

CA Nitin Guru

Subject- **Cost and Management Accounting- By CA NITIN GURU**

Mock Test – 5 - SOLUTIONS

Material Cost, Labour Cost & Direct Expenses, Overheads: Absorption Costing Method & Activity Based Costing

Time: 1 Hour

M.M. – 25 Marks

Instructions-

1. This is a self paced test series, where you can do the test anytime after you complete your chapter and attempt the test and email it to us for checking or self evaluate with help of the solution set provided. For video solutions and test paper to be checked please email us at email id provided below.
2. Answer Sheet is in a single pdf format.
3. First Sheet contains all the information- Name, Registered Email id, Registered Mobile No., Test Number with Subject, website name through which you are watching our class.
4. NO answer sheet will be accepted over a chat box or telegram or any other mode other than email.
5. Test solutions should be emailed to test.canitinguru@gmail.com
6. Please give us at least 10 working days time to check and send back your test copy.
7. Sir, will record test paper discussion video as well, which you can watch and clarify your doubts if you have any. Solution videos will be available on youtube and please join our telegram channel [@canitinguru](https://t.me/canitinguru) to be updated with any announcement about test discussion.

Solution 1.

[5 Marks]

Annual requirement of raw material in kg. (A) = $\frac{2,00,000 \text{ units}}{5 \text{ units per kg.}} = 40,000 \text{ kg.}$

Ordering Cost (Handling & freight cost) (O) = Rs. 1,500

Carrying cost per unit per annum = (Rs. 7.5 × 4) = Rs. 30 per kg.

(i) E.O.Q. = $\sqrt{2 \times 40,000 \text{ KGS} \times \text{Rs. } 1500 / \text{Rs. } 30} = 2,000 \text{ Kg.}$

(ii) Percentage of discount in the price of raw materials to be negotiated:

Particulars	Yearly order	EOQ
Size of the order	40,000 kg.	2,000 kg.
No. of orders	1	20
Cost of placing orders	Rs. 1,500 (1 order × Rs. 1500)	Rs. 30,000 (20 orders × Rs. 1500)
Inventory carrying cost	Rs. 6,00,000 (40,000 kg. × ½ × Rs. 30)	Rs. 30,000 (2,000 kg. × ½ × Rs. 30)
Total Cost	Rs. 6,01,500	Rs. 60,000

When order is placed on yearly basis, the ordering cost and carrying cost increased by Rs. 5,41,500 (Rs. 6,01,500 - Rs. 60,000). This increase in total cost should be compensated by reduction in purchase price per kg. to make yearly order placement rational.

Reduction per kg. in the purchase price of raw material:

= $\frac{\text{Increased in total cost}}{\text{Annual requirement}} = \frac{\text{Rs. } 5,41,500}{40,000 \text{ kg}} = \text{Rs. } 13.54 \text{ per kg.}$

Discount in the price of raw material to be negotiated = $\frac{\text{Rs. } 13.54}{\text{Rs. } 96} = 14.10\%$

Solution 2.

10 Marks

(a) Calculation of total earnings and earnings per hour:

	Particulars	(a) Time taken is 320 hours	(b) Time taken is 150 hours	(c) Time taken is 30 hours
A.	Time Allowed	300 hours	300 hours	300 hours
B.	Time taken	320 hours	150 hours	30 hours
C.	Time Saved (A-B)	Nil	150 hours	270 hours
D.	Bonus hours (Refer the workings)	Nil	51 hours	81 hours
E.	Hours to be paid (B+D)	320 hours	201 hours	111 hours
F.	Wages rate per hour	Rs 60	Rs 60	Rs 60
G.	Total earnings (E×F)	Rs 19,200	Rs 12,060	Rs 6,660
H.	Earnings per hour (G÷B)	Rs 60	Rs 80.40	Rs 222

Workings:

Calculation of bonus hours:

	Time saved 150 hours	Time saved 270 hours
For first 20% of time allowed i.e. 60 hours	15 (25% of 60 hours)	15 (25% of 60 hours)
For next 30% of time allowed i.e. 90 hours	36 (40% of 90 hours)	36 (40% of 90 hours)
For next 30% of time allowed i.e. 90 hours	-	27 (30% of 90 hours)
For next 20% of time allowed i.e. 60 hours	-	3 (10% of 30 hours)
Bonus hours	51	81

Solution 3.

[10 Marks]

Working Notes:

- (i) Total Productive hours = Estimated Working hours – Machine Maintenance hours = 2,200 hours – 200 hours = 2,000 hours
- (ii) Depreciation per annum = (Rs 1,00,000 - Rs 10,000) / 10 years = Rs 9000
- (iii) Chemical solution cost per annum = Rs 200 × 50 weeks = Rs10,000
- (iv) Wages of attendants (per annum) = (Rs 1,200 × 50 weeks) / 6 machines = Rs 10,000

Calculation of Machine hour rate

Particulars	Amount(Rs)(per annum)	Amount (Rs) (per hour)
A. Standing Charge		
(i) Wages of attendants	10,000	
(ii) Departmental and general works overheads	20,000	
Total Standing Charge	30,000	
Standing Charges per hour (30,000 / 2000)		15.00
B. Machine Expense		
(iii) Depreciation	9,000	4.50
(iv) Electricity (Rs $\frac{0.9 \times 16 \text{ units} \times 1,900 \text{ hours}}{2,000 \text{ hours}}$)	-	13.68
(v) Chemical solution	10,000	5.00
(vi) Maintenance cost	12,000	6.00
Machine operating cost per hour (A + B)		44.18