

**Question No: 35 ( Marks: 3 )**

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Barley Ltd produces a certain food item in a manufacturing process. On 1st November there was no opening stock in process. During November, 700 units of material were put in to process, with a cost of Rs, 20,000. Direct labor cost in November was Rs.15; 000. production overhead is absorbed at the rate of 300% of direct labor costs. Closing stock on 30th November consisted of 200 units which were 100% completed as to materials and 80% completed as to labor and over head.

**Required:** Calculate the quantity of units completed and transfer-out

**SOLUTION:**

Units of opening work in process = 700 units

Units put into the process = 200 units

Units completed and transfer out =  $700 + 200 = 900$  units

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The higher rate of labor turnover results in increased cost of production. Discuss the Effect of Labor Turnover

**Effect of Labor Turnover**

**The higher rate of labor turnover results in increased cost of production:**

- (i) Increased cost of new recruitment, training,
- (ii) Interruption of production,
- (iii) Decrease in production due to inefficiency and inexperience of newly recruited workers,
- (iv) The new workers are more accident prone and are liable to cause more damage to machinery, tools than old employees,

- (v) Losses due to wastage, spoilage and defectives,
- (vi) Increased number of accidents causing loss of output and increase in medical expenses and cost of repairs,
- (vii) Lack of cooperation and coordination between old and new employees resulting fall in output and increased cost of production,

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	Units
Units transferred to next department	40,000
Units still in process (all material, 2/3 labour & FO H)	8,000
Abnormal loss (1/2 complete as to material, Labour and FOH)	1,000

Following costs were added during the process.

Materials	Rs.40,500
Labour	101,700
Factory overhead	50,500

**Required:**

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**QUANTITY SCHEDULE:**

Unit received from departmet		49000
Unit completed and transfer to next	40000	
Unit still in process(all material, 2/3 labour & FO H)	8000	
Abnormal loss (1/2 complete as to material, Labour and FOH)	<u>1000</u>	49000

**III- Calculation of Equivalent Units Produced:**

Direct material= $40000 + (8000 \times 100\%) + (1000 \times 1/2) = \text{RS}48500$

Direct labor = $40000 + (8000 \times 2/3) + (1000 \times 1/2) = \text{RS}45833.33333$

F.O.H= $40000 + (8000 \times 2/3) + (1000 \times 1/2) = \text{RS}45833.33333$

**Calculation Of Per Unit Cost:**

= Total Cost/Equivalent Units Produced

Material= $40,500/48500$  unit

**Material=0.83505 per unit**

Labor= $101700/45833.33333$  unit

**Labor=2.2189 per unit**

Foh= $50500/45833.33333$  unit

**FOH=1.101818 per unit**

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50, 000 units were received from preceding department, 9,000 units were still in process at the end of month (complete all material, 75% Labour & FOH). 500 lost units were 60% complete as to material and conversion costs. This loss is considered as abnormal and is to be charged to factory overhead.

**Required:** You are required to calculate equivalent units of material, labour and factory overhead.

**QUANTITY SCHEDULE:**

Unit received from department		49000
Unit completed and transfer to next	40000	
Unit still in process(all material, 2/3 labour & FO H)	8000	
Abnormal loss (1/2 complete as to material, Labour and FOH)	<u>1000</u>	49000

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Irfan Industries Limited has two production departments A and B and two mutually interdependent service departments X and Y. Cost of service departments is apportioned on the basis of following %ages:

	A	B	X	Y
Service department X	50%	30%	-	20%
Service department Y	40%	50%	10%	-

Following figures of departmental costs are available after the primary distribution:

Department A	15,750	Department B	7,500
Department X	11,750	Department Y	5,000

Calculate total factory overhead of production department by preparing a work sheet showing the secondary distribution using Repeated apportionment method.

**Solution**

**Irfan Industries Limited**  
**Work Sheet showing secondary distribution**  
**Repeated apportionment method**

Particulars	Production department		Service department	
	A	B	X	Y

Departmental Cost after	RS	RS	RS	RS
Primary distribution	15,750	7,500	11,750	5,000
<b>Secondary distribution</b>				
Service department X	5,875	3,525	(11,750)	2,350
Service department Y	2,940	3,675	735	(7,350)
Service department X	368	220	(735)	147
Service department Y	59	73	15	(147)
Service department X	7	5	(15)	3
Service department Y	1	2	-	(3)
<b>Total</b>	<b>25,000</b>	<b>15,000</b>	<b>0</b>	<b>0</b>

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Factory overhead absorption rate of a pharmaceutical is Rs 2.50. Budgeted Factory overhead at two activity levels is as follows for that period.

	Activity level	Budgeted factory overhead
Low	20,000 Hours	Rs. 45,000
High	40,000 Hours	Rs. 75,000

Actual Factory overhead for that period was Rs. 42,000 and actual volume was 25,000 hours.

