York University AP/ADMS2500.03 Introduction to Financial Accounting

Midterm Examination #2

Time: 3.0 hours **Winter 2012** **Questions: 50**

Instructions:

1. **Submit:** Only the pink mark sense sheet will be collected: you may keep this midterm examination paper. Mark your answers on it for later reference. Ensure your name is on the pink mark sense sheet.

2. **Mark Sense Sheet:**
   - Record your name and student number and answer all questions on the computer mark sense sheet provided with an HB (soft lead) pencil. Bring several pencils in case one breaks. The computer will not recognize ink or hard lead pencils
   - Test Form is for the exam version you are writing (A, B or C) and Code is your Section (in the left column).
   - Fill in the bubbles for your name and student number in pencil (your phone number is not required). Leave the last column of the student number BLANK
   - If you change an answer, use a high quality eraser to completely remove the previous mark. If the computer senses two answers to a question, only the first scanned will be recognized.

3. **Exam Aids:**
   - Only calculators without alphanumeric programmable memories are allowed. It is strongly suggested you bring a couple of cheap 4 function computers to the exam in case one fails. Be prepared to be challenged by invigilators if you bring a "fancy" calculator.
   - Compact foreign language/English dictionaries may be used. However, these will be examined by invigilators. If there are any loose pages or handwriting in the dictionary, it will be seized and you will be charged with academic dishonesty.
   - In 2500, invigilators answer no questions of interpretation. They will pass along questions regarding possible errors/ typos/missing data to the head invigilator. If you believe a question contains an error and do not receive a response, make a detailed note at the back of your answer (pink) sheet.

4. **Exam Strategy**
   - Careful budgeting of time on an accounting exam is essential. Bring a watch and check your progress regularly. Poor time management is the most common reason for poor exam performance in accounting.
   - It is always a good idea to attempt the questions you deem easiest first. In an interrupted exam that is not restarted, your exam will be scored based on questions attempted.
   - It is essential to transfer your answers to the grading sheet after each question in case the exam is interrupted by fire alarm.
   - The last ten minutes of an exam should be devoted to double checking your transfers. What you submit is what is graded. If you have not transferred your answers to the mark sense sheet at the end of the exam, the invigilator will not wait. Your answer sheet will be seized and it will be graded based on whatever questions have choices filled in.
   - Remember there is no penalty for guessing on a multiple choice computer graded exam. Submit a choice for every question. Also note that in 2500, the choice of *None of the above* does indeed represent a frequent correct choice to questions.

5. **Exam room regulations:**
   - All personal belongings either on the floor or at the front of the exam room. All items on your desk will be examined by invigilators
   - Bring appropriate ID as proof of registration. You will be required to sign in and show appropriate documentation. Students without ID will be allowed to write the exam, but will be photographed and asked to submit registration and photo ID to the School of Administrative Studies the next day.
   - No student may leave the exam in the first hour. No student may start the exam after an hour. Students requiring restroom visits must be accompanied by an invigilator.
   - The proctors will announce when there are 15 minutes remaining and any answers not transferred should be recorded at this time. No one is to leave their seat in the last 15 minutes.
   - When time is called, the proctors will go down the rows collecting your answer sheets and this exam paper. They will not wait and they will not accept your sheet once they have passed. Any violation of this protocol will result in a grade of zero recorded for the exam.

6. **Fire Alarms**
   - A frequent occurrence in York exams. In the event of a fire alarm, you are to leave your exam and answer sheet face down on your desk and immediately proceed outside with coats and all personal belongings. Print your surname on the back of the exam so you know which seat to return to. An invigilator will lead the group outside to a place of safety. There is to be no talking during the evacuation or outside. Most rooms are cleared within 30 minutes of the alarm so that exams can recommence. You will be told after this time whether to reenter the room and recommence the exam or to go home.

7. **Academic Dishonesty**
   - You are reminded that cheating is a serious offense which can result in expulsion from university
   - Exams at York are held in regular classrooms, which may involve tiered seating. Consequently, neck exercises are not allowed during exams. First instance of wandering eyes has the student relocated to the front of the room. Second instance results in seizure of paper.

8. **Special Instructions**
   - Double check your transfers to the pink mark sense sheet.
   - This exam contains several groups of questions based on the same set up. These are problems (similar to those in the e-book or class examples) that have been arranged as multiple choice questions
   - The exam clearly indicates when a group of questions are related to a single data set as: “Use the following data to answer Questions 1 to 5”.
   - Otherwise, assume each question is independent of the others
   - There are four present value tables appended to this exam in case you need to do time value of money computations
   - With 180 minutes to do 50 questions, you should budget your time carefully and not spend more than 3 minutes on a question. If you do, you risk not finishing the exam.

9. **Reminder**

This is a reminder to Submit the pink mark sense sheet only, this exam paper will not be collected. Ensure your name is on the pink mark sense sheet and that you have marked your answers in this paper so you can check your answers when the correct answers are published.

Use the following data to answer Questions 1 to 3

The items below represent expenditures (or receipts) related to the construction of a new home office for ICON Limited.

Cost of land site, which included an old apartment building (appraised at $60,000) $170,000
Legal fees, including fee for title search $2,100
Payment of apartment building mortgage and related interest due at time of sale $7,500
Payment of delinquent property taxes assumed by the purchaser $2,800
Cost of razing (demolish) the apartment building $14,000
Proceeds from sale of salvaged materials ($3,200)
Grading and drainage on land site to construct the building basement $6,000
Architect's fees on new building $100,000
Proceeds from sale of excess dirt (from basement excavation) to owner of adjoining property (dirt was used to fill in a low area on property) ($800)
Payment to building contractor $2,500,000
Interest cost incurred during construction (based on average accumulated construction expenditures – may be capitalized) $200,000
Payment of medical bills of employee accidentally injured while inspecting building construction $600
Special assessment for paving city sidewalks (paid to city) $12,000
Cost of paving driveway and parking lot $16,000
Cost of installing lights in parking lot $7,300
Premium for insurance on building during construction $5,000
Cost of open house party to celebrate opening of new building $4,500

1) Compute the proper balance of Land:

A) 2,810,800
B) 2,810,200
C) 205,200
D) 193,200
E) None of the above

2) Compute the proper balance of Building:

A) 2,810,800
B) 2,810,200
C) 205,200
D) 193,200
E) None of the above

3) Compute the proper balance of Land Improvements:

A) 205,200
B) 193,200
C) 28,000
D) 23,300
E) None of the above

4) The Discount on Bonds Payable account has a debit balance and, as such, should be reported as:
A) A deferred charge
B) A contra asset account
C) A contra liability account
D) Either A or C above
E) None of the above

5) Which of the following would not be a feature of a system of internal control over cash?
A) all cash receipts are deposited intact in the bank each day
B) all major disbursements are made by cheque
C) work and responsibilities of cash handling and recording are divided in such a way that errors are readily disclosed and the possibility of irregularities is reduced
D) insider trading is reported
E) None of the above

6) Choose the word or phrase that best completes the following sentence. A set of rules of professional conduct that governs the behaviour of accountants in the performance of their work is called _____.
A) generally accepted accounting principles
B) the Accounting Act
C) the Sarbanes-Oxley Act
D) a code of ethics
E) none of the above

7) When estimating acquisition of capital assets in general we can capitalize an expenditure if it:
A) is necessary to the acquisition and installation of the asset
B) improves the quality or usefulness of the asset in terms of its revenue generating potential
C) is material
D) A and B are correct
E) A, B and C are correct

8) Which of the following capital assets is not depreciated, amortized or depleted:
A) Land improvements
B) Buildings
C) Mining site
D) Property, plant and Equipment
E) None of the above

9) Which of the following are factors in determining the amount of money a firm actually receives when it offers a bond issue to the market?
A) The stated or nominal and the market interest rate
B) The face or par value of the bond issue
C) The term to maturity
D) A and B only
E) A, B and C

Use the following data to answer questions 10 to 12

A company has been in business for three years. The company makes all sales on account and does not offer cash discounts. The firm's credit sales, collections from customers, and write-offs of uncollectible accounts for the three-year period are summarized below:

Year	Sales	Collections	Accounts Written Off
1	$400,000	$380,000	$2,000
2	600,000	590,000	2,400
3	720,000	704,000	3,000

10) If the company had used the direct write-off method of recognizing credit losses during the three years, what amount of Accounts Receivable would appear on the firm's balance sheet at the end of the third year?

