

# SUGGESTED SOLUTION

# **INTERMEDIATE M'19 EXAM**

SUBJECT- COSTING AND F.M.

Test Code - CIM 8019

Date: 12.08.2018

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# **ANSWER-1**

Operating cost statement of 'RP' Resort (P) Limited

Particulars	Cost per annum (Rs. in lakhs)
Staff Salaries	680.00
Room Attendant's Wages (refer W.N-3)	286.20
Lighting, Heating & Power	300.00
Repairs, Maintenance & Renovation	180.00
Linen	30.00
Laundry charges	24.00
Interior Decoration	75.00
Sundries	30.28
Depreciation (refer W.N- 4):	
- Building	45.00
- Furniture & Fixture	9.00
- Air Conditioners	7.50
Total cost for the year	1,666.98

(4 Marks)

### **Computation of profit:**

Let Rs. x be the rent for deluxe from.

Equivalent deluxe room days are 90,720 (refer W.N-2)

Total takings = Rs. 90,720x Profit is 25% of total takings.

Profit = 25% of Rs. 90,720x = Rs. 22,680x Total takings = Total Cost + Profit

Rs. 90,720x = Rs.16,66,98,000 + Rs.22,680x

Rs. 90,720x - Rs.22,680x = Rs.16,66,98,000

Rs. 68,040x = Rs.16,66,98,000

### X = <u>Rs. 166698000</u> **Rs. 68040**

### = Rs.2450

(2 Marks)

Rent to be charged for Deluxe room	Rs. 2,450
Rent to be charged for Super deluxe room = Rent of deluxe room × 2 = Rs. 2,450 × 2	Rs. 4,900
Rent to be charged for Luxury suite =	Rs. 7,350
Rent of Super Deluxe room × 1.5 = Rs. 4,900 × 1.5	

# Working Notes:

### 1. Computation of Room Occupancy

Type of Room	No. of rooms x no. of days x occupancy %	Room days
Deluxe Room	100 rooms x 360 days x 90% occupancy	32,400
Super Deluxe Room	60 rooms x 360 days x 75% occupancy	16,200
Luxury Suite	40 x 360 days x 60% occupancy	8,640
	Total	57,240

# 2. Computation of equivalent deluxe room days:

Rent of 'super deluxe' room is to be fixed at 2 times of 'deluxe room' and luxury suite' is 3 times of 'deluxe room'. Therefore equivalent room days would be:

Type of Room	Room days	Equivalent deluxe room days
Deluxe Room	32,400 x 1	32,400
Super Deluxe Room	16,200 x 2	32,400
Luxury Suite	8,640 x 3	25,920
	Total	90,720

### 3. Computation of room attendant's wages:

Room occupancy days × Rs. 500 per day

= 57,240 days × Rs. 500 = Rs. 286.20 lakhs

4. Computation of Depreciation per annum:

Particulars	Cost (Rs.)	Rate of Depreciation	Depreciation (Rs.)
Building	900,00,000	5%	45,00,000
Furniture & Fixtures	90,00,000	10%	9,00,000
Air Conditioners	75,00,000	10%	7,50,000

(1\*4= 4 Marks)

# **ANSWER-2**

# **ANSWER-A**

(i) Calculation of Economic Order Quantity:

$$\mathsf{EOQ} = \sqrt{\frac{2 \times A \times O}{C}}$$

 $=\sqrt{\frac{2\times(60,000\ Packs\times12\ months)\times\ Rs.240}{Rs.228\times10\%}}$ 

= 3,893.3 packs or 3,893 packs

(ii) Number of orders per year

= Annual requirements E.O.Q

<u>=7,20,000 packs</u> 3,893 packs

= 184.9 or 185 orders a year

(iii) Ordering and storage costs

	(Rs.)
Ordering costs :- 185 orders × Rs. 240	44,400.00
Storage cost :- 1/2 (3,893 packs × 10% of Rs.228)	<u>44,380.20</u>
Total cost of ordering & storage	<u>88,780.20</u>

(1 Mark)

(1 Mark)

### (iv) Timing of next order

(a) Day's requirement served by each order.

Number of days requirements supply =  $\frac{No.of \ working \ days}{No.of \ order \ in \ a \ year}$ 

 $=\frac{360 \ days}{185 \ orders}$ 

= 1.94 days

This implies that each order of 3,893 packs supplies for requirements of 1.94 days only.

