material required to produce 9,100 units'Exe'	18,200 kg

(9,100 unitX2Kg)	
Less: Opening stock of 'Dee'	1,000 kg
Annual demand for raw material'Dee'	17,200 kg

(ii) Computation of Economic order of Quantity (EOQ):

$$EOQ = \sqrt{\frac{2 \times \text{Annual demand 'Dee'} \times \text{ordering cost}}{\text{carrying cost per unit per annum}}}$$

$$= \sqrt{\frac{2 \times 17{,}200\text{kg} \times \text{Rs.}720}{\text{Rs.}125 \times 13.76\%}} = \sqrt{\frac{2 \times 17{,}200\text{kg} \times \text{Rs.}720}{\text{Rs.}17.2}} = 1{,}200\text{kg}$$

(iii) Re-order Level

=(Maximum consumption per day × Maximum lead time)

$$= \left\{\left(\frac{\text{Annual consumption of 'Dee'}}{364\text{kg}} + 20\text{kg}\right) \times 8\text{ days}\right\}$$

$$= \left\{\left(\frac{18{,}200\text{kg}}{364\text{ kg}} + 20\text{ kg}\right) \times 8\text{ days}\right\} = 560\text{kg}$$

(iv) Minimum consumption per day of raw material 'Dee'

Average consumption per day = 50kg

Hence, Maximum Consumption per day = 50 kg. + 20 kg. = 70 kg.

So Minimum consumption per day will be

Average Consumption =Min.consumption+Max.consumption

Or, 50 kg. =Min.consumption+70kg.

2

Or, Min. consumption = 100 kg – 70 kg. = 30 kg.

(a) Re-order Quantity :

EOQ – 200 kg. = 1,200 kg. – 200 kg.= 1,000 kg.

(b) Maximum Stock level:

= Re-order level + Re-order Quantity – (Min. consumption per day × Min. lead time

= 560 kg. + 1,000 kg. – (30 kg. × 4 days) = 1,560 kg. – 120 kg. = 1,440 kg

(c) Minimum Stock level:

= Re-order level – (Average consumption per day × Average lead time)

= 560 kg. – (50 kg. × 6 days) = 260 kg.

(d) Impact on the profitability of the company by not ordering the EOQ.

		When purchasing the ROQ	When purchasing the EOQ
I	Order quantity	1,000 kg.	1,200 kg.
II	No. of orders a year	$\frac{17{,}200\text{kg}}{1{,}000\text{kg}} = 17.2$ or 18 orders	=14.33or 15 orders
III	Ordering Cost	18 orders × ` 720 = `12,960	15 orders × ` 720 = `10,800
IV	Average Inventory	1,000kg./2= 500kg.	1,200kg./2= 600kg.

V	Carrying Cost	500 kg. × ` 17.2 = ` 8,600	600 kg. × ` 17.2 = ` 10,320
VI	Total Cost	` 21,560	` 21,120

Extra Cost incurred due to not ordering EOQ = ` 21,560 - ` 21,120 = 440

PROBLEM NO: 13

Inventory turnover ratio $= \frac{\text{Cost of goods sold}}{\text{Average Stock}}$

Inventory turnover ratio of A $= \frac{10{,}000 + 52{,}000 - 6{,}000}{\left(\frac{10{,}000 + 6{,}000}{2}\right)} = \frac{\text{Rs.}56{,}000}{\text{Rs.}8{,}000} = 7$ times

Inventory turnover ratio of B $= \frac{9{,}000 + 27{,}000 - 11{,}000}{\left(\frac{11{,}000 + 9{,}000}{2}\right)} = \frac{\text{Rs.}25{,}000}{\text{Rs.}10{,}000} = 2.5$ times

Note: COGS = Opening stock +purchases - closing stock

Average stock = $\frac{\text{Opening stock} + \text{Closing stock}}{2}$

Comment: Material A is faster moving than Material B

PROBLEM NO: 14

Statement showing computation of effective quantity of each chemical available for use

Particulars	Chemical A (Kg)	Chemical B (Kg)	Chemical C (Kg)
Quantity purchased	3,000	5,000	2,000
Less: Shortage due to breakage	(200)	(280)	(100)
	2,800	**4,720**	**1,900**
Less: Provision for further deterioration 5%	(140)	(236)	(95)
	2,660	**4,484**	**1,805**

Statement showing total cost of material

Particulars	Chemical A (Rs.)	Chemical B (Rs.)	Chemical C (Rs.)
Purchase price	12,600	19,000	9,500
Add: Sales Tax*	630	950	475
Railway Freight*	300	500	200
Octroi duty @ 0.1 kg	300	500	200
cartage paid	22	63.12	31.8
	13,852	**21,013.12**	**10,406.8**

Rate per Kg.

