

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-5/T-1 B. Sc. Engineering Examinations 2014-2015

Sub : **HUM 313** (Principles of Accounting)

Full Marks : 140

Time : 3 Hours

The figures in the margin indicate full marks.

USE SEPARATE SCRIPTS FOR EACH SECTION

SECTION – A

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

1. (a) Distinguish between manufacturing overhead, administration overhead and selling and distribution overhead with examples. (5 1/3)
- (b) Listed below are the number of costs typically found in organizations: (10)
- (i) Hamburger buns in Wendy's outlet;
 - (ii) Advertising by a dental office;
 - (iii) Apples processed and canned by Del Monte'
 - (iv) Boxes used for packing detergent produced by the company;
 - (v) Wages of workers assembling computers;
 - (vi) Microchips used in producing calculators;
 - (vii) Thread used in a garment factory;
 - (viii) Sugar used in soft-drink production;
 - (ix) Property taxes on the factory;
 - (x) Sales person's commission. Classify each cost as either variable, fixed or mixed cost.
- (c) The data below have been taken from the cost record of porter manufacturing company. A careful study shows average shipping cost will be Tk. 44,000 for 3000 units and if the number of units are 5000, the average shipping cost will be Tk. 60,000. (8)
- Required:
- (i) Using high and low point method, determine the variable cost per unit and the fixed cost in total.
 - (ii) Calculate a linear cost equation in the form of $y = mx + c$
 - (iii) What will be the total shipping cost if the number of units are 4000.
2. (a) "Manufacturing cost is composed of three components-direct materials, direct labour and manufacturing overhead." Give examples of each component for a furniture manufacturing plant. (5 1/3)
- (b) Name the three types of inventories that appear on a manufacturer's balance sheet. (3)
- (c) The following costs and inventory data are taken from the accounting records of Meriwell company for the year ended on December 31st 2015: (15)

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Contd ... Q. No. 2

Direct labour cost	Tk. 70,000
Purchase of raw materials	118,500
Indirect labour	30,000
Maintenance, factory equipment	6000
Advertising expenses	90,000
Insurance, factory	800
Sales commission	35,000
Administrative manager's salary	55,000
Supervisor's salary	12,000
Rent, factory	30,000
Rent, office	25,000
Rent, showroom	13,000
Utilities (70% for factory, 30% for office)	15,000
Supplies (60% for factory, 40% for office)	3000
Power and electricity	2,500
Depreciation, factory-equipment	30,000
Director's fees	15,000

<u>Inventories</u>	<u>January 1</u>	<u>December 31</u>
Raw materials	Tk. 7000	Tk. 15,000
Work-in process	10,000	5000
Finished goods	20,000	35,000

Required:

- (i) Prepare a statement of cost of goods sold;
- (ii) Also prepare an income statement if sales amount is Tk. 700,000.

3. (a) What is the basic difference between absorption costing and variable costing? (3 1/3)

(b) Chuck Wagon grills manufacturing company makes a single product – a handmade specially barbecue grill that it sells for Tk. 210. Data for last year's operations are as follows: (20)

Units produced	20,000
Units sold	19,000
<u>Variable costs per unit</u>	
Direct materials	Tk. 50
Direct labour	80
Variable manufacturing overhead	20
Variable selling and administrative overhead	10
<u>Fixed costs (Total):</u>	
Fixed manufacturing overhead	700,000
Fixed selling and administrative overhead	285,000

Required:

- (i) Compute unit product cost under absorption costing and variable costing;
- (ii) Prepare income statement under both of the costing methods.

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4. (a) What is degree of operating leverage (DOL)? **(4 1/3)**

(b) Stratford Company makes a product that sells for Tk. 15 per unit. Variable costs are Tk. 6 per unit, and fixed costs total Tk. 180,000 annually. **(19)**

Required:

- (i) What is the product's CM ratio?
- (ii) Determine the break-even point in units and in sales taka.
- (iii) The company estimates that sales will increase by Tk. 45,000 during the coming year due to increase demand. By how much should net income increase?
- (iv) Assume that the operating results for last year were as follows:

Sales	Tk. 360,000
Less: Variable costs	144,000
Contribution margin	216,000
Less: Fixed cost	180,000
Net income/profit	<u>Tk. 36,000</u>

It is expected that sales will be increased by 15% next year. By how much should net income increase?

(v) Refers to the original data. Assume that the company sold 28,000 units last year. The sales manager is convinced that a 10% reduction in the selling price combined with a Tk. 70,000 increase in advertising expenses, would cause annual sales in units to increase by 50%. Prepare two contribution income statements, one showing the results of last years operations and one showing what the results of operations would be if these changes were made. Would you recommend that the company do as the sales manager suggests?

SECTION – B

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

5. (a) What are the elements of financial statements? Describe with examples. **(5 1/3)**

(b) Terry Bin's transactions related to his grocery shop are as follows for the month June 30, 2015. **(12+6)**

- Invested Tk. 1000 cash to the business.
- Sell goods in cash Tk. 2000.
- Paid shop rent Tk. 4000.
- Paid employee salary Tk. 2000.
- Owner drawing Tk. 2000.
- Purchase furniture an account Tk. 10000.

Required:

- (i) Prepare a tabular analysis.
- (ii) Prepare Income statement and owner's equity statement.