A) $46,000
B) $38,600
C) $1,720,000
D) $1,674,000
E) None of the above

11) If the company had used an allowance method of recognizing credit losses and had provided for such losses at the rate of 1% of sales, what amount of Allowance for Uncollectible Accounts would appear on the firm's balance sheet at the end of the third year?

A) $5,500
B) $9,800
C) $12,900
D) $17,200
E) None of the above

12): If the company had used an allowance method of recognizing credit losses and had provided for such losses at the rate of 1% of sales, what total amount of uncollectible accounts expense would have appeared on the firm's income statement during the three-year period?

A) $5,500
B) $9,800
C) $12,900
D) $17,200
E) None of the above

13) A company may either borrows $1,000,000 by issuing, at par, twenty-year, 10 percent bonds with semiannual coupons or obtain the $1,000,000 by undertaking a twenty-year mortgage with an implicit borrowing rate of 10 percent, the annual payments are $1,000,000/8.51356 = $117,460. If the bonds are held to maturity and the mortgage is not prepaid, i.e., both borrowings run their respective 20 year term, the total interest expense will be:

A) The same under both financing strategies
B) More under the mortgage financing
C) More under the bond financing
D) Unable to determine due to incomplete data (i.e. effective interest table)
E) None of the above

14) The Steven Co. estimates its Allowance for Doubtful Accounts by aging its accounts receivable. At the end of 1998 its accounts receivable were aged as follows:

0-30 days	**$1,000,000**
31-90 days	**500,000**
over 90 days	**100,000**

The company estimates that all amounts outstanding for 30 days or less will be collected at the 99% but the 5% of the amounts outstanding between 31 and 90 days and 50% of the amount outstanding over 90 days will eventually be uncollectible. The balance in the Allowance for Doubtful Accounts at the beginning of 1998 was $50,000. During 1998, $35,000 of uncollectible accounts were written off. The Uncollectible Accounts Expense for 1998 is

A) 35,000
B) 70,000
C) 60,000
D) 85,000
E) None of the above

15) A firm's gross profit on net sales is 35% The firm had net sales of $400,000 and net cost of purchases of $260,000. If the beginning inventory was $40,000, how much was the ending inventory?

A) $180,000
B) $60,000
C) $20,000
D) $40,000
E) None of the above

Use the following data to answer Questions 16 to 20

On July 1, 2000, the BigBoy Productions Limited purchased computing equipment for $20,000 that has an estimated life of eight years and a disposal value of $2,000 (rate for declining balance depreciation of 20%). In early 2002, a major improvement was made to the computing equipment costing $2,500. As a result, the production capacity doubled, but its expected life remained unchanged. At the beginning of 2003, BigBoy Productions Limited revised the estimated useful life to be only three remaining years (2003, 2004, and 2005) and its residual value to $1,000 (revised rate for declining balance depreciation of 33%).

16) Calculate the depreciation for 2001 and accumulated depreciation at the end of 2001 using the Straight-Line Method
A) 2,250 and 3,375
B) 1,125 and 2,250
C) 1,125 and 3,375
D) 2,250 and 2,250
E) None of the above

17) Calculate the depreciation for 2003 using the Straight-Line method.
A) 1,125
B) 2,250
C) 3,375
D) 5,163
E) None of the above

18) Calculate the depreciation for 2001 using the Declining Balance Method (rate 20%):
A) 4,000
B) 3,934
C) 3,600
D) 2,000
E) None of the above

19) Calculate the depreciation for 2003 using the Declining Balance Method (rate 20%):
A) 4,000
B) 3,934
C) 3,600
D) 4,462
E) None of the above

20) Calculate the depreciation for 2000 using the Declining Balance Method (rate 20%):
A) 4,000
B) 3,934
C) 3,600
D) 4,462
E) None of the above

21) Which method gives higher interest expense in the first year when the bonds are issued at a premium?:
A) effective interest method of accounting for interest on bonds
B) straight-line method of accounting for interest on bonds
C) both of them result in the same interest expense
D) unable to answer due to missing data (effective interest table)
E) None of the above

22) Nothingham HS contracts to pay teachers in twelve monthly installments over the period September of one year through August of the next year but services are provided since September to June. For the current academic year, the total contractual salaries to be paid to teachers is $360,000. The amount that should be accrued at the end of each month is:
A) $36,000, plus benefits
B) $36,000
C) $30,000, plus benefits
D) $30,000
E) None of the above

23) A company trades a car which cost $20,000 and has accumulated depreciation of $5,000, for a new car which has a list price of $25,000. The dealer allows a $23,000 trade-in, and $1,000 is paid in cash. The car being traded-in could be sold for $16,000 in the well established second-hand market. When recorded on the books the operation will show a:
A) Loss of $1,000
B) Gain of $1,000
C) Loss of $2,000
D) No gain or loss
E) None of the above

24) Which method gives higher interest expense in the last year when the bonds are issued for more than par?
A) effective interest method of accounting for interest on bonds
B) straight-line method of accounting for interest on bonds
C) both of them result in the same interest expense
D) unable to answer due to missing data (effective interest table)
E) None of the above

Use the following data to answer questions 25 to 28

The following amounts have been collected by Sally at month end from the books of her company and from the bank statement, but the final balances do not match. Prepare the bank reconciliation with the following data:

February 29th data (bank reconciliation done by Sally last month)

balance per bank	7,000
add: deposits in transit	1,800
deduct: outstanding cheques	(2,000)
balance per books	6,800

Month of March Data from two sources:

	per bank statement	per books
balance March 31	8,250	9,100
Deposits	5,000	5,500
Cheques	4,100	3,200
Note collected	900	-
bank service charge	15	-
NSF cheque	235	-
Interest Received	50	-
Autowithdrawal	$350	-

25) The amount of the adjusted book balance is:

A) $6,800
B) $9,100
C) $8,250
D) $7,320
E) None of the above

26) Total amount of cheques written and paid in March:

A) $4,100
B) $2,000
C) $2,100
D) $3,200
E) None of the above

27) Total amount of deposits made and cashed in March

A) $5,000
B) $5,500
C) $3,200
D) $1,800
E) None of the above

28) The interest received was considered by Sally when doing the bank reconciliation in the following manner:

A) Added to the balance per books
B) Added to the balance per bank statement
C) Subtracted from the balance per book
D) Subtracted from the balance per bank statement
E) None of the above

29) Which of the following does not meet the criteria of a liability?
A) Firm orders from customers for goods and services to be delivered later.
B) Advances from customers for goods and services to be delivered later.
C) Interest accrued but not paid on a note.
D) Mortgages payable.
E) None of the above

30) Determine the number of units available for sale and ending inventory if you know the following: Beginning Inventory 8,000; Produced 14,000; Sold 17,000
A) EI: 0 and Available for sale: 8,000
B) EI: 5,000 and Available for sale: 14,000
C) EI: 5,000 and Available for sale: 22,000
D) unable to determine due to incomplete data
E) None of the above

