QUESTION:

What do you call the cost that does not involve cash transaction?

Choices:

a. Sunk cost c. Book cost
b. Non-cash cost d. Standard cost

ANSWER: c. Book cost

QUESTION:

A cost that is incurred because of the use of limited resources, such that the opportunity to use those resources to monetary advantage in an alternative use is foregone.

Choices:

a. Opportunity cost c. Life cycle cost
b. Sunk cost d. Book cost

ANSWER: a. Opportunity cost

QUESTION:

An investor has an option to purchase a tract of land that will be worth P20,000 in seven years. If the value of the land increases at 9% each year, how much should the investor be willing to pay now for this property?

Choices:

a. P9,341 b. P10,941 c. P11,521 d. P12,015

ANSWER: b. P10,941

SOLUTION (IF PROBLEM -SOLVING)

$$P = F\left(\frac{1}{1+i}\right)^n$$

$$= \mathrm{F(P/F,i\%, n)}$$

$$\mathrm{P = P20{,}000(P/F,9\%,7) = P10{,}940.68}$$

QUESTION:

What is the size of seven equal annual payments to repay a loan of P2,000? The first payment is due one year after receiving the loan and the nominal rate of interest is 12%.

Choices:

a. P438 b. P529 c. P631 d. P799

ANSWER: P438

SOLUTION (IF PROBLEM -SOLVING)

$$P = A\left(\frac{(1+i)^n - 1}{\mathrm{i}(1+i)^n}\right)$$

$$\mathrm{P2000 = A(P/A,12\%,7)}$$

$$\mathrm{A = P438.24}$$

QUESTION:

Suppose that you make 12 equal annual deposits of P2,000 each into a bank account paying 8% interest per year. The first deposit will be made one year from today. How much money can be withdrawn from this bank account immediately after the 12th deposit?

Choices:

a. P35,492 b. P36,218 c. 37,954 d. P38,755

ANSWER: c. 37,954

SOLUTION (IF PROBLEM -SOLVING)

$$F = A\left(\frac{(1+i)^n - 1}{\mathrm{i}}\right)$$

$$= \mathrm{P2000(F/A,8\%,12)} = \mathrm{P37,954.25}$$

QUESTION:

With straightforward use of the gradient conversion factors, find the present equivalent value at the beginning of the first year of a certain end-of-year cash flows that are expected to be P1,000 for the second year, P2000 for the third year, and P3,000 for the fourth year and that, if interest is 15% per year.

Choices:

a. P3790 b. P4790 c. P5790 d. P6790

ANSWER: a. P3790

SOLUTION (IF PROBLEM -SOLVING)

$$P = G\frac{1}{i}\left[\frac{(1+i)^n - 1}{i(1+i)^n} - \frac{n}{(1+i)^n}\right]$$

$$P = P1{,}000(P/G,15\%,4) = P3786.44$$

QUESTION:

A credit card company charges an interest rate of 1.5% per month on the unpaid balance of all accounts. The annual interest rate, they claim is 12(1.5%) =18%. What is the effective rate of interest per year being charged by the company?

Choices:

a. 18.89% b. 19.56% c. 19.92% d. 20.11%

ANSWER: b. 19.56%

SOLUTION (IF PROBLEM -SOLVING)

$$i_{effective} = \left(1 + \frac{0.18}{12}\right)^{12} - 1 = 0.1956(19.56\%)$$

QUESTION:

An individual makes five annual deposit of P,2000 in a savings account that pays interest at a rate of 4% per year. One year after making the last deposit, the interest rate changes to 6% per year. Five years after the last deposit, the accumulated money is withdrawn from the account. How much is withdrawn?

Choices:

a. P14,233 b. P14,323 c. P14,332 d. P14,223

ANSWER: d. P14,223

SOLUTION (IF PROBLEM -SOLVING)

$$F = P2{,}000(F/A,4\%,5)(F/P,4\%,1)(F/P,6\%,4) = P14{,}223$$

QUESTION:

Some future amount F, is equivalent to P2,000 being received every six months over the next 12 years. The nominal interest rate is 20% compounded continuously. Find the value of F.

