স্কুল অব বিজনেস
Bangladesh Open University
MBA Program
Semester: 162 (2nd Level)

Course: Business Mathematics **Due on: October 20, 2017**

Instructions

➢ **Answer all the questions in your <u>own handwriting</u> on <u>A4 size white paper</u>.**
➢ **The assignment must be submitted on the assigned date to the Coordinator of the study center you are attached with.**
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Questions

1. A student surveyed 525 people. He determined that 350 read newspaper for news, 215 listened to radio and 140 watched television, Additionally 75 read the newspaper and watched television, 40 listened radio and watched television and 100 read the newspaper and listened radio. If 25 used all three sources of news, how many people utilized none of the three?

2. Simplify $7\log\dfrac{10}{9} - 2\log\dfrac{25}{24} + 3\log\dfrac{81}{80}$

3. You borrow Tk.22,000 at 12% to be repaid over the next 6 years. Equal installment payments are required at the end of each year, and these payments must be significant in amount to repay the Tk.22,000 together with providing the lender a 12% return, Based on these data, prepare an amortisation schedule.

4. A man says to his son, "Seven year's ago I was seven times as old as you were, and three years hence, I shall be three times as old as you." Find their present ages.

5. Find out the number of ways in which a cricket team consisting of 11 players can be selected from 14 players. Also find out how many of these ways (i) will include captain (ii) will not include captain?

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Course: Business Mathematics　　　　　　　　　　**Due on: December 15, 2017**

(Answer all the questions in your own handwriting on A4 size white pages)

1. ED Wong has total of Tk.70,000 invested in a common stock, corporate bonds, and municipal bonds. In order to limit risk, he has twice as much invested in corporate bonds as in stock. Last years, the common stock paid a 2% dividend, the corporate bonds paid 10% interest, and the municipal bonds paid 6% interest. ED's total income last year from his investments was in Tk.4,800. How much has he invested in bonds?

2. What do you understand by differential calculus and integral calculus? How does differential calculus differ from integral calculus?

3. A study has shown that the cost of producing sign pens of a manufacturing concern is given by, $C = 30 + 1.5x + .0008x^2$
What is the marginal cost at x = 1000 units? If the pens sells for Tk.5.00 each for what values of x does marginal cost equal marginal revenue?

4. The supply and demand function for product are $S(x) = 4 + x$ and $D(x) = 16 - x^2$ respectively. Compute consumer's and producer's surplus.

5. Find $\lim_{x \to 2} \dfrac{x^2 - 4}{x - 2}$

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** স্কুল অব বিজনেস**

Bangladesh Open University
MBA Program
Semester: 162 (2nd Level)

Course: Business Statistics for Decision Making   **Due on: October 20, 2017**

Instructions

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Questions

1. (a)   What do you mean by the term "Statistics"? What are its characteristics?
   (b)   Briefly narrate the scope and importance of statistics.
   (c)   Suppose you are in charge of conducting a socioeconomic survey of the CNG drivers in a city. Prepare a suitable questionnaire in this connection.

2. (a)   "Diagrams help us to visualise the whole meaning of a numerical complex at a single glance." Comment.
   (b)   Draw a suitable diagram to represent the following:

	Selling Price Pe: Unit (Tk.)	Qty. Sold	Wages (Tk. crore)	Materials	Others
Factor A :	400	20	3200	2400	1600
Factor A :	600	30	6000	6000	9000

   Show also profit or loss as the case may be.

3. Describe the method of constructing ogive. How would you determine median from it? Draw ogive and find median from the following data:

Marks :	0-15	15-30	30-45	45-60	60-75
Students :	2	15	30	9	4

   .

4. Calculate variance and coefficient of variation from the following data:

Profit (Tk. crores)	No. of Cos.	Profit (Tk. crores)	No. of Cos.
Less than 10	8	Less than 40	70
Less than 20	20	Less than 50	90
Less than 30	40	Less than 68	100

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Bangladesh Open University
MBA Program
Semester: 162 (2nd Level)

Course: Business Statistics for Decision Making   **Due on: December 15, 2017**

(Answer all the questions in own handwriting on A4 size white pages)

1. (a) What is Spearman's rank correlation coefficient? Bring out its usefulness. How does the coefficient differ from Kari Pearson's coefficient of correlation?

   (b) The making of 10 trainees in two skills, programming and analysis are as follows. What is the coefficient of rank correlation?