Chemical A $= \frac{\text{Rs.}13{,}852}{2660\text{kgs}} = \text{Rs.}5.2$

Chemical B $= \frac{\text{Rs.}21{,}013.20}{4484\text{kgs}} = \text{Rs. } 4.6$

Chemical C $= \frac{\text{Rs.}10{,}406.80}{1805\text{kgs}} = \text{Rs. } 5.7$

*Sales tax is apportioned on the basis of purchase price

* Railway freight is apportioned in the ratio of quantity purchased

PROBLEM NO:15

Working Notes:

Date	Particulars	Qty. (kgs)	Rate (Rs.)	Value (Rs.)
01.03.2013	Opening Stock (A)	22,000	58.50	12,87,000
03.03.2013	Purchase	35,000	60.75*	21,26,250
18.03.2013	Purchase	32,000	61.25*	19,60,000
25.03.2013	Purchase	22,000	61.75*	13,58,500
	Total Purchase (B)	89,000		54,44,750
	Total (A+B) (C)	1,11,000		67,31,750
31.03.2013	Closing Stock (D)	23,000		
	Quantity issued during March, 13 (C - D)	88,000		53,12,000#

* Cost of purchase includes freight paid @ RS.1.75 per kgs

Value of material issued under FIFO method

Quantity (kgs)	Rate (Rs.)	Value (RS.)
22,000	58.50	12,87,000
35,000	60.75	21,26,250
31,000	61.25	18,98,750
88,000		53,12,000

(i) Value of Closing Stock as on 31.03.2013 using FIFO method

	(Rs.)	
Value of Opening Stock		12,87,000
Add: Purchases made		54,44,750
	67,31,750	
Less: Value of material issued		(53,12,000)
Value of Closing Stock		14,19,750

(ii) Cost of Goods Sold

Cost of materials issued = 53,12,000

(iii) Profit for the month of March, 2013

	(Rs.)
Value of Material issued	53,12,000
Add: Accountant's Salary	11,000
Total Cost	53,23,000
Less: Sales Value	(62,00,000)
Profit	8,77,000

PROBLEM NO:16

Store Ledger Account

Name - **Code No. -** **Description-**				**Max. Stock Level –** **Min. Stock Level –** **Re-order level –**			**Bin No.-** **Location Code-** **Re-order quantity-**		
Date	**Receipts**			**Issues**			**Balance**		
	Qty.	**Rate**	**Amount**	**Qty.**	**Rate**	**Amount**	**Qty.**	**Rate**	**Amount**
	Units	**(Rs.)**	**(Rs.)**	**Units**	**(Rs.)**	**(Rs.)**	**Units**	**(Rs.)**	**(Rs.)**
April 1							200	10	2,000

April 5	250	8	2000				200	10	4,000
							250	8	
April 8	150	8.50	1275				200	10	5,275
							250	8	
							150	8.50	
April 10				100	8.50	850	200	10	4,425
							250	8	
							50	8.50	
April 15	50	10	500				200	10	4,925
							250	8	
							50	8.50	
							50	10	
April 20				10 (shortage)	10	100	190	10	4,825
							250	8	
							50	8.50	
							50	10	
April 21	60	9	540				190	10	5,365
							250	8	
							50	8.50	
							50	10	
							60	9	
April 22				190	10	3,580	40	8	1,785
				210	8		50	8.50	(closing
							50	10	Stock)
							60	9	

PROBLEM NO. 17

Statement of Total Cost and Ranking

Item	Units	% of Total units	Unit cost (Rs.)	Total cost (Rs.)	% of Total cost	Ranking
1	7,000	3.1963	5.00	35,000	9.8378	4
2	24,000	10.9589	3.00	72,000	20.2378	2
3	1,500	0.6849	10.00	15,000	4.2162	7
4	600	0.2740	22.00	13,200	3.7103	8
5	38,000	17.3516	1.50	57,000	16.0216	3
6	40,000	18.2648	0.50	20,000	5.6216	6
7	60,000	27.3973	0.20	12,000	3.3730	9
8	3,000	1.3699	3.50	10,500	2.9513	11
9	300	0.1370	8.00	2,400	0.6746	12
10	29,000	13.2420	0.40	11,600	3.2605	10
11	11,500	5.2512	7.10	81,650	22.9502	1
12	4,100	1.8721	6.20	25,420	7.1451	5
	2,19,000	100		3,55,770	100	

Basis for selective control (Assumed)

Rs. 50,000 & above -- 'A' items

Rs. 15,000 to 50000 -- 'B' items

Below Rs. 15,000 -- 'C' items

On this basis, a plan of A B C selective control is given below:

Ranking	Item Nos.	% of Total units	Cost (Rs.)	% of Total Cost	Category
1	11	5.2512	81,650	22.9502	
2	2	10.9589	72,000	20.2378	
3	5	17.3516	57,000	16.0216	
Total	**3**	**33.5617**	**2,10,650**	**59.2096**	**A**
4	1	3.1963	35,000	9.8378	
5	12	1.8721	25,420	7.1451	
6	6	18.2648	20,000	5.6216	
7	3	0.6849	15,000	4.2162	
Total	**4**	**24.0181**	**95,420**	**26.8207**	**B**
8	4	0.2740	13,200	3.7103	
9	7	27.3973	12,000	3.3730	
10	10	13.2420	11,600	3.2605	
11	8	1.3699	10,500	2.9513	
12	9	0.1370	2,400	0.6746	
Total	**5**	**42.4202**	**49,700**	**13.9697**	**C**
Grand Total	**12**	**100**	**3,55,770**	**100**	

The End