(b) Days requirement covered by inventory

 $=\frac{Units in inventory}{EOQ} \times (Day's requirement served by an order)$  $=\frac{10033 Packs}{3893 Packs} \times 1.94 days$ 

= 5 days requirement

(c) Time interval for placing next order
Inventory left for day's requirement – Average lead time of delivery
5 days – 5 days = 0 days

This means that next order for the replenishment of supplies has to be placed immediately.

# **ANSWER-B**

# (i) Minimum stock of A<br/>Re-order level – (Average rate of consumption × Average time required to obtain<br/>fresh delivery) $= 8,000 - (200 \times 10 \times 2) = 4,000$ kgs.(1 Marks)(ii) Maximum stock of B<br/>Re-order level + Re-order quantity – (Minimum consumption × Minimum delivery<br/>period) $= 4,750 + 5,000 - (175 \times 4 \times 3)$ <br/>= 9,750 - 2,100 = 7,650 kgs.(1 Marks)(iii) Re-order level of C<br/>Maximum deliveryMaximum delivery<br/>period

Maximum delivery period × Maximum usage

 $= 4 \times 225 \times 6 = 5,400$  kgs.

(2 Marks)

	OR	
	Re-order level of C	
	= Minimum stock of C + [Average rate of consumption × Average time	
	required to obtain fresh delivery]	
	$= 2,000 + [(200 \times 6) \times 3]$ kgs.	
	= 5,600 kgs.	(1 Marks)
(iv)	Average stock level of A = Minimum stock level of A + ½ Re-order quantity of A	
	= 4,000 + ½ × 10,000 = 4,000 + 5,000 = 9,000 kgs.	
	OR	
	Average Stock level of A	
	Minimum stock level of A +Maximum stock level of A (Refer to working	g note)
	2	
	$\frac{4,000+16,250}{10,125}$ = 10,125 kgs.	(1 Marks)
	2	
	Working note:	
	Maximum stock of A = ROL+ ROQ – (Minimum consumption × Minimum	m
	re-order period)	
	= 8,000 + 10,000 - [(175 × 10) × 1]	
	=16,250 kgs.	(1 Marks)

# **ANSWER-3**

# Monthly Cash Budget (January-June)

# (4 Marks)

(Rs. in lakhs)

		Jan.	Feb.	March	April	May	June	Total
Opening cash balance		-	21.00	-	2.75	10.50	14.50	-
A. Cash inflows								
Equity shares		100.00	-	_	-	-	-	100.00
Loans		13	2.50	_	-	-	-	15.50
(Refer to working note 1)								
Receipt from debtors		<u>-</u>		<u>30.00</u>	<u>35.00</u>	<u>35.00</u>	<u>40.00</u>	<u>140.00</u>
Total (A)		<u>113.00</u>	<u>23.50</u>	<u>30.00</u>	<u>37.75</u>	<u>45.50</u>	<u>54.50</u>	<u>255.50</u>
B. Cash Outflows								
Plant and Machinery		20.00	-	-	-	-	-	20.00
Land and Building		40.00	-	-	-	-	-	40.00
Furniture		10.00	-	-	-	-	-	10.00
Motor Vehicles		10.00	-	-	-	-	-	10.00
Stock of raw materials		10.00	-	-	-	-	-	10.00
(minimum stock)								
Preliminary expenses		1.00	-	-	-	-	-	1.00
Payment to creditors for purchases	credit	-	20.50	24.25	24.25	28.00	28.00	125.00
(Refer to working note 2)								
Wages and salaries		-	2.00	2.00	2.00	2.00	2.00	10.00
Admn. expenses		<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>6.00</u>
Total :(B)		<u>92.00</u>	<u>23.50</u>	<u>27.25</u>	<u>27.25</u>	<u>31.00</u>	<u>31.00</u>	<u>232.00</u>
Closing balance (A)-(B)		<u>21.00</u>		<u>2.75</u>	10.50	<u>14.50</u>	<u>23.50</u>	<u>23.50</u>

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Budgeted Income Statement for the six-month	n period ending 30 <sup>th</sup> June
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		(13. 111	annsj
Particulars	Rs.	Particulars	Rs.
To Purchases	166.75	By Sales	225.00
To Wages and Salaries	12.00	By Closing stock	10.00
To Gross profit c/d	<u>56.25</u>		
	<u>235.00</u>		<u>235.00</u>
To Admn. expenses	6.00	By Gross profit b/d	56.25
To Depreciation			
(10% on Rs. 80 lakhs for six mo	nths) 4.00		
To Accrued interest on loan			
(Refer to working note 3)	0.903	5	
To Net profit c/d	<u>45.34</u>	1 <u>5</u>	
	<u>56.25</u>		56.25

