

**Date of Examination: 28/10/2021**

**AHSANULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**Department: Arts and Sciences**  
**Program: B. Sc. in Computer Science and Engineering**  
**Semester Final, Fall 2020**  
**Year: 3<sup>rd</sup> Semester: 1<sup>st</sup>**  
**Course Number: HUM 3115**  
**Course Title: Economics and Accounting**

**Time: 2 (Two) Hours**

**Full Marks: 50**

**There are two parts. Use a separate script for each part. Marks allotted are indicated in the right margin.**

<b>Instructions:</b>	i)	Answer script should be hand written and should be written in A4 white paper. You must submit the hard copy of this answer script to the Department when the university reopens.
	ii)	You must write the following information at the top of each answer script: <b>Department:</b> <b>Course No:</b> <b>Examination:</b> <b>Student Id:</b> <b>Program:</b> <b>Course Title:</b> <b>Semester (Session):</b> <b>Signature and Date:</b>
	iii)	Write down Student ID, Course number and put your signature at the top of every single page of the answer script.
	iv)	Write down page number at the bottom of every page of the answer script.
	v)	Upload the scan copy of your answer script in PDF format through provided <b>google form</b> at the respective course site (i.e., google classroom) using institutional email within the allocated time. Uploading clear and readable scan copy (uncorrupted) is your responsibility and your scan copy must cover the full page of your answer script. However, for clear and readable scan copy of the answer script student should use only one side of a page for answering the questions.
	vi)	You must avoid <b>plagiarism</b> , maintain <b>academic integrity, and ethics</b> . You are not allowed to take any help from another individual and if taken so can result in stern disciplinary actions from the university authority.
	vii)	Marks allotted are indicated in the <b>right margin</b> .
	viii)	Necessary <b>charts/tables</b> are attached at the end of the question paper. You may use graph papers where necessary.
	ix)	Assume any reasonable data if needed.
	x)	Symbols and characters have their usual meaning.
	xi)	Before uploading rename the PDF file as <b>CourseNo_StudentID_PartNo.pdf</b> e.g. HUM1151_190101001_Part-A.pdf / HUM1151_190101001_Part-B.pdf

**Part- A (Economics-33)**

The answer script (**one single pdf file**) of this part (**Part-A**) must be uploaded at designated location in provided **google form link** available in the **google classroom**.

**There are 4 (four) questions. Answer any 2 (two) questions**

1. Prepare the schedule below and explain-

**16.5**

Name of the product	Nature of competition	Nature of the product	Name of the market	No. of seller	Profit/Loss
Graduate Computer Engineer of Bangladesh					
Computer Engineer of Bangladesh					

2. a) Make the following table complete and sketch the graph explaining the relations among various short run cost curves.

**8**

Quantity of output	TFC	TVC	TC	AC	AVC	AFC	MC
1	70	30					
2	70		110				
3		45					
4		55					
5		75					
6	70		180				

- b) Pharmaceutical drugs have an inelastic demand and computers have an elastic demand. Suppose that technological advance doubles the supply of both products (that is, the quantity supplied at each price is twice what it was). Illustrate---

**7**

- i) what happens to the equilibrium price and quantity in each market.
- ii) which product experiences a larger change in price.
- iii) which product experiences a larger change in quantity.
- iv) what happens to total consumer spending on each product.

- c) Compose the definition of supply function.

**1.5**

3. a) Suppose the government of Bangladesh fixes the prices of services of BTCL where its  $P=MC$ . Argue why and how BTCL would abide by this decision and show reasons in favor of your answer. **6.5**

- b) From the following assumptions, derive a model for development - **5**

(i) There is a dual economy i.e., the economy is characterized by a traditional, over-populated rural subsistence sector furnished with zero MPL, and the high productivity modern urban industrial sector.

(ii) The production in the advanced sector is higher than the production in traditional and backward sector.

(iv) The supply of labor is perfectly elastic. In other words, the supply of labor is greater than demand for labor.

- c) Suppose the economy has just not reached potential output and there occurs a draught. Explain the impact on economy. **5**

4. a) From the following table calculate elasticity of demand if you move from point A to C and explain what you understand from the result. **7**

POINT	$P_x$	$Q_y$
A	1500	150
B	1600	180
C	1700	210

- b) Your utility function is  $U = 100 X^{0.5} Y^{0.5}$  and you are consuming two commodities. One is commodity X and another is commodity Y. Your monthly income is TK 5000. As a rational consumer you want to maximize satisfaction. Identify how much of the two commodities you will consume. Find your maximum amount of satisfaction. Explain. **7**

- c) Compose the definitions of budget line and budget set. **2.5**

**PART-B (Accounting) Marks: 17**

The answer script (**one single pdf** file) of this part (**PartB**) must be uploaded at designated location in the provided **google** form link available in the google classroom.

**There are two (2) Questions, Answers any one (1).**

**Question 5. [Marks : 17]**

a) Distinguish between Product Cost and Period Cost. [3]

b) Mushfiq Corp. produced 15,000 units of product monthly (75% of its full capacity). It has incurred the following cost per month while producing its product: [7]

Advertising expense	9,500	Direct labor cost	275,000
Rent on factory equipment	10,250	Insurance (50% office building)	10,000
Utilities Expense	4,500	Sales commission	7,500
Depreciation on office furniture	7,775	Factory supervisor's salary	30,000
Raw material purchases	225,000	Delivery expense	8,500
Indirect labor	19,750	Selling & Admin. Salaries	22,000

**Instruction:**

1. Demonstrate a cost sheet with appropriate column headings and compute the cost to produce one product.
  2. Compute selling price per unit (under full capacity production) assuming 20% profit on cost.
- c) Watson Company is a distributor of single product. Data concerning next month's budget appear below: [7]

Selling price	\$40 per unit
Variable costs	\$24 per unit

Fixed costs	\$15,500 per month
Unit sales	1,500 units per month
Target Net Income	\$18,000

**Instruction:**

1. Compute the break-even units and break-even sales in amount.
2. Compute the required sales in units and amount to achieve the target income.
3. Compute the margin of safety and margin of safety ratio.

**Question 6. [Marks : 17]**

- a) Distinguish between transaction and event with one example of each. [2]
- b) Abraham Lee has started his business with \$50,000 of cash, \$75,000 of building and \$25,000 of furniture on 1<sup>st</sup> April 2021 as a marketing consulting firm. Other transactions for the month are given as follows: [15]
- Apr 5: Paid \$9,000 cash for an insurance policy covering the next 24 months.
- Apr 9: Services are performed and clients are billed for \$15,000.
- Apr 12: The client immediately pays \$7,500 for services to be performed at a later date.
- Apr 15: Withdrawn \$5,000 from the company for personal use.
- Apr 20: Placed Advertisement in a newspaper of \$200, payment to be made within 30 days.

**Instruction:**

- a) Prepare general journal entries for the above transactions.
- b) Show the journal entries to the appropriate ledger accounts.
- c) Prepare a trial balance for the month of April.