Choices:

a. P185,000 b. P187,000 c. P189,000 d. P191,000

ANSWER: d. P191,000

SOLUTION (IF PROBLEM -SOLVING)

$$F = \frac{P2{,}000}{6\text{ mo}}(F/A, 10\%\text{ per }6\text{ months}, 24 - \textit{six month period})$$

$$F = P190{,}607.40$$

QUESTION:
Find the current price of a 15-year old bond paying 8% per year (payable semi-annually) that is redeemable at par value, if bought by a purchaser to yield 12% per year. The face value of the bond is P2,000.

Choices:
a. P1375 b. P1398 c. P1487 d. P1510

ANSWER: c. P1487

SOLUTION (IF PROBLEM -SOLVING)

$$n = 15x2 = 30$$

$$r = \frac{8\%}{2} = 4\%$$

$$i = \left[(1.12)^{1/2} - 1\right] = 5.83\%$$

$$C = Z = \$1{,}000$$

$$Vn = C(P/F, i\%, n) + rZ(P/A, i\%, n)$$

$$= P2{,}000(P/F, 5.83\%, 30) + P2{,}000(0.04)(P/A, 5.83\%, 30)$$

$$= P365.4 + P1121.51 = P1486.91$$

QUESTION:

A new electric saw for cutting small pieces of lumber in a furniture manufacturing plant has a cost basis of P5,000 and a 8-year depreciable life. The estimated salvage value of the saw is zero at the end of 8 years. The book value at the end of 5 years using straight-line method.

Choices:

a. P3125 b. P625 c. P1,875 d. P1,000

ANSWER: c. P1,875

SOLUTION (IF PROBLEM -SOLVING)

$$d_5 = 5\left[\frac{5{,}000 - 0}{8}\right] = P3{,}125$$

$$D_5 = P5{,}000 - P3{,}125 = P1{,}875$$

QUESTION:

A piece of equipment used in a business has a basis of %50,000 and is expected to have a P10,000 salvage value when replaced after 30,000 hours of use. Find its book value after 10,000 hours of operation.

Choices:
a. P36,700 b. P37,800 c. P38,200 d. P39,500

ANSWER: P36,700

SOLUTION (IF PROBLEM -SOLVING)

Depreciation per unit of production= $\dfrac{\%50{,}000 - \$10{,}000}{30{,}000 \text{ hours}} = P1.33 \text{ per hour}$

After 10,000 hours:

$$BV = P50{,}000 - \frac{P1.33}{hour}(10{,}000 \text{ hours}) = \text{P}36{,}700$$

QUESTION:

Determine the exact simple interest on P2000 for the period from January 10 to October 28, 2011 at 15% interest.

Choices:
a. P125.15 b. P230.13 c. P387.43 d. P401.44

ANSWER: b. P230.13

Jan 10-32= 21 days June = 30 days
Feb = 28 days July = 31 days
March = 31 days Aug = 31 days
April = 30 days Sept = 30 days
May = 31 days Oct = 28 days

Total # of days = 291

$$I = P2000\left(\tfrac{291}{365}\right)0.15 = P239.13$$

QUESTION:

What is the effective rate of interest if P1000 is invested at a nominal rate of 15% compounded quarterly?

Choices:
a. 15.86% b. 16.86% c. 17.86% d. 18.86%

ANSWER: a. 15.86%

SOLUTION (IF PROBLEM -SOLVING)

$$i_{eff} = \left(1 + \frac{0.15}{4}\right)^4 - 1 = 15.86\%$$

QUESTION:
A P1000 loan was originally made at 8% simple interest for 4 years. At the end of this period the loan was extended for 3 years, without the interest being paid, but the new interest rate was made 12% compounded semiannually. How much should the borrower pay at the end of 7 years?