(Rs. In lakhs)

(3 Marks)

Projected Bal 20th I Ch 4 6

Balance Sheet as on 30 <sup>th</sup> June, 2015	(Rs. In Lakhs)

Liabilities	Amt.	Assets		Amt.	Amt.
Share capital :		Fixed Assets :			
Authorised Capital 20,00,000 equity shares of 10 each	200.00	Land and Building	40.00		
Issued, subscribed and paid up capital 10,00,000 equity share of 10 each	100.00	Less : Depreciation	2.00	38.00	
		Plant and Machinery	20.00		
		Less : Depreciation	1.00	19.00	
Reserve and Surplus		Furniture	10.00		
Profit and Loss	45.345	Less : Depreciation	0.50	9.50	
Long term loans	15.50	Motor Vehicles	10.00		
		Less : Depreciation	0.50	9.50	76.00
Current liabilities & provisions:		Current Assets :			
Sundry Creditors 31.75	1	Stock		10.00	
Accrued interest 0.905	1	Sundry debtors		85.00	
Outstanding expenses 2.00	34.655	Cash		23.50	118.50
		Miscellaneous expend the extent not written			
		Preliminary expenses			1.00
	195.50				195.50
				8	Page

### Working Notes:

1. Subsequent Borrowings Needed (Rs. in lakhs)

Α.	Cash Inflow						
	Equity shares	100.00					
	Loans	13.00					
	Receipt from debtors			<u>30.00</u>	<u>35.00</u>	<u>35.00</u>	<u>40.00</u>
	Total (A)	<u>113.00</u>		30.00	<u>35.00</u>	<u>35.00</u>	40.00
	B. Cash Outflow						
	Purchase of fixed assets	<u>80.00</u>					
	Stock	<u>10.00</u>					
	Preliminary expenses	<u>1.00</u>					
	Payment to creditors	-	<u>20.50</u>	<u>24.25</u>	<u>24.25</u>	<u>28.00</u>	<u>28.00</u>
	Wages and salaries	<u>-</u>	<u>2.00</u>	<u>2.00</u>	<u>2.00</u>	<u>2.00</u>	<u>2.00</u>
	Administrative expenses	1.00	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>
	Total	<u>92.00</u>	<u>23.50</u>	<u>27.25</u>	<u>27.25</u>	<u>31.00</u>	<u>31.00</u>
	Surplus/ (Deficit)	<u>21.00</u>	<u>(23.50)</u>	<u>2.75</u>	<u>7.75</u>	<u>4.00</u>	<u>9.00</u>
	Cumulative balance	<u>21.00</u>	<u>(2.50)</u>	<u>0.25</u>	<u>8.00</u>	<u>12.00</u>	<u>21.00</u>

1. There is shortage of cash in February of Rs. 25 lakhs which will be met by borrowings on February

2. Payment to Creditors

Purchases = Cost of goods sold-Wages and salaries

Purchases for January= (75% of 30 lakhs) - Rs. 2 = Rs. 20.50 lakhs.

(**Note:** Since gross margin is 25% of sales, cost of manufacture i.e. materials plus wages and salaries should be 75% of sales)

Hence, Purchases = Cost of manufacture minus wages and salaries of Rs. 2 lakhs) The creditors are paid in the first month following purchases.

Therefore, payment in February is Rs. 20.50 lakhs

The same procedure will be followed for other months.

Total purchases = Rs. 125 lakhs (for Jan-May) + Rs. 31.75 lakhs (for June) + Rs. 10 lakhs (stock)= Rs. 166.75 lakhs

Accrued Interest on Loan
12% interest on Rs. 13 lakhs for 6 months
0.78 lakhs
Add: 12% interest on Rs. 2.5 lakhs for 5 months
0.125 lakhs
0.905 lakhs

# **ANSWER-4**

Working Notes:

- 1. The material received as replacement from vendor is treated as fresh supply.
- In the absence of information the price of the material received from within on 20-9-X1 has been taken as the price of the earlier issue made on 17-9- X1. In FIFO method physical flow of the material is irrelevant for pricing the issues.
- 3. The issue of material on 26-9-X1 is made out of the material received from within.
- 4. The entries for transfer of material from one job and department to other on 22-9-X1 and 29-9-X1 are book entries for adjusting the cost of respective jobs and as such they have not been shown in the stores ledger account.
- 5. The material found short as a result of stock taking has been written off.