31) Determine the number of units in beginning inventory and available for sale if you know the following: Produced 26,000, Sold 27,000 and Ending inventory 12,000
A) BI: 0 and Available for sale: 39,000
B) BI: 12,000 and Available for sale: 27,000
C) BI: 13,000 and Available for sale: 26,000
D) unable to determine due to incomplete data
E) None of the above

32) Which of the following meets the criteria of a liability?
A) Contractual promises to purchase natural gas for each of the next ten years.
B) Cost of restoring strip-mining sites after mining operations are completed.
C) Damages the company must pay if a pending lawsuit is lost.
D) Fifteen-year cancellable lease on an office building.
E) None of the above

33) A company trades a car which cost $20,000 and has accumulated depreciation of $4,000, for a new car which has a list price of $25,000. The dealer allows a $23,000 trade-in, and $2,000 is paid in cash. The car being traded-in could be sold for $15,000 in the well established second-hand market. The new car should be recorded on the books at:
A) $25,000
B) $23,000
C) $21,000
D) $20,000
E) None of the above

34) The allowance method for uncollectible accounts receivable is similar to the allowance method for estimated warranty costs because
A) Estimates of future events are made and the cost to the business is charged to income in the period of sale.
B) Both the Allowance for Uncollectible Accounts and the Allowance for Warranties are liability accounts.
C) The expense is debited directly to Retained Earnings and does not appear on the income statement.
D) Both the Allowance for Uncollectible Accounts and the Allowance for Warranties are subtracted from the respective asset account.
E) None of the above

35) A noted accountant once remarked that the optimal number of faulty TV sets for the XYZ Electric Co. Ltd. to sell is "not zero," even if XYZ promises to repair all faulty XYZ sets that break down, for whatever reason, within two years of purchase. The optimal number would be "not zero" because:
A) The repair costs are tax deductible
B) Zero defects could not be accounted for and hence the accounting system could not capture the information to better plan future production
C) Zero defects accounting is complicated and expensive.
D) It is cheaper (and, therefore more profitable) to repair a few sets than to have such stringent quality control that no defects result
E) None of the above

36) How would Mortgages payable be valued?
A) the source of the funds must be shown as a liability in the amount of the cash received
B) at the present value, calculated using the yield rate at the time of issue, of the remaining stated or coupon interest and principal payments.
C) at the present value of future payments.
D) at the expected, undiscounted value of future interest costs arising from all payments made prior to the balance sheet date
E) None of the above

37) Internal control systems are not designed to
A) promote operational efficiency
B) safeguard assets
C) check the accuracy and reliability of accounting records
D) encourage adherence to prescribed management policies
E) internal control systems are designed to do all of the above

Use the following data to answer questions 38 to 41

A non interest-bearing note that pays $7,935 three years from today is issued in exchange for used equipment, the discount rate appropriate for such notes is 8% per annum.

38) Which of the following amounts would be recorded as the acquisition value of the equipment:

A) $3,942
B) $6,299
C) $3,969
D) $1,940
E) None of the above

39) The entry to record the issue of a note for the used equipment on our books would include a

A) Dr Used Equipment $7,935
B) Cr Note Payable $6,299
C) Dr Discount on Note Payable $1,031
D) Cr Discount on Note Payable $1,031
E) None of the above

40) the interest expense on the note for the second year will be:

A) $504
B) $544
C) $588
D) $545.33
E) None of the above

41) The unamortized discount on notes payable at the end of the second year will be:

A) $588
B) $545.33
C) $1,132
D) $1,636
E) None of the above

42) Which of the following is not a characteristic of the accounting profession?

A) Mastery of an intellectual skill
B) A desire to serve the public interest
C) A guarantee of a high salary
D) A code of conduct
E) All of the above are characteristics of professions

43) The accounting concept that justifies the usage of accruals and deferrals is
A) The going concern
B) Materiality
C) Consistency
D) Monetary unity
E) None of the above

44) How would damages the company must pay if a pending lawsuit is lost be valued?
A) If we expected to lose a reasonably estimable amount in the suit, then we would show an estimated liability
B) If the expenditure is incurred to win the lawsuit, as such it is an asset and the asset is not recognized until the expenditure is made. The present value of an estimate of the costs is the theoretically correct answer.
C) at the present value of future payments.
D) at the expected, undiscounted value of future interest costs arising from all payments made prior to the balance sheet date
E) None of the above

Use the following information to answer questions 45 to 50 (Round to 0 decimal places):

The following information has been extracted from the records of Glass Co.:

March 1st Beginning Inventory 50 units @ $10 each
March 9th Bought 100 units @ $12 each
March 15th Sold 120 units @ $20 each
March 20th Bought 50 units @ $15 each
March 25th Sold 100 units @ $22 each

45) If Glass Co uses the FIFO cost flow assumption, under a periodic method, the cost of goods sold for March, is:
A) $400
B) $492
C) $520
D) $2,600
E) None of the above

46) If Glass Co. uses the FIFO cost flow assumption, under a perpetual method, the cost of goods sold for March, is::
A) $400
B) $492
C) $520
D) $2,600
E) None of the above

47) If Glass Co. uses the LIFO cost flow assumption, under a perpetual method, the ending inventory value at March 31st is
A) $400
B) $492
C) $520
D) $2,600
E) None of the above

48) If Glass Co. uses the LIFO cost flow assumption, under a periodic method, the ending inventory value at March 31st is
A) $400
B) $492
C) $520
D) $2,600
E) None of the above

49) If Glass Co. uses the Weighted Average cost flow assumption, under a perpetual method, the ending inventory value at March 31st is
A) $400
B) $492
C) $520
D) $2,600
E) None of the above

50) If Glass Co. uses the Weighted Average cost flow assumption, under a periodic method, the ending inventory value at March 31st is
A) $400
B) $492
C) $520
D) $2,600
E) None of the above