Choices:
a. P1782 b. P1827 c. P1872 d. P1278

ANSWER: c. P1872

SOLUTION (IF PROBLEM -SOLVING)

$$F_4 = P1{,}000[1 + 4(0.08)] = P1{,}320$$
$$F_7 = P1{,}320(1 + 0.12/2)^{3(2)} = P1{,}872.4$$

QUESTION:

A man invested P20,000 at an interest rate of 10% compounded annually. What will be the final amount of his investment, in terms of today's pesos, after five years, if the inflation remains the same at the rate of 8% per year?

Choices:

a. P21,229 b. P21,922 c. P22,922 d. P21,929

ANSWER: b. P21,922

SOLUTION (IF PROBLEM -SOLVING)

$$F = P20{,}000\left(\frac{1+0.10}{1+0.08}\right)^5 = P21{,}921.72$$

QUESTION:
An Electronic Engineer wishes to set up a special fund by making uniform semiannual end-of-period deposits for 22 years. The fund is to provide P200,000 at the end of each of the last seven years of the 22-year period. If interest is 10% compounded semiannually, what is the required semiannual deposit to be made?

Choices:
a. P10,473 b. P11,292 c. P12,651 d. P13,115

ANSWER: c. P12,651

SOLUTION (IF PROBLEM -SOLVING)

$$i_{deposit} = \frac{10\%}{2} = 5\%$$

$$i_{withdraw} = (1+0.05)^2 - 1 = 10.25\%$$

$$A(F/A,5\%,44) = P200{,}000(F/A,10.25\%,7)$$

$$A(151.443) = P(1{,}912{,}061.657)$$

$$A = P12{,}650.68$$

QUESTION:

Using a compound interest of 8%, find the equivalent uniform annual cost for a proposed machine that has a first cost of P150,000 an estimated salvage value of P20,000 and an estimated economic life of 8 years. Annual maintenance will amount to P2,000 a year and periodic overhaul costing P6,000 each will occur at the end of the second and fourth year.

Choices:
a. P26,666 b. P36,666 c. P46,666 d. P56,666

ANSWER: c. P46,666

SOLUTION (IF PROBLEM -SOLVING)

$$A(P/A,8\%,8) = P150{,}000 + P2{,}000(P/A,8\%,8) + P6{,}000(P/F,8\%,2) + P6{,}000(P/F,8\%,4) - P20{,}000(P/F,8\%,8)$$

$$A(5.7466) = P150{,}000 + P20{,}000(5.7466) + P6{,}000(0.5403)$$

$$A = P46{,}666.52$$

QUESTION:
A man purchased a house for P425,000. In the first month that he owned the house, he spent P75,000 on repairs and remodeling. Immediately after the house was remodeled, he was offered P545,000 to sell the house. After some consideration, he decided to keep the house and have it rented for P4,500 per month starting two months after the purchase. He collected rent for 15 months and then sold the house for P600,000. if the interest rate was 1.5% per month, how much extra money did he make or lose by not selling the house immediately after it was remodeled?

Choices:
a. P3,000 b.P4,000 c. P5,000 d. P6,000

ANSWER: c. P5,000

SOLUTION (IF PROBLEM -SOLVING)

$$Ans = P545{,}000 - P4{,}500(P/A,1.5\%,15) - P600{,}000(P/F,1.5\%,15)$$
$$= \text{P5,015}$$

QUESTION:
On the day his grandson was born, a man deposited to a trust company a sufficient amount of money so that the boy could receive five annual payments of P20,000 each for his college tuition fees, starting with his 18th birthday. Interest at the rate of 12$ per annum was to be paid on all amounts on deposit. There was also a provision that the grandson could elect to withdraw no annual payments and receive a single lump amount on his 25th birthday. The grandson chose this option. How much did the grandfather deposit?