(3 Marks)

	Receipt							Issue	Issue Balance		
Date	GRN No.	Qty.	Rate	Amt.	Requisi	Qty.	Rate	Amt.	Qty.	Rate	Amt.
	MRP No.	Units	(Rs.)	(Rs.)	Tion No.	Units.	(Rs.)	Rs.	Units	(Rs.)	(Rs.)
1	2	3	4	5	6	7	8	9	10	11	12
1 – 9 X1	-	-	-	-	-	-	-	-	25	6.50	162.50
4 – 9 – X1	-	-	-	-	85	8	6.50	52	17	6.50	110.50
6 – 9 – X1	26	50	5.75	287.50	-	-	-	-	17 շ	6.50 ر	398.00
									ر 50	5.75 <sup>∫</sup>	570.00
7 – 9 - X1	-	-	-	-	97	12	6.50	78	5 J	6.50 ر	320.00
									50 ∫	5.75 ∫	320.00
10 – 9 – X1	-	-	-	-	Nil	10	5.75	57.50	5 J	6.50 ر	262.00
									7 40	5.75 Ĵ	202.00
12 – 9 – X1	-	-	-	-	108	ך 5	ל.50 כ				
						10〕	5.75 <sup>J</sup>	90	30	5.75	172.5
13 – 9 – X1	-	-	-	-	110	20	5.75	115	10	5.75	57.5

### Stores Ledger of AT Ltd. for the month of September, 20X1 (FIFO Method)

15 – 9 - X1	33	25	6.10	152.50	-	-	-	<u>ا</u>	10 ך	5.75 כ	210.00
,	11	1	1	1		, <u> </u>	11	1	25 ∫	ر 6.10	210.00
17 – 9 – X1	I '	1'	['	I!	121	10	5.75	57.5	25	6.10	152.5
19 – 9 – X1	38	10	5.75	57.5	-		-	-	ך 25	ן 6.10	
ļ	1	1	· · ·	1		,	I	i	10 }	5.75 }	210
1	1	1	1	1		,t	1	1	5 ]	5.75 <sup>J</sup>	
20 – 9 – X1	4	5	5.75	28.75	-	,	-	i - 1	ך 25	ר 6.10	258.75
ļ	1	1	· · ·			,,	I	i T	10 5	7.75了	256.75
26 – 9 – X1	-	-	-	-	146	ך 5	ך 5.75	l l	ר 20	6.10 <sub>\</sub>	170 50
ļ	1	1	· · ·			55	ر 6.10	59.25	10 }	5.75 <sup>_</sup>	179.50
30 – 9 – X1	-	-	-	-	Shortage	2	6.10	12.20	ן 18	6.10 <sub>\</sub>	1/70
1	1	1	1			, <u> </u>	1	I	10 5	5.75 <sup></sup>	167.3

(7 Marks)

# **ANSWER-5**

Working Notes:

Total Distance (in km.) covered per month

(1 Marks)

Bus route	Km. per trip	Trips per day	Days per month	Km. per month
Delhi to Chandigarh	250	2	8	4,000
Delhi to Agra	210	2	10	4,200
Delhi to Jaipur	270	2	6	3,240
	11,440			

# Passenger- km. per month

# (3 Marks)

	Total seats available per month (at 100%	Capacity utilised		Km. per trip	Passenger- Km. per month
	capacity)	(%)	Seats		
Delhi to Chandigarh & Back	800	90	720	250	1,80,000
	(50 seats × 2 trips ×				(720 seats × 250
	8 days)				km.)
Delhi to Agra and Back	1,000	85	850	210	1,78,500
Dack	(50 seats × 2				(850 seats × 210
	trips × 10 days)				km.)
Delhi to Jaipur and Back	600	100	600	270	1,62,000
and dack	(50 seats × 2 trips ×				(600 seats × 270
	6 days)				km.)
Total	5,20,500				

Monthly Operating Cost Statement

(4 Marks)

		<b>(</b> Rs. <b>)</b>	<b>(</b> Rs. <b>)</b>
(i)	Running Costs		
	- Diesel {(11,440 km ÷ 4 km) × Rs. 56}	1,60,160	
	- Lubricant oil {(11,440 km ÷ 100) × Rs. 10}	1,144	1,61,304
(ii)	Maintenance Costs		
	- Repairs & Maintenance		1,000
(iii)	Standing charges		
	- Salary to driver	24,000	
	- Salary to conductor	21,000	
	- Salary of part-time accountant	5,000	
	- Insurance (Rs. 4,800 ÷12)		
	- Road tax (Rs. 15,915 ÷12)		
	- Permit fee	315	

