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Week 3 : Assignment 3

The due date for submitting this assignment has passed.

Due on 2025-02-12, 23:59 IST.

Assignment submitted on 2025-02-11, 22:16 IST

1) What is the value of the internal rate of return, when the net present value of project becomes zero? ***1 point***

- (●) Equal to discount rate
- ( ) More than the discount rate
- ( ) Less than the discount rate
- ( ) None of the above

Yes, the answer is correct.
Score: 1

Accepted Answers:
Equal to discount rate

2) Which of the following options does not consider time value of money? ***1 point***

- ( ) Net Present Value
- ( ) Benefit-to-cost ratio
- (●) Simple payback period
- ( ) Internal rate of return

Yes, the answer is correct.

Score: 1

Accepted Answers:
Simple payback period

3) Select all the factors that affect the capital recovery factor. ***1 point***

- [ ] Initial investment
- [x] Lifetime of the equipment
- [ ] Salvage value of the equipment
- [x] Discount rate

Yes, the answer is correct.
Score: 1

Accepted Answers:
Lifetime of the equipment
Discount rate

4) A positive value of _____ indicates that the investment is expected to generate more value than the cost of the capital invested. ***1 point***

- (•) Net present value (NPV)
- ( ) Capital cost
- ( ) Annual operation and maintenance cost
- ( ) Life of the equipment

Yes, the answer is correct.
Score: 1

Accepted Answers:
Net present value (NPV)

5) The cost of 1 MW coal thermal power plant is estimated to be ₹ 9 crore. If the discount rate is 12 % and plant life is 20 years. The annualized value of the capital cost is ₹ 0.5 crore. ***1 point***

- ( ) True
- (•) False

Yes, the answer is correct.
Score: 1

Accepted Answers:
False

6) Typically, which of the following have the highest discount rates? ***1 point***

- ( ) Public sector companies
- (•) Low-income households
- ( ) Private sector companies
- ( ) Society as a whole

Yes, the answer is correct.

Score: 1
Accepted Answers:
Low-income households

7) The capital cost of a solar heating system is ₹ 7,200. It is expected to save 9,000 kWh of electricity annually. The price of electricity to the user is ₹ 0.15 per kWh. The annual cost of operation of the system is estimated at ₹ 150. The useful life of the system is estimated to be 30 years. The discount rate is 6%. Determine the values of Simple Payback period. ***1 point***

- 8 years.
- 9 years.
- 5.5 years.
- 6 years.

Yes, the answer is correct.
Score: 1
Accepted Answers:
6 years.

8) A factory installed new insulation in their air duct with insulation whose capital cost of installation is ₹ 5,00,000. Due to this, factory saves 850 units of grid electricity monthly, where average grid electricity price is ₹ 5 Per unit. If life of the insulation is 10 years and discount rate is 8%, find the benefit to cost ratio, assuming electricity price remains same for whole life. ***1 point***

- 0.5
- 0.62
- 0.78
- 0.69

Yes, the answer is correct.
Score: 1
Accepted Answers:
0.69

9) Which of the following is a component of life cycle costs? ***1 point***

- Initial investment
- Operating costs
- Maintenance costs
- All of the above

Yes, the answer is correct.
Score: 1
Accepted Answers:
All of the above

10) A project has a life of 15 years and discount rate given is 10%. Values of Capital Recovery Factor and Present Value Factor are respectively: ***1 point***

- 0.16, 6.25

- (●) 0.13, 7.6
- ( ) 6, 0.167
- ( ) 7.6, 0.13

Yes, the answer is correct.
Score: 1

Accepted Answers:
0.13, 7.6