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## Composed & Solved by Iftikhar Ali Lecturer Statistics, Finance & Accounting

<b>Paper</b>	Financial Management	<b>Standard</b>	MCOM
<b>Board/University</b>	University of Sargodha	<b>Code</b>	MCM-507
<b>Term/Year</b>	Term 2 <sup>nd</sup> /2015	<b>Marks</b>	100

Objective part is compulsory. Attempt any three questions from subjective part.

### Objective Part

**Q No1: Explain the following terms (16 x 2= 32)**

1. Bond Discount
2. Balloon Payment
3. Call Premium
4. Characteristic Line
5. Cash Cycle
6. Declaration Date
7. Earnings Per Share
8. Factoring
9. Going-Concern Value
10. Hurdle Rate
11. Invoice
12. Independent Project
13. Line of Credit
14. Liquidity
15. Mortgage Banker
16. Opportunity Cost

### Subjective Part

**Q.No.2** Lost Dutchman Mines, Inc., is considering investing in Peru. It makes a bid to the government to participate in the development of a mine, the profits of which will be realized at the end of five years. The mine is expected to produce \$5 million in cash to Lost Dutchman Mines at that time. Other than the bid at the outset, no other cash flows will occur, as the government will reimburse the company for all costs. If Lost Dutchman requires a nominal annual return of 20 percent (ignoring any tax consequences), what is the maximum bid it should make for the participation right if interest is compounded (a) annually? (b) Semiannually? (c) Quarterly? (d) Continuously?

**Q.No.3** Red Frog Brewery has \$1,000-par-value bonds outstanding with the following characteristics: currently selling at par; 5 years until final maturity; and a 9 percent coupon rate (with interest paid semiannually). Interestingly, Old Chicago Brewery has a very similar bond issue outstanding. In fact, every bond feature is the same as for the Red Frog bonds, except that Old Chicago's bonds mature in

exactly 15 years. Now, assume that the market's nominal annual required rate of return for both bond issues suddenly fell from 9 percent to 8 percent.

- Which brewery's bonds would show the greatest price change? Why?
- At the market's new, lower required rate of return for these bonds, determine the per bond price for each brewery's bonds. Which bond's price increased the most, and by how much?

**Q.No.4** The Hedge Corporation manufactures only one product: planks. The single raw material used in making planks is the dint. For each plank manufactured, 12 dints are required. Assume that the company manufactures 150,000 planks per year, that demand for planks is perfectly steady throughout the year, that it costs \$200 each time dints are ordered, and that carrying costs are \$8 per dint per year.

- Determine the economic order quantity of dints.
- What are total inventory costs for Hedge (total carrying costs plus total ordering costs)?
- How many times per year would inventory be ordered?

**Q.No.5** The Fresno Finial Fabricating Works is considering automating its existing finial casting and assembly department. The plant manager, Mel Content, has accumulated the following information for you:

- The automation proposal would result in reduced labor costs of \$150,000 per year.
- The cost of defects is expected to remain at \$5,000 even if the new automation proposal is accepted.
- New equipment costing \$500,000 would need to be purchased. For financial reporting purposes, the equipment will be depreciated on a straight-line basis over its useful four year life. For tax purposes, however, the equipment falls into the three-year property class and will be depreciated using the MACRS depreciation percentages. The estimated final salvage value of the new equipment is \$50,000.
- Annual maintenance costs will increase from \$2,000 to \$8,000 if the new equipment is purchased.
- The company is subject to a marginal tax rate of 40 percent. What are the relevant incremental cash inflows over the proposal's useful life, and what is the incremental cash outflow at time 0?

**Q.No.6** Archimedes Torque and Gear Company has \$7.4 million in long-term debt having the following payment schedule:

	AMOUNT
15% serial bonds, \$100,000 payable annually in principal	\$2,400,000
13% first-mortgage bonds, \$150,000 payable annually in principal	3,000,000
18% subordinated debentures, interest only until maturity in 10 years	<u>2,000,000</u>
	<u>\$7,400,000</u>

Archimedes' common stock has a book value of \$8.3 million and a market value of \$6 million. The corporate tax rate, federal plus state, is 50 percent. Archimedes is in a cyclical business; its expected EBIT is \$2 million, with a standard deviation of \$1.5 million. The average debt-to-equity ratio of other companies in the industry is 0.47.

- Determine the interest coverage and the debt-service coverage ratios for the company.
- What are the probabilities that these two ratios will go below 1:1?
- Does Archimedes have too much debt?