-	Depreciation {(Rs. 12,00,000 × 20%) ÷ 12}	20,000	72,041.25			
Total co	osts per month before Passenger Tax (i)+(ii)+(iii)	h before Passenger Tax (i)+(ii)+(iii) 2,34,345.25				
Passen	ger Tax*		93,738.10			
Total C	3,28,083.35					
Add: Pr		1,40,607.15				
Total ta	akings per month		4,68,690.50			

\*Let, total takings be X then

X = Total costs per month before passenger tax + 0.2 X (passenger tax) + 0.3 X (profit)

X = Rs. 2,34,345.25 + 0.2 X + 0.3 X

0.5 X = Rs. 2,34,345.25 or, X = Rs.4,68,690.50

Passenger Tax = 20% of Rs.4,68,690.50 = Rs. 93,738.10 Profit = 30% of Rs.4,68,690.50 = Rs. 1,40,607.15

Calculation of Rate per passenger km. and fares to be charged for different routes

Rate per passenger 
$$-km = \frac{Total \ takings \ per \ month}{Total \ passenger - km.per \ month}$$
 (1 Marks)  
$$= \frac{Rs.468690.50}{520500 \ passenger - km} = Rs. 0.90$$

Bus fare to be charged per passenger

(1 Marks)

Delhi to Chandigarh =  $Rs.0.9 \times 250 \ km = Rs.225$ 

Delhi to Agra =  $Rs.0.9 \times 210 \ km$  = Rs.189

Delhi to Jaipur = Rs. $0.9 \times 270 \ km$  = Rs. 243

# **ANSWER-6**

# Preparation of Monthly Cash Budget

# (5 Marks)

# Cash Budget for four months from June, 2014 to September, 2014

Particulars	Jun	Jul	August	September
	e (R	y (R	(Rs.)	(Rs.)
	s.)	s.)		
Opening Balance	45,000	45,500	45,500	45,000
Receipts:				
Cash Sales	1,00,000	98,000	1,08,000	1,22,000
Collection from debtors	3,48,000	3,80,000	3,96,000	4,12,000
Dividends	25,000			
Total (A)	<u>5,18,000</u>	<u>5,23,500</u>	<u>5,49,500</u>	<u>5,79,000</u>
Payments:				
Creditors for Materials	2,00,000	2,10,000	2,60,000	2,82,000
Wages	1,62,500	1,65,000	1,65,000	1,67,500
Overheads	40,000	38,000	37,500	60,800
Installment for Machine	-	20,000	20,000	20,000
Interest on Debentures	30,000	-	_	-
Advance Tax			<u>15,000</u>	
Total (B)	<u>4,32,500</u>	<u>4,33,000</u>	<u>4,97,500</u>	<u>5,30,300</u>
Surplus (A – B)	85,500	90,500	52,000	48,700
Fixed Deposits	<u>40,000</u>	<u>45,000</u>	7,000	3,000
Closing Balance	<u>45,500</u>	<u>45,500</u>	<u>45,000</u>	<u>45,700</u>

# Working Notes:

(1) Ca	(5 M	(5 Marks)						
	Total	Cash	es Sales	Со	llection fror	n Debtors	Debtors	
Month	Sales (Rs.)	Sales (Rs.)		June (Rs.)	July (Rs.)	Aug. (Rs.)	Sept. (Rs.)	
April, 2010	4,20,000	84,000	3,36,000	1,68,000	-	-	-	
May, 2010	4,50,000	90,000	3,60,000	1,80,000	1,80,000	-	-	
June, 2010	5,00,000	1,00,000	4,00,000	-	2,00,000	2,00,000	-	
July, 2010	4,90,000	98,000	3,92,000	-	-	1,96,000	1,96,000	
Aug., 2010	5,40,000	1,08,000	4,32,000	-	-	-	2,16,000	
Sept., 2010								
	6,10,000	1,22,000	4,88,000					
			Total	<u>3,48,000</u>	<u>3,80,000</u>	<u>3,96,000</u>	<u>4,12,000</u>	

# **Payment of Wages**

June = 80,000 + 82,500 = 1,62,500;

July = 82,500 + 82,500 = 1,65,000;

Aug. = 82,500 + 82,500 = 1,65,000; and

Sept.= 82,500 + 85,000 = 1,67,500.

(Note: It has been assumed that the company wants to keep minimum cash balance of

Rs. 45,000.)