

## BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

B. Sc. Engineering Examinations 2017-2018

Sub: **HUM 313** (Principle of accounting)

Full Marks: 140

Time: 3 Hours

USE SEPARATE SCRIPTS FOR EACH SECTION

The figures in the margin indicate full marks

**SECTION – A**There are **FIVE** questions in this section. Answer any **FOUR**.

1. (a) Semilton Computer Solution Ltd. is a software and hard ware selling firm.

Following events and transaction are occurred during the month January, 2018:

(23  $\frac{1}{3}$ )

January-1: Owner invested tk. 2,00,000 cash in the business.

January-2: Hired an office manager at a salary of tk. 20,000 per month.

January-3: Purchased tk. 25,000 of office furniture on account from Autobi furniture.

January-10: Paid office rent tk. 9,000 cash for the month

January-15: Completed a customized software and billed client tk. 60,000.

January-17: Received tk. 40,000 advanced on a consulting service engagement.

January-25: Received cash tk. 12,000 for services completed for KBC Co. ltd.

January-31: Paid Office manager tk.20,000 salary for the month.

January-31: Paid 60% of balance due to Autobi.

Required: (i) Prepare a journal book for January 31, 2018.

(ii) Post to the ledger Accounts.

(iii) Prepare a trial balance on January 31, 2018

2. (a) Selected financial transactions of July for John's Law office are given below:

(11  $\frac{1}{3}$ )

(i) Purchased office equipment on account tk. 3000.

(ii) Provide legal service on account tk. 3000.

(iii) Paid office rent in advance tk. 20,000.

(iv) Borrowed tk. 10,000 from Sonata Bank Ltd.

(v) Purchase office supplies for tk. 8,000. Paid tk. 4,000 in cash and billed the balanced amount.

Required : Show the effect of the above transactions on Accounting Equation for the month July 31, 2018.

- (b) Following is the Balance sheet of Rexim Company as on 31<sup>st</sup>, December, 2018.

(12)

Rexim Company		
As on December 31, 2018		
Balance Sheet		
Particulars	2017 (Tk.)	2018(Tk.)
Cash	6300	5700
Accounts Receivable	23,000	25400
Inventory	12000	9000
Land	22000	28000
Building	72000	72000
Accumulated Depreciation	(17000)	(12000)
Total Assets	118300	128100
Accounts Payable	20170	31100
Stockholders' Equity	98130	97000
Total	118300	128100

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**Contd... Q. No. 2(b)**

Rexim Company's 2018 Income Statement included net sales of Tk. 90,000, cost of goods sold Tk. 40,000 and net income Tk. 10,000.

**Required:**

Compute the following ratios for 2018.

- (i) Current ratio.
- (ii) Quick ratio.
- (iii) Receivable turnover
- (iv) Inventory turnover
- (v) Profit margin
- (vi) Return on stockholder's equity.

3. Mr. Dason started a consulting firm. The trial balance at June 30,2018 is shown below. (23 1/3)

Dason Company		
Trial Balance		
June 30, 2018		
Particulars	Debit (Tk.)	Credit(Tk.)
Cash	1000	-
Accounts Receivable	6000	-
Supplies	2000	-
Prepaid Insurance	3000	-
Equipment	15000	-
Accounts Payable	-	4500
Unearned Service Revenue	-	4000
Owner's Capital	-	24600
Service Revenue	-	7900
Salaries and Wages Expenses	400	-
Rent Expense	10000	-
Total	<u>41,000</u>	<u>41,000</u>

Other information:

- Supplies used during the year tk. 1500.
- Accrued utility bill tk. 2500.
- The insurance is for a year.
- Earned revenue of unearned revenue tk. 3800.
- Salaries incurred but not paid tk. 3000.
- Accrued Revenue tk. 1200.

Required: (i) Prepare necessary adjusting journal entries.

(ii) Prepare an adjusted trial balance as on June 30, 2018.

4. The trial balance of Gorgiun Company Ltd for the year ended on 31<sup>st</sup> December, 2018 is as follows:

(23 1/3)

**HUM 313****Contd... Q. No. 4**

Gorgiun Company Ltd		
Trial Balance		
31 <sup>st</sup> December, 2018		
Account Title	Debit (Tk.)	Credit(Tk.)
Cash	50,000	-
Accounts Receivable	20,500	-
Accounts Payable	-	21,000
Owner's Equity	-	100,800
Office Equipment	25,000	-
Service Revenue	-	30,000
Salary Expense	12,000	-
Prepaid Rent	4,000	-
Miscellaneous Expense	1,000	-
Commission Expense	3,000	-
Supplies	700	-
Notes Payable	-	6,400
Drawings	2,000	-
Goodwill	20,000	-
Building	1,50,000	-
Long-term Investment	50,000	-
Band Payable	-	1,55,000
Interest Payable	-	25,000
Total	<u>3,38,200</u>	<u>3,38,200</u>

Adjusting information:

- Salary were unpaid tk. 8000 during the year 2018.
- Annual Depreciation rate on Equipment is 20%
- Supplies on hand on 31<sup>st</sup> December is tk. 300.
- Prepaid Rent were expired tk. 3000.

Required:

- (i) Prepare an Income statement and Owner's Equity Statement.
- (ii) Prepare a classified Balance Sheet as on 31<sup>st</sup>, December 2018.

**SECTION - B**

There are **FOUR** questions in this section. Answer any **THREE**.

5. (a) What is meant by contribution margin ratio? How is this ratio useful in planning business operation?

