



OBAFEMI AWOLOWO UNIVERSITY ILE-IFE
FACULTY OF ENVIRONMENTAL DESIGN AND MANAGEMENT
DEPARTMENT OF ESTATE MANAGEMENT

BSc.(Estate Management), Harmattan Semester Examination, 2011/2012 Session

ESM 515-Plant and Machinery Valuation 1. Time Allowed: 2 hours

Instruction: Answer Question 1 and any other three questions.

- (1.) Value the assets of Senator Grip whose factory premises comprise buildings, plant and machinery on a well landscaped site. The structure is three single storey workshops with a net usable area of 1000 square meter each and two single storey warehouses let for #30 per square meter and #40 per square meter respectively.

The result of the market survey from relevant plant manufacturers in New York shows the following:

| | |
|-------------------------|-----------|
| Pumps and vessels | \$150,000 |
| Instruments and Control | \$20,000 |
| Mechanical/Electricals | \$20,000 |
| Shipping | \$10,000 |
| Installation | \$10,000 |
| Civil work | \$6000 |
| Professional fee | \$15,000 |
| Finance charge | \$10,000 |

The subject plant was constructed in 1990 at a historical cost (dollars). The plant took two years to construct and inflation tends over the past two years accounts for 20% of current plant construction cost per annum. Take the exchange rate of #150.00 to dollar. Adopting reducing balance depreciating at 20%. Useful life is 60 years out of a lifespan of 65 years.

Other machinery such as vehicles, generators, typewriters, computer, furniture etc. have recently been valued at 0.5 million naira by Boothman and associates. The minimum return required for this business is 9% while the expected profit from past trends suggests that a profit of 1 million Naira per annum will continue.

Data from the books of account of the company for the Year ended, Dec., 1998 include;

| | |
|-------------------------|---------|
| Stock of raw materials | #75,000 |
| Stock of finished goods | #80,000 |
| Cash-in-hand | #15,000 |
| Cash-at-bank | #50,000 |
| Sundry Debtors | #5000 |



#80,000

(i.) Calculate the capital value of the fixed tangible assets. **13 marks**

(ii.) Determine the working capital **4 marks**

(iii.) Value the goodwill using super profit method. **4marks**

Note: Assume 7% capitalization rate

(2.a) Plant and Machinery Valuation can be undertaken for both transactional and non-transactional driven purposes. Discuss. **8marks**

(b.) Demonstrate the scenario of "condition of average clause" in insurance valuation **5 marks**

(3a.) Explain the concept of value-in-use and break-up value in relation to plant and machinery Valuation. **7 marks**

(b) Outline the conditions under which "going concern value" computation is generally appropriate. **6 marks**

(4a) What are the factors which must be taken into account when depreciating an asset. **4marks**

(b.) Describe three methods of depreciation applicable in plant and machinery valuation. **9marks**

(5a.) Insurance valuation is based on the doctrine of utmost good faith. Discuss. **4 marks**

(b.) Engineer Kako owns an old factory building with a gross floor area of 10000 square meters. The construction is combination of stone and brick wall and asbestos cement pitch roof. Information reveals an average unit cost of 2000 per square meter. Engineer Kako has been wisely advised to insure the structures on both indemnity and reinstatement bases. Assume 10% professional fee, 5% gross internal floor area of entire size. Calculate the indemnity and reinstatement values. **9 marks**

(6a). Discuss various types of intangible assets attached to plant and machinery valuation on going-concern basis and describe their methods of valuation. **7 marks**

(b.) If the average profit (p) is #30,000, the minimum rate of return is 12%, value of the net asset is #200,000, 14% capitalization rate for the perpetual interest. Determine the goodwill, using Gross Profit method and Total Capitalization method. **6marks**