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6. (a) What are the limitation of trial balance? (5)

(b) Royal Kent’s transaction for the month August 31, 2015 are presented below: (14+4 1/3)

- Investment in Tk. 25000 cash.
- Purchase supplies on account of Tk. 2500
- Paid office rent Tk. 10000.
- Service provided to customer and billed Tk. 5000.
- Purchase office equipment on account Tk. 10000.
- Withdraw cash Tk. 1000 from the business.
- Get cash from dues on service provided.

Requirements:

- (i) Record Journal entries in appropriate format.
- (ii) Prepare cash ledger and account payable ledger.

7. (a) What is expense recognition principle? (2 1/3)

(b) Followings are the balance figures from the ledger of Xuric Company. Prepare appropriate trial balance from the accounts. (11)

Cash Tk. 8700; Accounts Receivable Tk. 11500; Supplies Tk. 650; Prepaid Insurance Tk. 1200; Equipment Tk. 18000; Accumulated Depreciation Equipment Tk. 700; Notes payable Tk. 10000; Account payable Tk. 2500; Salaries payable Tk. 725; Interest payable Tk. 100; Unearned Rent Revenue Tk. 1050; Owner’s capital Tk. 22000; Owners drawings 1600; Service Revenue Tk. 17100; Rent Revenue Tk. 2260; Salaries expense Tk. 8725; Rent expense Tk. 2900; Depreciation expense Tk. 700; Supplies expense Tk. 850; Utilities expense Tk. 1510; Interest expense Tk. 100.

(c) Prepare adjusting journal entries for the transactions below: (10)

- (i) Travel expenses accrued Tk. 2000.
- (ii) Tk. 1000 of unearned revenues is earned.
- (iii) Prepaid insurance expires Tk. 500 per month.
- (iv) Services of Tk. 3000 is given but not yet recorded and received in cash.
- (v) Depreciation expense is Tk. 1000 per month.

8. The adjusted trial balance of Falcon Company is presented below: (23 1/3)

Falcon Company Trial Balance December 31, 2015		
	Debit (Tk.)	Credit (Tk.)
Cash	5400	
Accounts Receivable	2400	
Supplies	2800	
Prepaid Insurance	1300	

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Contd ... Q. No. 8

Equipment	60000	
Notes Payable		40000
Accounts Payable		2400
Owner's Capital		30000
Owner's Drawings	1000	
Service Revenue		4900
Salary expense	3200	
Utility expense	800	
Advertising expense	400	
Total	<u>77300</u>	<u>77300</u>

Required:

- (i) Prepare a non-classified Income Statement and owner's equity statement.
- (ii) Prepare a classified Balance Sheet assuming 20000 of the notes payable is long-term.

SECTION – A

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

1. (a) Discuss different types and the purpose of specification. What are the General rules need to be followed while writing specification? (10)
(b) Specifications and drawings should complement each other-Explain. (10)
2. (a) Mention different points included in General and Specific paragraph. What are the sequences need to be followed while writing specific paragraph? (10)
(b) Mention different pre bid and post bid supplemental documents included in specification. Discuss any three of them. (15)
3. What is meant by 'Specification Format'? Discuss specification format with respect to the followings. (25)
 - (a) Size
 - (b) Title page
 - (c) Index of Sections
 - (d) Form
 - (e) Numbering System.
4. Write short notes on the followings (Any Two): (12 ½ × 2 = 25)
 - (a) Finish Schedule
 - (b) Specification Section
 - (c) Specification Language.

SECTION – B

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

5. Discuss the Basic materials or combination of materials for the following Items: (Any Four) (20)
 - (a) Brick soling works. (b) Reinforcing steel.
 - (c) Aluminum Door/ window channel with Glass. (d) Mass Concrete. (e) Aggregate.

ARCH 561

6. Name different types of Brick work required for superstructure of a R.C.C. building. Discuss two types of brick work with respect to their scope, materials, method of construction and precautions. (25)
7. Write short notes on the following Schedule of items (Any Two) (25)
- (a) Brick Pointing
 - (b) Plastering
 - (c) Distemping and Plastic Paint on Internal and External surfaces.
8. (a) Describe the scope, materials, preparation method of construction and precautions for Reinforced Cement Concrete (R.C.C) schedule of items. (25)
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L-5/T-1/ARCH

Date : 30/07/2016

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-5/T-1 B. Arch. Examinations 2014-2015

Sub : **ARCH 595** (Industrial Buildings Planning and Design)

Full Marks : 140

Time : 3 Hours

The figures in the margin indicate full marks.

USE SEPARATE SCRIPTS FOR EACH SECTION

SECTION – A

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

Use illustrations as necessary.

1. Explain the impact of innovations and inventions on industrial buildings. (23 ⅓)
2. Describe the meaning and purpose of different colour coding systems of safety signs and symbols with examples of use in industrial buildings. (23 ⅓)
3. Discuss in detail the manufacturing process of any small scale industry found in old Dhaka. (23 ⅓)
4. Write short notes on the followings: (23 ⅓)
 - (a) Lattice structures and Tensile structures.
 - (b) Industrialization and environmental degradation.

SECTION – B

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

5. In order to facilitate present and future needs of an industrial building, what measures should an architect consider in master planning and site development? (23 ⅓)
 6. Mention the design criteria for unloading and loading areas of industrial buildings. (23 ⅓)
 7. Discuss the measures to reduce noise and glare while designing an industrial building. (23 ⅓)
 8. Write short notes on the followings: (23 ⅓)
 - (a) Manual handling vs. Mechanical handling
 - (b) Overhead gantry crane.
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