**Required:**

- Variable factory overhead absorption rate
- Budgeted variable factory overhead at high activity level 40,000 hours.
- Budgeted fixed factory overhead

	Activity level	Budgeted factory overhead
Low	20,000 Hours	Rs. 45,000
High	40,000 Hours	Rs. 75,000
<b>Change</b>	<b>20000 hours</b>	<b>Rs 30000</b>

**1. Variable rate**= Change in budgeted FOH/ Change in activity level

**Variable rate**=30000/20000

**Variable rate=RS 1.5 PER HOUR**

**2.Budgeted fixed factory overhead**

Total FOH for 40000 machine hours = Rs. 75000

**Budgeted variable FOH** = 40000 hrs Rs 1.5 = Rs. 60000

**Budgeted fixed FOH** = Rs 75000 less Rs. 60000 = **Rs. 15000**

**Budgeted Activity Level**

Budgeted activity level = Fixed FOH/fixed rate

Budgeted activity level=15000/2.25 less 1.5

Budgeted activity level=20000 hours

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Schlamber Company Factory overhead rate is Rs.2 per hour. Budgeted overhead for 3,000 hours per month is Rs. 8,000 and 7,000 hours is Rs. 12,000. Actual factory overhead for the month was Rs.9, 000 and actual volume was 5,000 hours.

**Required:**

1. Applied overhead
2. Over-or under applied overhead.

**SOLUTION:**

	Activity level	Budgeted factory overhead
High	7000 hours	Rs. 12000
Low	3000 hours	Rs. 8000
<b>Change</b>	<b>4000 hours</b>	<b>Rs 4000</b>

**1. Variable rate**= Change in budgeted FOH/ Change in activity level

**Variable rate**=4000/4000

**Variable rate**=RS 1 PER HOUR

**2.Budgeted fixed factory overhead**

Total FOH for 7000 machine hours = Rs.12000

**Budgeted variable FOH** = 7000 hrs Rs 1 = Rs. 7000

**Budgeted fixed FOH** = Rs 12000 less 7000= **RS 5000**

**Budgeted Activity Level**

Budgeted activity level = Fixed FOH/fixed rate

Budgeted activity level=5000/2 less 1

Budgeted activity level=5000 hours

**REQUIRMENT NO 1**

**APPLIED FOH**=Actual volume x FOH absorption rate

**APPLIED FOH**=5000\*2

**APPLIED FOH**=RS 10000

**REQUIRMENT NO 2****2.Over-or under applied overhead.**

	RS
Actual FOH	9000
Applied FOH	<u>10000</u>
<b>UNDER APPLIED</b>	<b><u>1000</u></b>

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PA limited operates a job costing system. The company standard sale price is predetermined Rs. 505 based on cost plus 20% profit margin. The estimated cost for Job # 141 is as follows:

Direct material	5 meters@ Rs.20 per meter
Direct labor	14 hours@ Rs. 8.00 per hour

Production overhead for the year are budgeted to be Rs.200,000 and are to be recovered on the basis of the total 40,000 direct labor hour for the year.

**Required:**

- ⊗ Calculate Cost of Goods Sold for job # 141
- ⊗ Calculate amount of profit for job #141

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Units transferred out to next department 20,000 units. Units lost at beginning of production 500 units. Units in process 2,500 units which were complete as to materials, 1/2 complete as to labor and factory overhead.

**Required:** Prepare the Quantity Schedule

**SOLUTION****QUANTITY SCHEDULE:**

Unit received from department		23000
Unit completed and transfer to next	20000	
Unit still in process(materials, 1/2 complete as to labor and factory overhead)	2500	
UNIT LOST	<u>500</u>	23000

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Patacake Ltd produces a certain food item in a manufacturing process. On 1st November there was no opening stock in process. During November, 500 units of material were put in to process, with a cost of Rs, 9,000. Units completed and transferred-out were 400 units. Direct labor cost in November was R.3840. Production overhead is absorbed at the rate of 200% of direct labor costs. Closing stock on 30th November consisted of 100

<b>Material</b>	<b>100*18</b>	<b>1800</b>
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Labor	80*8	640	
Foh	80*16	1280	4200
<b>TOTAL COST ACCOUNTED FOR</b>			<b>20520</b>

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Ali Company estimates its factory overhead for the next period at Rs. 64,000. It is estimated that 30,000 units will be produced at material cost of Rs. 65,000. Production will require 25,000 direct labor hours at an estimated cost of Rs. 130,000. The machine will run about 18,000 hours.

**Required:** the predetermined factory overhead rate based on:

- i. Units of production
- ii. Direct labor hours
- iii. Machine hours
- iv. Direct labour cost
- v. Material cost

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What is the justification of spreading the cost of lost units over the remaining goods units?

**Solution:**

Whenever a loss of units is normal in producing the final units, the good units completed absorb all costs, resulting in a spreading of the cost of lost units over the remaining good units. When abnormal or unusual losses occur, the cost ordinarily assigned to any such lost units might be charged to factory overhead or to a current period expense account. This method results in the assignment of normal (nonloss) costs to remaining good units.

When units are lost in departments subsequent to the first, an adjustment must be made to the unit cost representing work done in preceding departments. The fewer units must absorb the preceding department's costs, resulting in an increase in that department's unit cost.

Ordinarily, there is no difference in completed unit costs whether units are lost at the beginning or during operations. The cost of lost units is spread over remaining good units including those still in process. However, when units are lost at the end of operations, after completion, or are otherwise identified as not pertaining to work in process units, the cost of these lost units is customarily assigned to finished units only. No lost unit cost is assigned to units still in process.