End of exam

APPENDIX - PRESENT VALUE TABLES

Table A-1 Future Value Interest Factors for One Dollar Compounded at *k* Percent for *n* Periods: $FVIF_{k,n} = (1 + k)$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	20%	24%	25%	30%
1	1.0100	1.0200	1.0300	1.0400	1.0500	1.0600	1.0700	1.0800	1.0900	1.1000	1.1100	1.1200	1.1300	1.1400	1.1500	1.1600	1.2000	1.2400	1.2500	1.3000
2	1.0201	1.0404	1.0609	1.0816	1.1025	1.1236	1.1449	1.1664	1.1881	1.2100	1.2321	1.2544	1.2769	1.2996	1.3225	1.3456	1.4400	1.5376	1.5625	1.6900
3	1.0303	1.0612	1.0927	1.1249	1.1576	1.1910	1.2250	1.2597	1.2950	1.3310	1.3676	1.4049	1.4429	1.4815	1.5209	1.5609	1.7280	1.9066	1.9531	2.1970
4	1.0406	1.0824	1.1255	1.1699	1.2155	1.2625	1.3108	1.3605	1.4116	1.4641	1.5181	1.5735	1.6305	1.6890	1.7490	1.8106	2.0736	2.3642	2.4414	2.8561
5	1.0510	1.1041	1.1593	1.2167	1.2763	1.3382	1.4026	1.4693	1.5386	1.6105	1.6851	1.7623	1.8424	1.9254	2.0114	2.1003	2.4883	2.9316	3.0518	3.7129
6	1.0615	1.1262	1.1941	1.2653	1.3401	1.4185	1.5007	1.5869	1.6771	1.7716	1.8704	1.9738	2.0820	2.1950	2.3131	2.4364	2.9860	3.6352	3.8147	4.8268
7	1.0721	1.1487	1.2299	1.3159	1.4071	1.5036	1.6058	1.7138	1.8280	1.9487	2.0762	2.2107	2.3526	2.5023	2.6600	2.8262	3.5832	4.5077	4.7684	6.2749
8	1.0829	1.1717	1.2668	1.3686	1.4775	1.5938	1.7182	1.8509	1.9926	2.1436	2.3045	2.4760	2.6584	2.8526	3.0590	3.2784	4.2998	5.5895	5.9605	8.1573
9	1.0937	1.1951	1.3048	1.4233	1.5513	1.6895	1.8385	1.9990	2.1719	2.3579	2.5580	2.7731	3.0040	3.2519	3.5179	3.8030	5.1598	6.9310	7.4506	10.604
10	1.1046	1.2190	1.3439	1.4802	1.6289	1.7908	1.9672	2.1589	2.3674	2.5937	2.8394	3.1058	3.3946	3.7072	4.0456	4.4114	6.1917	8.5944	9.3132	13.786
11	1.1157	1.2434	1.3842	1.5395	1.7103	1.8983	2.1049	2.3316	2.5804	2.8531	3.1518	3.4785	3.8359	4.2262	4.6524	5.1173	7.4301	10.657	11.642	17.922
12	1.1268	1.2682	1.4258	1.6010	1.7959	2.0122	2.2522	2.5182	2.8127	3.1384	3.4985	3.8960	4.3345	4.8179	5.3503	5.9360	8.9161	13.215	14.552	23.298
13	1.1381	1.2936	1.4685	1.6651	1.8856	2.1329	2.4098	2.7196	3.0658	3.4523	3.8833	4.3635	4.8980	5.4924	6.1528	6.8858	10.699	16.386	18.190	30.288
14	1.1495	1.3195	1.5126	1.7317	1.9799	2.2609	2.5785	2.9372	3.3417	3.7975	4.3104	4.8871	5.5348	6.2613	7.0757	7.9875	12.839	20.319	22.737	39.374
15	1.1610	1.3459	1.5580	1.8009	2.0789	2.3966	2.7590	3.1722	3.6425	4.1772	4.7846	5.4736	6.2543	7.1379	8.1371	9.2655	15.407	25.196	28.422	51.186
16	1.1726	1.3728	1.6047	1.8730	2.1829	2.5404	2.9522	3.4259	3.9703	4.5950	5.3109	6.1304	7.0673	8.1372	9.3576	10.748	18.488	31.243	35.527	66.542
17	1.1843	1.4002	1.6528	1.9479	2.2920	2.6928	3.1588	3.7000	4.3276	5.0545	5.8951	6.8660	7.9861	9.2765	10.761	12.468	22.186	38.741	44.409	86.504
18	1.1961	1.4282	1.7024	2.0258	2.4066	2.8543	3.3799	3.9960	4.7171	5.5599	6.5436	7.6900	9.0243	10.575	12.375	14.463	26.623	48.039	55.511	112.455
19	1.2081	1.4568	1.7535	2.1068	2.5270	3.0256	3.6165	4.3157	5.1417	6.1159	7.2633	8.6128	10.197	12.056	14.232	16.777	31.948	59.568	69.389	146.192
20	1.2202	1.4859	1.8061	2.1911	2.6533	3.2071	3.8697	4.6610	5.6044	6.7275	8.0623	9.6463	11.523	13.743	16.367	19.461	38.338	73.864	86.736	190.050
21	1.2324	1.5157	1.8603	2.2788	2.7860	3.3996	4.1406	5.0338	6.1088	7.4002	8.9492	10.804	13.021	15.668	18.822	22.574	46.005	91.592	108.420	247.065
22	1.2447	1.5460	1.9161	2.3699	2.9253	3.6035	4.4304	5.4365	6.6586	8.1403	9.9336	12.100	14.714	17.861	21.645	26.186	55.206	113.574	135.525	321.184
23	1.2572	1.5769	1.9736	2.4647	3.0715	3.8197	4.7405	5.8715	7.2579	8.9543	11.026	13.552	16.627	20.362	24.891	30.376	66.247	140.831	169.407	417.539
24	1.2697	1.6084	2.0328	2.5633	3.2251	4.0489	5.0724	6.3412	7.9111	9.8497	12.239	15.179	18.788	23.212	28.625	35.236	79.497	174.631	211.758	542.801
25	1.2824	1.6406	2.0938	2.6658	3.3864	4.2919	5.4274	6.8485	8.6231	10.835	13.585	17.000	21.231	26.462	32.919	40.874	95.396	216.542	264.698	705.641
30	1.3478	1.8114	2.4273	3.2434	4.3219	5.7435	7.6123	10.063	13.268	17.449	22.892	29.960	39.116	50.950	66.212	85.850	237.376	634.820	807.794	*
35	1.4166	1.9999	2.8139	3.9461	5.5160	7.6861	10.677	14.785	20.414	28.102	38.575	52.800	72.069	98.100	133.176	180.314	590.668	*	*	*
36	1.4308	2.0399	2.8983	4.1039	5.7918	8.1473	11.424	15.968	22.251	30.913	42.818	59.136	81.437	111.834	153.152	209.164	708.802	*	*	*
40	1.4889	2.2080	3.2620	4.8010	7.0400	10.286	14.974	21.725	31.409	45.259	65.001	93.051	132.782	188.884	267.864	378.721	*	*	*	*
50	1.6446	2.6916	4.3839	7.1067	11.467	18.420	29.457	46.902	74.358	117.391	184.565	289.002	450.736	700.233	*	*	*	*	*	*