Choices:

a. P9,500 b. P10,500 c. P11,500 d. P12,500

ANSWER: P10,500

SOLUTION (IF PROBLEM -SOLVING)

$$P = P20{,}000(P/A,12\%,5)(P/F,12\%,17)$$
$$= P10{,}500$$

QUESTION:

A man bought an equipment costing P30,000 payable in 12 quarterly payments, each installment payable at the beginning of each period. The rate of interest is 24% compounded quarterly. What is the amount of each payment

Choices:

a. P1,700 b. P2,700 c. P3,700 d. P4,700

ANSWER: c. P3,700

SOLUTION (IF PROBLEM -SOLVING)

$$P30{,}000 = A(1 + P/A,8\%,12-1)$$
$$A = P3{,}685.96$$

QUESTION:
Determine the capitalized cost of a research laboratory which requires P6,000,000 for original construction; P100,000 at the end of every year for the first 6 years and then P120,000 each year thereafter for operating expenses, and P500,000 every 5 years for replacement of equipment with interest at 12% per annum?

Choices:
a. P5.75M b. P6.75M c. P7.75M d. P8.75M

ANSWER: c. P7.75M

SOLUTION (IF PROBLEM -SOLVING)

$$CC = P6{,}000{,}000$$
$$+ P100{,}000(P/A,12\%,6) + \frac{P120{,}000}{0.12}(P/F,12\%6)$$
$$+ \frac{P500{,}000}{(1+0.12)^5 - 1}$$
$$CC = P6{,}000{,}000 + P917{,}740 + P655{,}910$$
$$CC = P7{,}753{,}650$$

QUESTION:

A telecommunication company purchased an equipment for P53,000 and paid P1,500 for freight and delivery charges to the job site. The equipment has a normal life of 10 years with a trade-in value of P5,000 against the purchase of a new equipment at the end of the life. Determine the annual depreciation cost by the sinking fund method. Assume interest at 6.5% compounded annually.

Choices:
a. P2,543 b. P3.,668 c. P4,215 d. P5,956

ANSWER: b. P3.,668

SOLUTION (IF PROBLEM -SOLVING)

$$C_O = P53{,}000 + P1{,}500 = P54{,}500$$
$$C_L = P5{,}000$$
$$d = \frac{P54{,}500 - P5{,}000}{F/A, 6.5\%, 10} = P3{,}668$$

QUESTION:
Find the book value at the end of 7 years for an asset that costs P10,000 new and has an estimated scrap value of P2,000 at the end of 12 years using declining balance method.

Choices:
a.P4,035 b. P5,059 c. P6,089 d. P7,022

ANSWER: c. P6,089

SOLUTION (IF PROBLEM -SOLVING)

$$k = 1 - \sqrt[12]{\frac{P2{,}000}{P10{,}000}} = 12.55\%$$
$$C_7 = P10{,}000(1 - 0.1255)^7 = P3{,}911.28$$
$$D_7 = P10{,}000 - P3{,}911.28 = P6{,}088.7$$

QUESTION:

A plant bought a machine for P200,000 and used it for 10 years, the life span of the equipment. What is the book value of the machine after 5 years of use? Assume a scrap value of P20,000. Use double declining balance method.

Choices:
a. P43,648 b. P59,425 c. P65,536 d. P70,923

ANSWER: c. P65,536

SOLUTION (IF PROBLEM -SOLVING)

$$C_5 = P200{,}00(1 - \tfrac{2}{10})^5 = P65{,}536$$

QUESTION:

A consortium of international telecommunication companies contracted for the purchase and installation of fiber optic cable linking two major cities at a total cost of P1.5 billion. This amount includes freight and installation charges estimated at 10% of the above contract. If the cable shall be depreciated over a period of 15 years with zero salvage value, what is the depreciation charge during the 8th year using sum-of-the-tears-digits method?

Choices:
a. P50M b. P100M c. P150M d. P200M

ANSWER: b. P100M

SOLUTION (IF PROBLEM -SOLVING)

$$\text{sum of digits} = \frac{15(15+1)}{2} = 120$$

$$\text{reverse digit} = 8$$

$$\text{d}_8 = \frac{8}{120} = (P1.5billion) = P100million$$