

**Part I: Multiple Choice. Circle the best answer (3.5 points each).**

1. If the rate of return on assets is less than the interest rate, the rate of return on equity is:
  - a. greater than the rate of return on assets
  - b. less than the rate of return on assets
  - c. negative
  - d. equal to rate of return on assets
  - e. none of the above
  
2. The following can be methods of gaining control of capital:
  - a. debt (or borrowed) capital
  - b. lease the asset
  - c. outside equity
  - d. your net worth
  - e. all of the above
  
3. According to the 'Sources for Agricultural Credit' information, commercial banks provide the following types of credit to agriculture:
  - a. long-term such as for real estate
  - b. intermediate-term such as for livestock and machinery
  - c. short-term such as for a feeder cattle purchase, fertilizer, etc.
  - d. all the above types of credit are types of credit you can get from in commercial banks
  
4. Which of the following best describes a "particular" income statement (profit and loss statement)?
  - a. it shows changes in assets used in the business
  - b. it shows the assets and liabilities over the last accounting period
  - c. it shows assets and liabilities at a point in time
  - d. it shows business profit or loss for the last accounting period
  - e. it shows changes in liability level for the last accounting period
  
5. There are various sources of credit for agricultural purposes in Iowa. In December 2003 the agency which extended the greatest amount of credit in agriculture was:
  - a. the Farm Service Agency
  - b. Commercial Banks
  - c. the Farm Credit System
  - d. individuals and others
  - e. none of the above

6. From 1999 through 2003 life insurance companies:
- did not change its relative share of agricultural credit while agencies such as the Farm Service Agency increased its relative share
  - reduced its relative share of agricultural credit while other sources such as individuals and others increased their relative share
  - reduced its relative share of agricultural credit while agencies such as the Farm Credit system increased its share
  - increased its relative share of agricultural credit while agencies such as the Farm Credit System reduced its relative share
7. Location of production of products such as corn, cattle or any product can be impacted by:
- climate
  - social and population
  - distance to markets
  - comparative advantage
  - all of the above are factors which impact where products are produced

Now you are a veteran at Econo 330 One Stop Bank and doing your own loan analysis. Christy Cyclone comes to you for a loan and provides the following information from her farm financial records:

Rate of return on equity	=	5%
Rate of return on assets	=	6%
Total debt	=	\$200,000
Interest paid on debt	=	\$20,000

8. Given this, what is the maximum debt-to-asset ratio that Christy can go to? 100%
- 33.3 percent
  - 120 percent
  - 60 percent
  - 40 percent
  - 50 percent
9. According to the presentation by Dr. Mike Duffy there are three types of government payments made to crop producers. These include:
- continuous counter production payments (CCP); direct deposit payments (DP); and land direct payments (LDP).
  - advance payments (AP); direct payments (DP); and land direct payments (LDP).
  - continuous payments (CP); direct deposit payments (DP); and loan deficiency payments (LDP).
  - counter cyclical payments (CCP); direct payments (DP); and loan deficiency payments (LDP).
  - none of the above

10. According to Dr. Mike Duffy government payments as a percent of net farm income:
- a. have decreased rapidly during the 1990s and 2000s compared to the early 1980s and before
  - b. have increased substantially during the 1990s and 2000s compared to the early 1980s and before
  - c. have been gradually reduced to where the payments are very low today or in 2005-2006
  - d. have increased to the level where they now represent 100 percent or more of net farm income every year.
11. According to Dr. Mike Duffy the following will be issues in determining the 2007 Farm Bill:
- a. the budget will be a key factor driving the debate
  - b. WTO (World Trade Organization) consideration will be a larger factor in the final outcome
  - c. CRP (conservation reserve program) will look much different
  - d. CSP (conservation security program) will be an issue
  - e. all the above will be issues

**The next five questions (12-16) are based on the following information.** You have bought the neighboring 40 acres. The purchase price is \$120,000. You will borrow \$100,000 and use \$20,000 from the sale of soybeans to pay for the land. The \$100,000 loan will be paid off over 20 years with an interest rate of 7 percent. The loan will be paid annually. (An attached table may help with some of these questions.)