Table A-2 Future Value Interest Factors for a One-Dollar Annuity Compounded at *k* Percent for *n* Periods: $FVIFA_{k,n} = [(1 + k) - 1] / k$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	20%	24%	25%	30%
1	1.0000	1.0200	1.0300	1.0400	1.0500	1.0600	1.0700	1.0800	1.0900	1.1000	1.1100	1.1200	1.1300	1.1400	1.1500	1.1600	1.2000	1.2400	1.2500	1.3000
2	2.0100	2.0200	2.0300	2.0400	2.0500	2.0600	2.0700	2.0800	2.0900	2.1000	2.1100	2.1200	2.1300	2.1400	2.1500	2.1600	2.2000	2.2400	2.2500	2.3000
3	3.0301	3.0604	3.0909	3.1216	3.1525	3.1836	3.2149	3.2464	3.2781	3.3100	3.3421	3.3744	3.4069	3.4396	3.4725	3.5056	3.6400	3.7776	3.8125	3.9900
4	4.0604	4.1216	4.1836	4.2465	4.3101	4.3746	4.4399	4.5061	4.5731	4.6410	4.7097	4.7793	4.8498	4.9211	4.9934	5.0665	5.3680	5.6842	5.7656	6.1870
5	5.1010	5.2040	5.3091	5.4163	5.5256	5.6371	5.7507	5.8666	5.9847	6.1051	6.2278	6.3528	6.4803	6.6101	6.7424	6.8771	7.4416	8.0484	8.2070	9.0431
6	6.1520	6.3081	6.4684	6.6330	6.8019	6.9753	7.1533	7.3359	7.5233	7.7156	7.9129	8.1152	8.3227	8.5355	8.7537	8.9775	9.9299	10.980	11.259	12.756
7	7.2135	7.4343	7.6625	7.8983	8.1420	8.3938	8.6540	8.9228	9.2004	9.4872	9.7833	10.089	10.405	10.730	11.067	11.414	12.916	14.615	15.073	17.583
8	8.2857	8.5830	8.8923	9.2142	9.5491	9.8975	10.260	10.637	11.028	11.436	11.859	12.300	12.757	13.233	13.727	14.240	16.499	19.123	19.842	23.858
9	9.3685	9.7546	10.159	10.583	11.027	11.491	11.978	12.488	13.021	13.579	14.164	14.776	15.416	16.085	16.786	17.519	20.799	24.712	25.802	32.015
10	10.462	10.950	11.464	12.006	12.578	13.181	13.816	14.487	15.193	15.937	16.722	17.549	18.420	19.337	20.304	21.321	25.959	31.643	33.253	42.619
11	11.567	12.169	12.808	13.486	14.207	14.972	15.784	16.645	17.560	18.531	19.561	20.655	21.814	23.045	24.349	25.733	32.150	40.238	42.566	56.405
12	12.683	13.412	14.192	15.026	15.917	16.870	17.888	18.977	20.141	21.384	22.713	24.133	25.650	27.271	29.002	30.850	39.581	50.895	54.208	74.327
13	13.809	14.680	15.618	16.627	17.713	18.882	20.141	21.495	22.953	24.523	26.212	28.029	29.985	32.089	34.352	36.786	48.497	64.110	68.760	97.625
14	14.947	15.974	17.086	18.292	19.599	21.015	22.550	24.215	26.019	27.975	30.095	32.393	34.883	37.581	40.505	43.672	59.196	80.496	86.949	127.913
15	16.097	17.293	18.599	20.024	21.579	23.276	25.129	27.152	29.361	31.772	34.405	37.280	40.417	43.842	47.580	51.660	72.035	100.815	109.687	167.286
16	17.258	18.639	20.157	21.825	23.657	25.673	27.888	30.324	33.003	35.950	39.190	42.753	46.672	50.980	55.717	60.925	87.442	126.011	138.109	218.472
17	18.430	20.012	21.762	23.698	25.840	28.213	30.840	33.750	36.974	40.545	44.501	48.884	53.739	59.118	65.075	71.673	105.931	157.253	173.636	285.014
18	19.615	21.412	23.414	25.645	28.132	30.906	33.999	37.450	41.301	45.599	50.396	55.750	61.725	68.394	75.836	84.141	128.117	195.994	218.045	371.518
19	20.811	22.841	25.117	27.671	30.539	33.760	37.379	41.446	46.018	51.159	56.939	63.440	70.749	78.969	88.212	98.603	154.740	244.033	273.556	483.973
20	22.019	24.297	26.870	29.778	33.066	36.786	40.995	45.762	51.160	57.275	64.203	72.052	80.947	91.025	102.444	115.380	186.688	303.601	342.945	630.165
21	23.239	25.783	28.676	31.969	35.719	39.993	44.865	50.423	56.765	64.002	72.265	81.699	92.470	104.768	118.810	134.841	225.026	377.465	429.681	820.215
22	24.472	27.299	30.537	34.248	38.505	43.392	49.006	55.457	62.873	71.403	81.214	92.503	105.491	120.436	137.632	157.415	271.031	469.056	538.101	*
23	25.716	28.845	32.453	36.618	41.430	46.996	53.436	60.893	69.532	79.543	91.148	104.603	120.205	138.297	159.276	183.601	326.237	582.630	673.626	*
24	26.973	30.422	34.426	39.083	44.502	50.816	58.177	66.765	76.790	88.497	102.174	118.155	136.831	158.659	184.168	213.978	392.484	723.461	843.033	*
25	28.243	32.030	36.459	41.646	47.727	54.865	63.249	73.106	84.701	98.347	114.413	133.334	155.620	181.871	212.793	249.214	471.981	898.092	*	*
30	34.785	40.568	47.575	56.085	66.439	79.058	94.461	113.283	136.308	164.494	199.021	241.333	293.199	356.787	434.745	530.312	*	*	*	*
35	41.660	49.994	60.462	73.652	90.320	111.435	138.237	172.317	215.711	271.024	341.590	431.663	546.681	693.573	881.170	*	*	*	*	*
36	43.077	51.994	63.276	77.598	95.836	119.121	148.913	187.102	236.125	299.127	380.164	484.463	618.749	791.673	*	*	*	*	*	*
40	48.886	60.402	75.401	95.026	120.800	154.762	199.635	259.057	337.882	442.593	581.826	767.091	*	*	*	*	*	*	*	*
50	64.463	84.579	112.797	152.667	209.348	290.336	406.529	573.770	815.084	*	*	*	*	*	*	*	*	*	*	*

