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CHEMICAL ENGINEERING REGULAR REVIEW
ENGINEERING ECONOMICS

1. The simple interest rate per year that will accumulate the same amount of money in 2 years as a compound interest rate of 20% per year is closest to:
 - a. 20.5%
 - b. 21%
 - c. 22%
 - d. 23%
2. An engineer deposits Php 5,000 into a savings account at a rate of 4% compounded quarterly. What will be the balance in the account after 5 years?
 - a. Php 6,082.43
 - b. Php 6,100.95
 - c. Php 6,367.24
 - d. Php 6,425.04
3. What is the nominal rate of 4% compounded quarterly if compounded semi – annually?
 - a. 3.987%
 - b. 4.02%
 - c. 4.06%
 - d. 4%
4. A sum of P1000 is invested now and left for eight years at which time the principal is withdrawn. The interest that has accrued is left for another eight years. If the effective annual interest rate is 5%, what will be the withdrawal amount at the end of the 16th year?
 - a. P770
 - b. P500
 - c. P706
 - d. P799
5. Determine the present worth of an annual payment of Php 2500.00 at the end of each year for 12 years at 8% compounded annually.
 - a. P 32,225.52
 - b. P 18,840.20
 - c. P 47,442.82
 - d. P 20,288.21
6. Calculate the present value of series of twenty-five equal annual payments of Php 5,000.00 starting five years from today. Assume an effective interest rate of 6%.
 - a. Php 43,751.80
 - b. Php 34,571.08
 - c. Php 60,258.80
 - d. Php 50,628.08
7. An arithmetic gradient with series of end of period payments of P 10,000 on the 1st year, P 8,000 on the 2nd year, P 6,000 on the 3rd year, P 4,000 on the 4th year and P 2,000 on the 5th year. If interest rate is 12%, what is its present worth?
 - a. P 12,125
 - b. P 23,007
 - c. P 22,565
 - d. P 23,254
8. A machine cost P 4,850 has a life of 10 years and a salvage value of P 500. Using straight line method determine the book value at the end of the fourth year.
 - a. P 435
 - b. P 3,110
 - c. P 1,305
 - d. P 2,321

9. What is a market situation whereby there is only one buyer of an item for which there is no goods substitute?
- a. Monopsony
 - b. Oligopoly
 - c. Monopoly
 - d. Oligopsony
10. It is defined as the sum of the first cost and the present costs of perpetual replacement, operation, and maintenance.
- a. Bond
 - b. Capitalized cost
 - c. Depreciation
 - d. Collateral

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