12. If you have an equal total payment plan, what is the level of payment (principal and interest) you will make in year 3?
- a. \$10,041.00
  - b. \$9,675.00
  - c. \$9,439.00
  - d. \$9,809
  - e. none of the above
13. If you have an equal principal payment plan, how much interest do you pay with your eleventh annual payment?
- a. \$7,000
  - b. \$3,500
  - c. \$3,150
  - d. \$4,500
  - e. none of the above
14. For the equal total payment plan, how much interest do you pay in total for the 20 loan payments?
- a. \$88,780
  - b. \$188,780
  - c. \$98,219
  - d. Can't determine with the information provided.
  - e. none of the above
15. For the equal total payment plan how much principal do you pay in the first year?
- a. \$9,439
  - b. \$1,439
  - c. \$2,439
  - d. Can't determine with the information provided.
  - e. none of the above

16. For the equal total payment plan how much interest do you pay in the second year?

- a. \$7,000
- b. \$5,426.97
- c. \$6,650.00
- d. \$6,829.27
- e. none of the above

17. With a loan payment plan that is an equal total payment plan the:

- a. amount of principal paid for each successive payment increases
- b. amount of principal paid for each successive payment decreases
- c. amount of interest paid for each successive payment increases
- d. the amount of principal paid for each successive payment remains the same

The next five questions (18-22) are based on the following information:

Unpaid labor charge	\$20,000
Unpaid management charge	\$10,000
Interest expense	\$25,000
Net farm income from operations	\$60,000
Capital charge (opportunity cost)	7%
Average asset value	\$600,000
Average level of liabilities	\$400,000
Reduced level of liabilities	\$10,000

18. What is '330 Acres' return to assets?

- a. \$85,000
- b. \$55,000
- c. \$60,000
- d. \$35,000
- e. None of the above.

$$\begin{array}{r} 60 \\ + 25 \\ \hline 85 \\ - 30 \\ \hline \end{array}$$

19. If '330 Acres' return to assets is \$50,000 (not the correct answer), what is her rate of return to assets (ROA)?

- a. 10.00%
- b. 8.33%
- c. 14.16%
- d. 7.59%
- e. none of the above

$$\frac{50,000}{600}$$

20. If '330 Acres' return to equity was \$45,000 (not the correct answer), what is her rate of return on equity (ROE)?

- a. 15.00%
- b. 22.5%
- c. 7.5%
- d. 33.00%
- e. none of the above

$$\frac{45}{200}$$

- d. \$20,000
- e. none of the above

23. According to Loyd Brown, President of Hertz Farm Management;

- a. in Iowa over 50 percent of land is rented by tenants.
- b. in Iowa less than 35 percent of land is rented by tenants.
- c. in Iowa over 70 percent of land is rented by tenants.
- d. in Iowa most land rented is rented by a cop-share arrangement.

24. According to Loyd Brown reasons non-farmers retain/own farmland is:

- a. so they can tax loss farm; for investment diversification; so they can have a high risk investment.
- b. for an income tax benefit; for recreation; for investment diversification
- c. to keep it out of neighbors hands; so they can have grain to sell; so they can have a high risk
- d. they have pride in ownership; it can create wealth over time; it keeps it out of neighbors hands.
- e. all the above are reasons he suggested.

25. According to Loyd Brown, as a professional farm manager they:

- a. provide written reports of the farm, crop production, etc. to the farm owner.
- b. are in regular contact with land owners through the use of telephones, etc. to keep them informed.
- c. work with clients to help them achieve their goals and objectives of the farm.
- d. view themselves as asset managers.
- e. do all the above

26. You have the following information from Sam's Suitable Farm.

Total farm assets	\$500,000
Total liability	\$250,000

$$\frac{250}{500}$$

Given this, what is Sam's asset turnover ratio?

- a. 1.0
- b. .5
- c. .75
- d. 2.5
- e. 1.5

The following information is for the next two (27-28) questions.

You are managing Econ 330 Farms and have the following information.

Hog sales	\$300,000
Beginning hog inventory	\$150,000
Ending hog inventory	\$130,000
Hog purchases	\$120,000
Value homegrown feed fed	\$70,000
Purchase feed fed	\$20,000
Home consumption	\$1,000

27. Given this, what is the return per \$100 feed fed for the hog enterprise?

- a. \$176.66
- b. \$177.77
- c. \$200.00
- d. \$178.88
- e. none of the above.

	+ 300	70
	- 150	20
	+ 130	<u>90</u>
	- 120	160
	+ 1	<u>90</u>

28. Given the above information, and that feed costs represented 50 percent of the total production costs, you:

- a. made money (profit) in the hog feeding operation
- b. lost money in the hog feeding operation
- c. can't determine if you made or lost money with the information provided

**Part II. Bonus – 2 points**

There is a major ISU student-run celebration coming up in late April. Unscramble the following letters to get the function.

A E H S I E V \_\_\_\_\_

If you need a hint, let me know.