Table A-3 Present Value Interest Factors for One Dollar Discounted at *k* Percent for *n* Periods: $PVIF_{k,n} = 1 / (1 + k)$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	20%	24%	25%	30%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696	0.8621	0.8333	0.8065	0.8000	0.7692
2	0.9803	0.9612	0.9426	0.9246	0.9070	0.8900	0.8734	0.8573	0.8417	0.8264	0.8116	0.7972	0.7831	0.7695	0.7561	0.7432	0.6944	0.6504	0.6400	0.5917
3	0.9706	0.9423	0.9151	0.8890	0.8638	0.8396	0.8163	0.7938	0.7722	0.7513	0.7312	0.7118	0.6931	0.6750	0.6575	0.6407	0.5787	0.5245	0.5120	0.4552
4	0.9610	0.9238	0.8885	0.8548	0.8227	0.7921	0.7629	0.7350	0.7084	0.6830	0.6587	0.6355	0.6133	0.5921	0.5718	0.5523	0.4823	0.4230	0.4096	0.3501
5	0.9515	0.9057	0.8626	0.8219	0.7835	0.7473	0.7130	0.6806	0.6499	0.6209	0.5935	0.5674	0.5428	0.5194	0.4972	0.4761	0.4019	0.3411	0.3277	0.2693
6	0.9420	0.8880	0.8375	0.7903	0.7462	0.7050	0.6663	0.6302	0.5963	0.5645	0.5346	0.5066	0.4803	0.4556	0.4323	0.4104	0.3349	0.2751	0.2621	0.2072
7	0.9327	0.8706	0.8131	0.7599	0.7107	0.6651	0.6227	0.5835	0.5470	0.5132	0.4817	0.4523	0.4251	0.3996	0.3759	0.3538	0.2791	0.2218	0.2097	0.1594
8	0.9235	0.8535	0.7894	0.7307	0.6768	0.6274	0.5820	0.5403	0.5019	0.4665	0.4339	0.4039	0.3762	0.3506	0.3269	0.3050	0.2326	0.1789	0.1678	0.1226
9	0.9143	0.8368	0.7664	0.7026	0.6446	0.5919	0.5439	0.5002	0.4604	0.4241	0.3909	0.3606	0.3329	0.3075	0.2843	0.2630	0.1938	0.1443	0.1342	0.0943
10	0.9053	0.8203	0.7441	0.6756	0.6139	0.5584	0.5083	0.4632	0.4224	0.3855	0.3522	0.3220	0.2946	0.2697	0.2472	0.2267	0.1615	0.1164	0.1074	0.0725
11	0.8963	0.8043	0.7224	0.6496	0.5847	0.5268	0.4751	0.4289	0.3875	0.3505	0.3173	0.2875	0.2607	0.2366	0.2149	0.1954	0.1346	0.0938	0.0859	0.0558
12	0.8874	0.7885	0.7014	0.6246	0.5568	0.4970	0.4440	0.3971	0.3555	0.3186	0.2858	0.2567	0.2307	0.2076	0.1869	0.1685	0.1122	0.0757	0.0687	0.0429
13	0.8787	0.7730	0.6810	0.6006	0.5303	0.4688	0.4150	0.3677	0.3262	0.2897	0.2575	0.2292	0.2042	0.1821	0.1625	0.1452	0.0935	0.0610	0.0550	0.0330
14	0.8700	0.7579	0.6611	0.5775	0.5051	0.4423	0.3878	0.3405	0.2992	0.2633	0.2320	0.2046	0.1807	0.1597	0.1413	0.1252	0.0779	0.0492	0.0440	0.0254
15	0.8613	0.7430	0.6419	0.5553	0.4810	0.4173	0.3624	0.3152	0.2745	0.2394	0.2090	0.1827	0.1599	0.1401	0.1229	0.1079	0.0649	0.0397	0.0352	0.0195
16	0.8528	0.7284	0.6232	0.5339	0.4581	0.3936	0.3387	0.2919	0.2519	0.2176	0.1883	0.1631	0.1415	0.1229	0.1069	0.0930	0.0541	0.0320	0.0281	0.0150
17	0.8444	0.7142	0.6050	0.5134	0.4363	0.3714	0.3166	0.2703	0.2311	0.1978	0.1696	0.1456	0.1252	0.1078	0.0929	0.0802	0.0451	0.0258	0.0225	0.0116
18	0.8360	0.7002	0.5874	0.4936	0.4155	0.3503	0.2959	0.2502	0.2120	0.1799	0.1528	0.1300	0.1108	0.0946	0.0808	0.0691	0.0376	0.0208	0.0180	0.0089
19	0.8277	0.6864	0.5703	0.4746	0.3957	0.3305	0.2765	0.2317	0.1945	0.1635	0.1377	0.1161	0.0981	0.0829	0.0703	0.0596	0.0313	0.0168	0.0144	0.0068
20	0.8195	0.6730	0.5537	0.4564	0.3769	0.3118	0.2584	0.2145	0.1784	0.1486	0.1240	0.1037	0.0868	0.0728	0.0611	0.0514	0.0261	0.0135	0.0115	0.0053
21	0.8114	0.6598	0.5375	0.4388	0.3589	0.2942	0.2415	0.1987	0.1637	0.1351	0.1117	0.0926	0.0768	0.0638	0.0531	0.0443	0.0217	0.0109	0.0092	0.0040
22	0.8034	0.6468	0.5219	0.4220	0.3418	0.2775	0.2257	0.1839	0.1502	0.1228	0.1007	0.0826	0.0680	0.0560	0.0462	0.0382	0.0181	0.0088	0.0074	0.0031
23	0.7954	0.6342	0.5067	0.4057	0.3256	0.2618	0.2109	0.1703	0.1378	0.1117	0.0907	0.0738	0.0601	0.0491	0.0402	0.0329	0.0151	0.0071	0.0059	0.0024
24	0.7876	0.6217	0.4919	0.3901	0.3101	0.2470	0.1971	0.1577	0.1264	0.1015	0.0817	0.0659	0.0532	0.0431	0.0349	0.0284	0.0126	0.0057	0.0047	0.0018
25	0.7798	0.6095	0.4776	0.3751	0.2953	0.2330	0.1842	0.1460	0.1160	0.0923	0.0736	0.0588	0.0471	0.0378	0.0304	0.0245	0.0105	0.0046	0.0038	0.0014
30	0.7419	0.5521	0.4120	0.3083	0.2314	0.1741	0.1314	0.0994	0.0754	0.0573	0.0437	0.0334	0.0256	0.0196	0.0151	0.0116	0.0042	0.0016	0.0012	*
35	0.7059	0.5000	0.3554	0.2534	0.1813	0.1301	0.0937	0.0676	0.0490	0.0356	0.0259	0.0189	0.0139	0.0102	0.0075	0.0055	0.0017	0.0005	*	*
36	0.6989	0.4902	0.3450	0.2437	0.1727	0.1227	0.0875	0.0626	0.0449	0.0323	0.0234	0.0169	0.0123	0.0089	0.0065	0.0048	0.0014	*	*	*
40	0.6717	0.4529	0.3066	0.2083	0.1420	0.0972	0.0668	0.0460	0.0318	0.0221	0.0154	0.0107	0.0075	0.0053	0.0037	0.0026	0.0007	*	*	*
50	0.6080	0.3715	0.2281	0.1407	0.0872	0.0543	0.0339	0.0213	0.0134	0.0085	0.0054	0.0035	0.0022	0.0014	0.0009	0.0006	*	*	*	*

Table A-4 Present Value Interest Factors for a One-Dollar Annuity Discounted at *k* Percent for *n* Periods: $PVIFA = [1 - 1/(1 + k)^n] / k$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	20%	24%	25%	30%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696	0.8621	0.8333	0.8065	0.8000	0.7692
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.7125	1.6901	1.6681	1.6467	1.6257	1.6052	1.5278	1.4568	1.4400	1.3609
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4437	2.4018	2.3612	2.3216	2.2832	2.2459	2.1065	1.9813	1.9520	1.8161
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.1024	3.0373	2.9745	2.9137	2.8550	2.7982	2.5887	2.4043	2.3616	2.1662
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6959	3.6048	3.5172	3.4331	3.3522	3.2743	2.9906	2.7454	2.6893	2.4356
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.2305	4.1114	3.9975	3.8887	3.7845	3.6847	3.3255	3.0205	2.9514	2.6427
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.7122	4.5638	4.4226	4.2883	4.1604	4.0386	3.6046	3.2423	3.1611	2.8021
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	5.1461	4.9676	4.7988	4.6389	4.4873	4.3436	3.8372	3.4212	3.3289	2.9247
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.5370	5.3282	5.1317	4.9464	4.7716	4.6065	4.0310	3.5655	3.4631	3.0190
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.8892	5.6502	5.4262	5.2161	5.0188	4.8332	4.1925	3.6819	3.5705	3.0915
11	10.368	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	6.2065	5.9377	5.6869	5.4527	5.2337	5.0286	4.3271	3.7757	3.6564	3.1473
12	11.255	10.575	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.4924	6.1944	5.9176	5.6603	5.4206	5.1971	4.4392	3.8514	3.7251	3.1903
13	12.134	11.348	10.635	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.7499	6.4235	6.1218	5.8424	5.5831	5.3423	4.5327	3.9124	3.7801	3.2233
14	13.004	12.106	11.296	10.563	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.9819	6.6282	6.3025	6.0021	5.7245	5.4675	4.6106	3.9616	3.8241	3.2487
15	13.865	12.849	11.938	11.118	10.380	9.7122	9.1079	8.5595	8.0607	7.6061	7.1909	6.8109	6.4624	6.1422	5.8474	5.5755	4.6755	4.0013	3.8593	3.2682
16	14.718	13.578	12.561	11.652	10.838	10.106	9.4466	8.8514	8.3126	7.8237	7.3792	6.9740	6.6039	6.2651	5.9542	5.6685	4.7296	4.0333	3.8874	3.2832
17	15.562	14.292	13.166	12.166	11.274	10.477	9.7632	9.1216	8.5436	8.0216	7.5488	7.1196	6.7291	6.3729	6.0472	5.7487	4.7746	4.0591	3.9099	3.2948
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.3719	8.7556	8.2014	7.7016	7.2497	6.8399	6.4674	6.1280	5.8178	4.8122	4.0799	3.9279	3.3037
19	17.226	15.678	14.324	13.134	12.085	11.158	10.336	9.6036	8.9501	8.3649	7.8393	7.3658	6.9380	6.5504	6.1982	5.8775	4.8435	4.0967	3.9424	3.3105
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.8181	9.1285	8.5136	7.9633	7.4694	7.0248	6.6231	6.2593	5.9288	4.8696	4.1103	3.9539	3.3158
21	18.857	17.011	15.415	14.029	12.821	11.764	10.836	10.017	9.2922	8.6487	8.0751	7.5620	7.1016	6.6870	6.3125	5.9731	4.8913	4.1212	3.9631	3.3198
22	19.660	17.658	15.937	14.451	13.163	12.042	11.061	10.201	9.4424	8.7715	8.1757	7.6446	7.1695	6.7429	6.3587	6.0113	4.9094	4.1300	3.9705	3.3230
23	20.456	18.292	16.444	14.857	13.489	12.303	11.272	10.371	9.5802	8.8832	8.2664	7.7184	7.2297	6.7921	6.3988	6.0442	4.9245	4.1371	3.9764	3.3254
24	21.243	18.914	16.936	15.247	13.799	12.550	11.469	10.529	9.7066	8.9847	8.3481	7.7843	7.2829	6.8351	6.4338	6.0726	4.9371	4.1428	3.9811	3.3272
25	22.023	19.523	17.413	15.622	14.094	12.783	11.654	10.675	9.8226	9.0770	8.4217	7.8431	7.3300	6.8729	6.4641	6.0971	4.9476	4.1474	3.9849	3.3286
30	25.808	22.396	19.600	17.292	15.372	13.765	12.409	11.258	10.274	9.4269	8.6938	8.0552	7.4957	7.0027	6.5660	6.1772	4.9789	4.1601	3.9950	3.3321
35	29.409	24.999	21.487	18.665	16.374	14.498	12.948	11.655	10.567	9.6442	8.8552	8.1755	7.5856	7.0700	6.6166	6.2153	4.9915	4.1644	3.9984	3.3330
36	30.108	25.489	21.832	18.908	16.547	14.621	13.035	11.717	10.612	9.6765	8.8786	8.1924	7.5979	7.0790	6.6231	6.2201	4.9929	4.1649	3.9987	3.3331
40	32.835	27.355	23.115	19.793	17.159	15.046	13.332	11.925	10.757	9.7791	8.9511	8.2438	7.6344	7.1050	6.6418	6.2335	4.9966	4.1659	3.9995	3.3332
50	39.196	31.424	25.730	21.482	18.256	15.762	13.801	12.233	10.962	9.9148	9.0417	8.3045	7.6752	7.1327	6.6605	6.2463	4.9995	4.1666	3.9999	3.3333

