

Unit 5 - Week 3

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Assignment 3

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-10-07, 23:59 IST.

1)

Which of the following cost is related to Non-Manufacturing Fixed Capital Investment?
(a) Site preparation
(b) Land
(c) Taxes payable
(d) Insulation

1 point

☐ a)
☐ b)
☐ c)
☐ d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
b)

2)

Select the correct option.

I. The Battery Limit is a geographic boundary that defines the manufacturing area of the process.

II. Working capital is required as long as the plant is in operation. It is generally not recovered at the end of project life.

(a)Only statement – I is true
(b)Only statement-II is true
(c)Both the statements are true
(d)Both the statements are false

1 point

☐ a)
☐ b)
☐ c)
☐ d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
a)

3)

Which type of cost estimate is used when we have no design information about the project and estimate is based on the similar previous cost data?
(a) Definitive estimate
(b) Order of magnitude estimate
(c) Preliminary estimate
(d) Study estimate

1 point

☐ a)
☐ b)
☐ c)
☐ d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
b)

4)

The annual direct production costs for a plant operating at full capacity are \$140,000. The sum of the annual fixed charges, overhead costs and general expenses is \$150,000, and this does not change with production rate. The breakeven point in total units of production per year if total annual sales are \$560,000 and the product sales at \$40 per unit is _____.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 5000

1 point

5)

A chemical plant produces a certain type of product whose annual production cost is Rs 35 lakh. The product sells at Rs 500 per unit and the total annual sales are Rs 70 lakhs. The sum of annual fixed charges, overhead costs and general expenses are Rs 25 lakhs,and this does not change with production rate. The number of units that must be sold for breakeven to occur is _____.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 10000

1 point

6)

The cost of a Shell and Tube Heat Exchanger with 100 ft² heating surface was Rs 3000 in 1980. The cost (in Rs) of a Heat Exchanger with 1000 ft² of heating surface in 1985 is _____.

The following data are given:
Cost index in 1985= 813
Cost index in 1980= 675
When surface area ranging from 100 to 400 ft², the cost- capacity exponent is 0.6,
When surface area ranging from 400 to 2000 ft², the cost- capacity exponent is 0.8

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 17000,17500

1 point

7)

In the year 1995, the cost of a Shell and Tube heat exchanger with 70 m² heat transfer area was Rs 10lakh. Chemical Engineering Index for cost in 1995 was 381.1 and the index in2002 was 390.4. Based on index of 0.6 for capacity scaling, the cost(in Lakhs of Rupees) of a similar heat exchanger having 90m² heat transfer area in 2002 will be _____.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 11.5,12.5

1 point

8)

A plant manufactures centrifugal pumps at the rate of N units/day. The daily fixed charges are Rs. 20,000 and the variable cost per pump is Rs. (100 + 0.5N^{1.2}). The selling price per pump is Rs 10,000. The number of pumps that should be manufactured, to the nearest integer, in order to maximize the daily profit is _____.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 1972,1975

1 point

9)

The total capital investment for a chemical plant is \$2 million, and the working capital is \$500,000. If the plant can produce an average of 10000 kg of final product per day during a 365-day year, what selling price in dollars per kilogram of product would be necessary to give a turnover ratio of 1.0?

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 0.35,0.45

1 point

10)

A process plant was erected in City-A for a direct cost of Rs 250 Lakh and indirect cost of Rs 100 Lakh in 1987. The fixed-capital investment in 1997(in Lakhs of Rs) for a similar process plant located in City-B with 1.5 times the process capacity but with an equal number of process units will be _____.

Use a power factor of 0.6. The following data are given:

City	Relative Labour Rate	Relative Productivity Factor
A	0.85	1.35
B	1.00	1.10

The Marshal and Swift Equipment Index in 1987 = 814
The Marshal and Swift Equipment Index in 1997 = 1056.8

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 770,800

1 point