Started on	Monday, 1 February 2021, 11:01 AM
State	Finished
Completed on	Tuesday, 2 February 2021, 1:45 PM
Time taken	1 day 2 hours
Grade	**100.00** out of 100.00

Question 1

Correct

Mark 24.00 out of 24.00

4.65 Kathy Stonewall bought a new car for $15,458. A dealer's financing was available at an interest rate of 11.5% compounded monthly. Dealer financing required a 10% down payment and 60 equal monthly payments. Because the interest rate was rather high, Kathy checked her credit union for possible financing. The loan officer at the credit union quoted a 9.8% interest rate for a new-car loan and 10.5% for a used car. But to be eligible for the loan, Kathy has to be a member of the union for at least six months. Since she joined the union two months ago, she has to wait four more months to apply for the loan. Consequently, she decided to go ahead with the dealer's financing, and four months later she refinanced the balance through the credit union at an interest rate of 10.5%.

(a) Compute the monthly payment to the dealer.

(b) Compute the monthly payment to the union.

(c) What is the total interest payment on each loan?

(a) Monthly payment to the dealer=$ 305.97 ✔ (Keep 2 decimal places in results)

(b) Monthly payment to the union=$ 299.44 ✔ (Keep 2 decimal places in results)

(c) Total interest payments (dealer+union)=$ 4080.04 ✔ (Keep 2 decimal places in results)

Question 2

Correct

Mark 36.00 out of 36.00

4.70 The Jimmy Corporation issued a new series of bonds on January 1, 1996. The bonds were sold at par ($1000), have a 12% coupon rate, and mature in 30 years, on December 31, 2025. Coupon interest payments are made semiannually (on June 30 and December 31).

(a) What was the yield to maturity (YTM) of the bond on January 1, 1996?

(b) Assuming that the level of interest rates had fallen to 9%, what was the price of the bond on January 1, 2001, five years later?

(c) On July 1, 2001, the bonds sold for $922.38. What was the YTM at that date? What was the current yield at that date?

(a) YTM (annual interest rate)= 12.36 ✔ % (Keep 2 decimal places in results)

(b) Bond price after five years=$ 1296.43 ✔ (Keep 2 decimal places in results)

(c)

YTM at that date (annual interest rate)= 13.49 ✔ % (Keep 2 decimal places in results)

Nominal current yield= 13.01 ✔ % per year (Keep 2 decimal places in results)

Question 3

Correct

Mark 5.00 out of 5.00

4.78 Suppose you purchased a corporate bond with a 10-year maturity, a $1000 par value, a 10% coupon rate, and semiannual interest payments. All this means that you receive a $50 interest payment at the end of each six-month period for 10 years (20 times). Then, when the bond matures, you will receive the principal amount (the face value) in a lump sum. Three years after the bonds were purchased, the going rate of interest on new bonds fell to 6% (or 6% compounded semiannually). What is the current market value (P) of the bond (three years after its purchase)?

P=$ 1225.92 ✔ (Keep 2 decimal places in results)

Question 4

Correct

Mark 10.00 out of 10.00

Q5.8

Cable television companies and their equipment suppliers are on the verge of installing new technology that will pack many more channels into cable networks, thereby creating a potential programming revolution with implications for broadcasters, telephone companies, and the consumer electronics industry. Digital compression uses computer techniques to squeeze 3 to 10 programs into a single channel. A cable system fully using digital compression technology would be able to offer well over 100 channels, compared with about 35 for the traditional cable television system. If the new technology is combined with the increased use of optical fibers, it might be possible to offer as many as 300 channels. A cable company is considering installing this new technology to increase subscription sales and save on satellite time. The company estimates that the installation will take place over two years. The system is expected to have an eight-year service life and produce the following savings and expenditures:

Digital Compression	
Investment Now	$535
Investment First Year	$3431
Investment Second Year	$4460
Annual Savings in Satellite time	$1647
Incremental Annual Revenues due to new subscriptions	$4781
Incremental Annual Expenses	$1582
Incremental Annual Income Tax	$1448
Economic Service Life	8 years
Net Salvage Value	$1512

Note that the project has a 2-year investment period, followed by an 8-year service life (a total 10-year life for the project). This implies that the first annual savings will occur at the end of year 3 and the last will occur at the end of year 10. If the firm's MARR is 15%, use the NPW method to justify the economic worth of the project.