SOLUTIONS

Q	Answer	Q	Answer
1	**C**	26	**C**
2	**B**	27	**C**
3	**D**	28	**A**
4	**A**	29	**A** a) No; executory promises not recorded. b) Yes. In spite of the indefiniteness of the time of delivery of the goods or services and the amount, the source of the funds must be shown as a liability in the amount of the cash received. c) Yes; amount of accrued interest payable. d) Yes; valued at the present value of future payments.
5	**D**	30	**C** Beginning Inventory 8,000 Produced 14,000 Available 22,000 Sold 17,000 Ending inventory 5,000
6	**D**	31	**E** Beginning Inventory 13,000 Produced 26,000 Available 39,000 Sold 27,000 Ending inventory 12,000
7	**E**	32	**B** a) No; viewed as executory. b) Yes, assuming the restoration is either statutorily or contractually required. If the expenditure is incurred to provide a future benefit, as such it is an asset and the asset is not recognized until the expenditure is made. The present value of an estimate of the costs is the theoretically correct answer, but many accountants would use the full amount undiscounted. c) No. If we expected to lose a reasonably estimable amount in the suit, then we would show an estimated liability. d) No; executory contract… it is cancellable
8	**E**		
9	**E** The coupon rate and par value of the bonds, the market rate of interest, and the market's opinion of the firm as a borrower. If the coupon rate is 8 percent, the market rate is 12 percent, and the market views the firm as a relatively poor credit risk, the bonds will sell at price to yield say, 15 percent. This means that the firm will receive less than the par value of the bonds it issues. We are told that when bonds are brought to the market, the investment banker attempts to set the coupon rate so the bonds will sell close to par.6.	33	**E**
		34	**A** Estimates of future events are made. The cost to the firm is charged to income in the period of sale, not in the later period when specific items become uncollectible or breakdown. The charge against income is reported as expense in both cases. The accounting treatment differs in that the balance sheet account showing the expected costs of future uncollectibles is subtracted from an asset account, while that for estimated warranties appears as a liability.
10	**B** Accounts Receivable at the End of Year 3 = $1,720,000 Sales - $1,674,000 collections - $7,400 Write-offs = $38,600		
		35	**D** It is cheaper (and, therefore, more profitable) to repair a few sets than to have such stringent quality control that zero defectives are produced. An allowance is justified when firms expect to have warranty costs. Probably, manufacturers of TV sets for space travel or heart pacemakers should strive for zero defects.
11	**B** Allowance for uncollectible accounts at the End of Year 3 = $17,200 Provisions for the Uncollectible accounts - $7,400 Write-offs = $9,800		
12	**D** Uncollectible Accounts Expense = 1%*$1,720,000=$17,200 for the three-year period.	36	**C**

Q	Answer	Q	Answer
13	**C** With bond financing, the entire principal, $1 million, is borrowed for the entire term of the loan. With lease or mortgage financing, part of the principal is repaid with each payment. Thus, the effective amount borrowed decreases over time and the interest expenses should be less even though the same rate is used.	37	**E**
		38	**B**
14	**B** 1,000,000 x 1% + 500,000 x 5% + 100,000 x 50% = 85,000 Desired balance 85,000 – current balance 50,000 = increase uncollectible account expense by 35,000 plus the 35,000 written off in the period; total 70,000	39	**E**
15	**D** 400,000 x 65%: CGS = 260,000 Purchases $260,000 Beginning inventory $40,000 Ending inventory: 260,000 + 40,000 – 260,000 = $40,000	40	**B**
16	**A**	41	**A**
17	**D**	42	**C**
18	C	43	**A**
19	**D**	44	**A**
20	**E**	45	**D** 50 x 10 + 150 x 12 + 20 x 15
21	**A**	46	**D** 50 x 10 + 150 x 12 + 20 x 15
22	**A** The school should accrue the salary in ten monthly installments of $36,000 each at the end of each month, September through June. It will have paid $30,000 at the end of each of these months, so that by the end of the reporting year a current liability of $60,000 = [$360,000 – (10 x $30,000)] will be reported.	47	**A** 40 x 10
23	**B**	48	**A** 40 x 10
24	**B**	49	**C**
25	**E**	50	**B** (500 + 1,800 + 900) / 260 x 40

Solution to Questions 1 to 3:

Expenditures and Receipts	Land	Building	Land Improvements
Land: Cost of Land Site	$170,000		
Legal Fees	$2,100		
Mortgage and Interest Assumed and Paid	$7,500		
Delinquent Property Taxes Assumed and Paid	$2,800		
Cost of Razing Old Building	$14,000		
Proceeds from Sale of Salvaged Materials	($3,200)		
Special Assessment for Paving of Sidewalks[1]	$12,000		
Total land	$205,200		
Building: Grading and Drainage on Land Site to construct the building basement		$ 6,000	
Architect's Fees on New Building		$ 100,000	
Proceeds from Sale of Excess Dirt		($ 800)	
Payment to Building Contractor		$2,500,000	
Interest Cost Incurred during Construction		$ 200,000	
Premium for Building Insurance during Construction		$ 5,000	
Total building		$2,810,200	
Land Improvements: Cost of Paving Driveway and Parking Lot			$16,000
Cost of Installing Parking Lot Lights			$7,300
Total land improvements			$23,300

[1] The special assessment for the paving of sidewalks is usually added to the Land Account because of the relatively permanent nature of the sidewalks (maintenance or replacement, if any, is handled by the municipality). The payment of the employee's medical bills would not be capitalized, because this payment was not a reasonable and necessary cost of the land, the building, or the land improvements. The cost of the open house party also would not be capitalized, because it was not a necessary cost of acquiring the land, constructing the building, or the land improvements.

Question 4:

Deferred Charge - Discount on Bonds Payable arises because the bond coupon rate is less than the market yield rate at the date of issue. Hence, the discount can be considered an advance payment of the interest differential deducted from the par value received from the purchaser. The par value represents the maturity value of the bond, or the amount to be repaid if the company defaults on the bonds prior to maturity by failing to pay interest or comply with other conditions of the bond indenture. Therefore, the liability should be reported at the par value.