(3 1/3)

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**Contd... Q. No. 5**

(b) Volter company manufactures and sells a specialized cordless telephone for high electromagnetic radiation environments. The company's contribution format income statement for the last year is given below:

(20)

Sales (20,000 units @Tk.60)	Tk. 12,00,000
Less: variable expenses	<u>Tk. 900,000</u>
Contribution margin	Tk. 300,000
Less: fixed expenses	<u>Tk.240,000</u>
Net profit	Tk. 60,000

**Requirements:**

- (i) Compute company's contribution margin (CM) ratio,
- (ii) Compute company's break even points in both units and in sales in tk.,
- (iii) Assume that sales increases by tk. 400,000 next year. If cost behavior patterns remain unchanged, by how much will the company's net income increase?
- (iv) Refer the original data. Assume that next year management wants to earn a profit of Tk. 90,000. How many units will have to be sold to earn this target profit?
- (v) Refer the original data. Compute the company's margin of safety in tk and in percentage form.
- (vi) Compute the company's degree of operating leverage at the present level of sales;  
Assume that company's sales increases by 8% next year. By what percentage would you expect net income to increase? Use degree of operating leverage (DOL) to obtain your answer.  
Verify your answer as calculate above by preparing a new contribution format income statement showing 8% increase in sales.

6. (a) What is the basic difference between absorption costing and variable costing method?

(3 1/3)

(b) Check Wagon grill manufacturing company makes barbecue grill that it sells for Tk. 210. Data for last year's operations follow:

(20)

Units Produced	20,000
Units Sold	19,000

<b>Variable cost per unit:</b>	
Direct materials	Tk. 50
Direct labor	Tk. 80
Variable manufacturing overhead	Tk. 20
Variable selling and administrative overhead	Tk. 10
<b>Fixed cost:</b>	
Fixed manufacturing overhead	Tk. 700,000
Fixed selling and administrative overhead	Tk. 285,000

**Requirements:**

- (i) Compute the production cost under absorption costing and variable costing method.
- (ii) Prepare income statements under both of the methods.
- (iii) Explain the reason for any difference between the net income under the both methods.

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7. (a) What are the purposes of cost allocation? (3 1/3)

(b) The relevant data for allocating service departments cost over production departments are given below: (20)

	Production Departments			Service Departments	
	A	B	C	D	E
Cost before allocation (tk.)	7550	7200	9650	4625	1575
Service provided by D deptt	20%	30%	40%	-	10%
Service provided by E deptt	40%	30%	20%	10%	-

**Requirements:**

You are required to prepare a schedule for allocating the service departments cost over the production departments under each of the following methods:

- (i) Direct method
- (ii) Reciprocal Service method.

8. (a) The data below have been taken from the cost records of Beverly Hospital. A careful study by the company's cost analyst has determined that if the number of X-rays taken is 7000, the average operating cost is tk. 4.14 per X-ray. If the number of X-rays taken is 3000, the average operating cost is tk. 5.65 per X-ray. (10)

**Requirments:**

- (i) Using high-low point method, determine the variable cost per X-ray taken and the fixed cost in total.
- (ii) Express the variable cost and fixed cost in the form of  $Y = mx + c$ .
- (iii) If the number of X-rays taken in a month is 4600, what total operating X-rays cost would you expect?

(c) The following costs and inventory data are taken from the accounting records of Edward Corporation for the last year, 2018- (13 1/3)

Purchase of raw materials	118,500
Direct labor cost	70,000
Indirect labor cost	30,000
Maintenance, factory	6,000
Insurance, factory	800
Supervisor's salary	12,000
Rent, factory	30,000
Power and electricity	2,500
Fuel for the factory equipment	700
Advertising expenses	90,000
Sales commission	35,000
Office salaries	55,000
Office rent	20,000
Utilities (20% factory, 80% office)	15,000

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### Contd... Q. No. 8(c)

<u>Inventories</u>	<u>January 1</u>	<u>December 31</u>
Raw materials	Tk.7,000	Tk. 15,000
Work in process	10,000	5,000
Finished goods	20,000	35,000

#### Requirements:

- (i) Prepare a cost of goods sold statement.
  - (ii) If sales for the last year is tk. 500,000, prepare an income statement.
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**SECTION – A**

There are **FOUR** questions in this section. Answer Q. No. 1 and any **TWO** from the rest.

1. Both specification and drawings are required to express every schedule of items in a book of specification- explain with examples. Do you consider Door, Window and Finish schedule should be an integral part of drawings?- Give reasons to your answer. (20)
2. What is meant by Specification Section? The Customary sequence of arranging section is based on the chronological development of the actual construction process –Explain with examples. (25)
3. (a) Discuss specification language in relation to the followings. (15)
  - I. Sentences,
  - II. Punctuation,
  - III. Capitalization,
  - IV. Tenses,
  - V. Words and phrases(b) Mention different supplemental documents included in specification. Discuss any two of them. (10)
4. Write short notes on the followings (Any Two) (25)
  - I. Arrangement of drawings for a small project
  - II. Specification Format
  - III. Types of Contract

**SECTION - B**

There are **FOUR** questions in this section. Answer Q. No. 5 and any **TWO** from the rest.

5. Specify the following schedule of materials or combination of materials related to construction work (Any Four) (4×5=20)
  - a. Cement
  - b. Sand
  - c. Reinforcing Steel
  - d. Coarse Aggregate
  - e. Timber for Door and Windows

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6. Describe Reinforced Cement Concrete (R.C.C.) schedule of items with respect to the scope, materials, preparation, method of construction and precaution. (25)
  
  7. Discuss 'General conditions of contract' in a set of specification that establishes legal responsibilities and relationships of all parties involved in Construction work. Describe at least five general conditions included in preparation of contract between Owner and Contractor. (25)
  
  8. Write short notes on the followings (Any Two) (2×12.5=25)
    - a. Earth excavation work and Sand filling in foundation work
    - b. Plastering on Brick and Concrete
    - c. Mass concrete in foundation and floor.
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