Net Present Worth: $ 5012.48 ✔

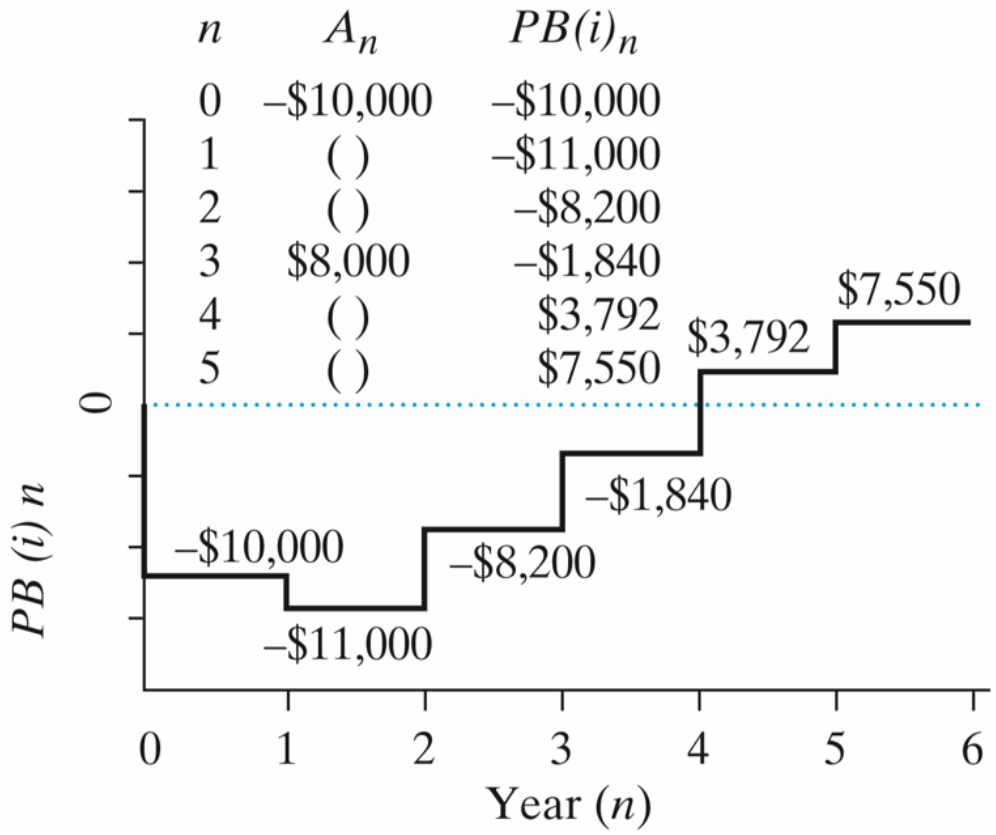
Question 5

Correct

Mark 25.00 out of 25.00

Q5.13

Consider the accompanying project balance diagram for a typical investment project with a service life of five years. The numbers in the figure indicate the beginning project balances.



(a) From the project balance diagram, construct the project's original cash flows.

n	A_n	$PB(i)_n$
0	-$10000	-$10000
1	$ 1000 ✔	$-11000
2	$ 5000 ✔	$-8200
3	$8000	$-1840
4	$ 6000 ✔	$3792
5	$ 2999.6 ✔	$7550

(b) What is the project's conventional payback period (without interest)? 3 ✔ years

◄ Assignment #2 answers

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Midterm #1 Review Questions and Answers ►