Liability Contra - When a company issues a bond, it undertakes to pay the bondholder at periodic intervals (quarterly, half-yearly, or annually), and a large amount at maturity date. The periodic payments are customarily determined by multiplying the coupon rate by the parvalue; the final payment is the par value. The amount of the liability should be determined by discounting the two forms of payments to the balance sheet date by using the market interest rate at the date of issue. At the date of issue, the amount calculated equals the proceeds received by the issuer and, at redemption date, equals the redemption value.

Questions 16 to 20

Date	Straight line Calculation	
2000	Depreciation = ($20,000 - $2,000) / 8 years x 6/12(half year) $1,125	$ 1,125.00
2001	Depreciation = ($20,000 - $2,000) / 8 years $2,250	$ 2,250.00
2002	Original Cost $20,000	$ 20,000.00
	Less: Depreciation in 2000 and 2001 ($1,125)	$ 3,375.00
	Plus: Improvement $ 2,500	$ 2,500.00
	Book Value before 2002 Depreciation $21,375	$ 19,125.00
	Less: Disposal Value ($ 2,000)	$ 2,000.00
	Depreciable Base $19,375	$ 17,125.00
	Remaining Life ÷ 6.5	$ 6.50
	Depreciation, 2002 $ 2,583	$ 2,634.62
2003	Book Value December 31, 2002 $21,375	$ 19,125.00
	Less: Depreciation in 2002 ($2,583)	$ 2,634.62
	Book Value before 2003 Depreciation $18,792	$ 16,490.38
	Less: Revised Disposal Value ($1,000)	$ 1,000.00
	Depreciable Base $17,792	$ 15,490.38
	Revised Remaining Life ÷ 3	$ 3.00
	Depreciation, 2003, 2004, 2005 $5,931	$ 5,163.46

Acq cost 2000	20000
Res value 2000	2000
Est useful life 2000	8
Improvement 2002	2500
Est res value 2003	1000
Est useful life 2003	3

Date	Declining balance Calculation	
2000	Depreciation = $20,000 x 20% x 6/12(half year)	$ 2,000.00
2001	Depreciation = ($20,000 - $1,800) / 8 years	$ 3,600.00
2002	Original Cost $20,000	$ 20,000.00
	Less: Depreciation in 2000 and 2001 ($1,125)	$ 5,600.00
	Plus: Improvement $ 2,500	$ 2,500.00
	Book Value before 2002 Depreciation $21,375	$ 16,900.00
	Depreciation, 2002 $ 2,583	$ 3,380.00
2003	Book Value December 31, 2002 $21,375	$ 16,900.00
	Less: Depreciation in 2002 ($2,583)	$ 3,380.00
	Depreciable Base $17,792	$ 13,520.00
	Revised rate 33%	$ 0.33
	Depreciation, 2003,	$ 4,461.60

Acq cost 2000	20000
Res value 2000	2000
Est useful life 2000	0.2
Improvement 2002	2500
Est res value 2003	1000
Est useful life 2003	0.33

Question 23

The fair value of the assets is $16,000 + $1,000 = $17,000. The fair value of the new asset is not evident (list prices are seldom the final negotiated fair value). This is a non-monetary exchange where the economic situation has not changed: there is little monetary consideration involved in this exchange and there is no reason to expect the risks, timing or amounts of future cash flows of the business would be altered by this exchange. Losses, but not gains should be recognized in a non-monetary exchange such as this one.

Debit Car New ……$17,000
Debit Accumulated Depreciation……$5,000
Credit Gain on Disposition……$1,000
Credit Car Old……$20,000
Credit Cash ……$ 1,000

Questions 25 to 28

From Class Solution:

Process to adjust the Cash book balance:

Balance per Book	$ 9,100
Plus: interest	$ 50
notes collected	$ 900
Less: NSF cheques	$ (235)
autowithdrawals	$ (350)
service charges	$ (15)
Plus/minus errors	
Adjusted Book balance	$ 9,450

Process to explain the differences between the books and the Bank statement:

Balance per bank		$ 8,250
Outstanding cheques		$ 1,100
Issued by March 31st	$ 4,100	
Less those from February	$ (2,000)	
Writen and paid in March	$ 2,100	
Cheques written in March	$ 3,200	
Plus deposit & transit		$ 2,300
Deposited by March 31st	$ 5,000	
Less those from February	$ (1,800)	
Deposited and cashed in March	$ 3,200	
Deposits done in March	$ 5,500	
Plus/minus errors		$ -
Adjusted bank records		$ 9,450

Question 33

The fair value of the assets is $15,000 + $2,000 = $17,000. The fair value of the new asset is not evident (list prices are seldom the final negotiated fair value). This is a non-monetary exchange where the economic situation has not changed: there is little monetary consideration involved in this exchange and there is no reason to expect the risks, timing or amounts of future cash flows of the business would be altered by this exchange. Losses, but not gains should be recognized in a non-monetary exchange such as this one.

Debit Car New ……$17,000
Debit Accumulated Depreciation……$4,000
Debit Loss on Disposition……$1,000
Credit Car Old……$20,000
Credit Cash ……$ 2,000

Questions 38 to 41

38) We want to know how much the equipment is worth today, thus this implies a Present Value (PV) calculation. Also, note that there are no series of cash flows/payments, this means a single sum problem. The equation for the Present Value (PV) of a Single Sum:
PV of a Single Sum = Future Value (FV) of a Single Sum x (PV Factor of a Single Sum)
PV = $? ; FV = $7,935
n = 3 {3 (number of years) x 1 (number of times compounded) = 3 (number of periods)}
r = 8% {8% (interest rate) ÷ 1 (number of times compounded) = 8% (rate of interest for a single period)}
So, continuing with the above formula:
PV of a Single Sum = Future Value (FV) of a Single Sum x (PV Factor of a Single Sum)
PV of a Single Sum = $7,935 x (PV Factor of a Single Sum3, 8%)
PV of a Single Sum = $7,935 x (0.79383)
PV of a Single Sum = $6,299.04 ≈ $6,299
Note: solving the equation PV of a Single Sum = Future Value (FV) of a Single Sum / (FV Factor of a Single Sum) would also compute the correct answer since factors for the present and future values of a single sum are reciprocals of each other.

39) The present value of the note at the date the equipment is acquired is $6,299 (the present value of $7,935 at 8% for 3 years). The difference between the face value of the note payable – the amount which will be paid at maturity ($7,935) - and its present value ($6,299), is known as the discount. The discount at the date of acquisition of the equipment is the amount of interest expense we will incur over the next three years, which is $1,636 ($7,935 - $6,299). The journal entry to record the acquisition of the equipment is:
Dr Equipment $6,299
Dr Discount on Note Payable $1,636
Cr Note Payable $7,935
The account Discount on Note Payable is a contra account. Notes Payable on the balance sheet are reported at their Present Value (Note Payable – Discount).

41) Each year the interest expense on the note is recorded as a reduction of the Discount on the note:

Face Value of Note	Unamortized Discount	Present Value	Interest Expense
$7,935	$1,636	$6,299	$504
$7,935	$1,132	$6,803	$544
$7,935	$ 588	$7,347	$588
			$1,636

The journal entry to record the interest expense for year one would be:
Dr Interest Expense $504
Cr Discount on Note Payable $504

Questions 45 to 50 49) WA table

Units	Price	Total	WA cost	CGS	Units	EI
50	10	500	10		50	500
150	12	1800	11.5		200	1800
120	20	2400		1380	80	920
60	15	900	13		140	1820
100	22	2200		1300	40	520
				2680		