TABLE 1. AMORTIZATION FACTORS FOR EQUAL TOTAL PAYMENTS

Years	Interest Rate													
	4%	4.5%	5%	5.5%	6%	6.5%	7%	7.5%	8%	8.5%	9%	9.5%	10%	
1	1.04000	1.04500	1.05000	1.05500	1.06000	1.06500	1.07000	1.07500	1.08000	1.08500	1.09000	1.09500	1.10000	
2	0.53020	0.53400	0.53780	0.54162	0.54544	0.54926	0.55309	0.55693	0.56077	0.56462	0.56847	0.57233	0.57619	
3	0.36035	0.36377	0.36721	0.37065	0.37411	0.37758	0.38105	0.38454	0.38803	0.39154	0.39505	0.39858	0.40211	
4	0.27549	0.27874	0.28201	0.28529	0.28859	0.29190	0.29523	0.29857	0.30192	0.30529	0.30867	0.31206	0.31547	
5	0.22463	0.22779	0.23097	0.23418	0.23740	0.24063	0.24389	0.24716	0.25046	0.25377	0.25709	0.26044	0.26380	
6	0.19076	0.19388	0.19702	0.20018	0.20336	0.20657	0.20980	0.21304	0.21632	0.21961	0.22292	0.22625	0.22961	
7	0.16661	0.16970	0.17282	0.17596	0.17914	0.18233	0.18555	0.18880	0.19207	0.19537	0.19869	0.20204	0.20541	
8	0.14853	0.15161	0.15472	0.15786	0.16104	0.16424	0.16747	0.17073	0.17401	0.17733	0.18067	0.18405	0.18744	
9	0.13449	0.13757	0.14069	0.14384	0.14702	0.15024	0.15349	0.15677	0.16008	0.16342	0.16680	0.17020	0.17364	
10	0.12329	0.12638	0.12950	0.13267	0.13587	0.13910	0.14238	0.14569	0.14903	0.15241	0.15582	0.15927	0.16275	
11	0.11415	0.11725	0.12039	0.12357	0.12679	0.13006	0.13336	0.13670	0.14008	0.14349	0.14695	0.15044	0.15396	
12	0.10655	0.10967	0.11283	0.11603	0.11928	0.12257	0.12590	0.12928	0.13270	0.13615	0.13965	0.14319	0.14676	
13	0.10014	0.10328	0.10646	0.10968	0.11296	0.11628	0.11965	0.12306	0.12652	0.13002	0.13357	0.13715	0.14078	
14	0.09467	0.09782	0.10102	0.10428	0.10758	0.11094	0.11434	0.11780	0.12130	0.12484	0.12843	0.13207	0.13575	
15	0.08994	0.09311	0.09634	0.09963	0.10296	0.10635	0.10979	0.11329	0.11683	0.12042	0.12406	0.12774	0.13147	
16	0.08582	0.08902	0.09227	0.09558	0.09895	0.10238	0.10586	0.10939	0.11298	0.11661	0.12030	0.12403	0.12782	
17	0.08220	0.08542	0.08870	0.09204	0.09544	0.09891	0.10243	0.10600	0.10963	0.11331	0.11705	0.12083	0.12466	
18	0.07899	0.08224	0.08555	0.08892	0.09236	0.09585	0.09941	0.10303	0.10670	0.11043	0.11421	0.11805	0.12193	
19	0.07614	0.07941	0.08275	0.08615	0.08962	0.09316	0.09675	0.10041	0.10413	0.10790	0.11173	0.11561	0.11955	
20	0.07358	0.07688	0.08024	0.08368	0.08718	0.09076	0.09439	0.09809	0.10185	0.10567	0.10955	0.11348	0.11746	
21	0.07128	0.07460	0.07800	0.08148	0.08500	0.08861	0.09229	0.09603	0.09983	0.10370	0.10762	0.11159	0.11562	
22	0.06920	0.07255	0.07597	0.07947	0.08305	0.08669	0.09041	0.09419	0.09803	0.10194	0.10590	0.10993	0.11401	
23	0.06731	0.07068	0.07414	0.07767	0.08128	0.08496	0.08871	0.09254	0.09642	0.10037	0.10438	0.10845	0.11257	
24	0.06559	0.06899	0.07247	0.07604	0.07968	0.08340	0.08719	0.09105	0.09498	0.09897	0.10302	0.10713	0.11130	
25	0.06401	0.06744	0.07095	0.07455	0.07823	0.08198	0.08581	0.08971	0.09368	0.09771	0.10181	0.10596	0.11017	
30	0.05783	0.06139	0.06505	0.06881	0.07265	0.07658	0.08059	0.08467	0.08883	0.09305	0.09734	0.10168	0.10608	
35	0.05358	0.05727	0.06107	0.06497	0.06897	0.07306	0.07723	0.08148	0.08580	0.09019	0.09464	0.09914	0.10369	
40	0.05052	0.05434	0.05828	0.06232	0.06646	0.07069	0.07501	0.07940	0.08386	0.08838	0.09296	0.09759	0.10226	