Programming :	3	5	8	4	7	10	2	1	6	9
Analysis :	6	4	9	8	1	2	3	10	5	7

2. (a) "The regression line gives only the best estimate of the value of quantity in question. We may assess the degree of uncertainty in this estimate by calculating a quantity known as the standard error of estimate." Elucidate.

   (b) Obtain the regression of Y on X and X on Y from the following data and estimate the blood pressure when the age is 50.

Age	Blood Pressure	Age	Blood Pressure
50	147	55	150
42	125	49	145
72	160	38	115
36	118	42	140
63	149	68	150
47	128	60	155

3. (a) Explain Time Reversal Test and Factor Reversal Test with the help of a suitable example.

   (b) Prepare price index numbers for 2008 with 1998 as base year from the following data by using (i) Laspeyres' (ii) Paasche's and (iii) Fisher's method.

Article								
	I		II		III		IV	
Year	P	Q	P	Q	P	Q	P	Q
1995	12.50	9	9.63	4	7.75	6	5.00	5
2005	18.75	9	7.75	6	8.80	10	10	6.507

With the help of above data prove that the Time Reversal Test is satisfied by Fisher's formula.

4. (a) Define Normal distribution? What are the main characteristics of Normal Distribution?

   (b) A firm plants to bid Tk.3000 per tonne for a contract to supply 1,000 tonnes of a metial. It has two competitors A and B and it assumes that the probability that A will bid less than Tk.3000 per tonne is 0.3 and that B will bid less than Tk. 3000 per tonne

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is 0.7. If the lowest bidder gets all the business and the firms bid independently. What is the expected value of the contract to the firm?

(c)   A machine produces bolt which are 10% defective. Find the probability that in random sample of 400 bolts produced by this machine, the number of defectives found

    (i)   Will be at most 30;

    (ii)   Will be between 30 and 50,

    (iii)   Will exceed 55.

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** স্কুল অব বিজনেস**

Bangladesh Open University
MBA Program
Semester: 162 (2nd Level)

Course: Organizational Behavior   **Due on: October 20, 2017**

Instructions

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Questions

1. (a) What is organizational behavior? Discuss the goal of organizational behavior.

   (b) What are the contributing disciplines to the organizational field? Explain each.

   (c) How is organizational behavior concepts addressed in management functions? Explain.

2. (a) What is attitude? How can attitudes be changed?

   (b) What types of barriers prevent people from changing their attitudes?

   (c)   What is job satisfaction? State the major characteristics of a job about which people have effective response to his/her job.

3. (a) What is personality? Explain the factors that determine an individual's personality.

   (b) Identify the key traits in the Big Five personality model.

   (c) How does personality relate to organizational behavior? Explain.

4. (a) What is team? Distinguish between work group and team.

   (b) Why do people join in a group? Explain.

   (c)   Discuss the life cycle of a team.

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Bangladesh Open University
MBA Program
Semester: 162 (2ⁿᵈ Level)

Course: Organizational Behavior   Due on: December 15, 2017

(Answer all the questions in own handwriting on A4 size white pages)

1. (a) What is leadership? Describe the leadership style according to managerial grid.
   (b) Do you agree with the opinion of that "Leaders are born, not made". Why? Explain with criticism.

2. (a) How do strong cultures differ from weak cultures? What two factors determine the strength of the culture? Explain.
   (b) What is organizational change? Describe the sources of organizational change.

3. **Go through the case and answer the question below the case:**

What Do They Want?

Pat Riverer is vice president of manufacturing and operations of a medium-size pharmaceutical firm in the Midwest. Pat has a Ph.D in chemistry but has not been directly involved in research and new-product development for twenty years. From the "school of hard knocks" when it comes to managing operations, Pat runs a "tight ship." The company does not have a turnover problem, but it is obvious to Pat and other key management personnel that the hourly people are putting in only their eight hours a day. They are not working anywhere near their full potential. Pat is very upset with the situation because, with rising costs, the only way that the company can continue to prosper is to increase the productivity of its hourly people.

Pat called the human resources manager, Carmen Lopez, and laid it on the line: "What is it with our people, anyway? Your wage surveys show that we pay near the top in this region, our conditions are tremendous, and our fringes choke a horse. Yet these people still are not motivated. What in the world do they want? "Carmen replied:" I have told you and the president time after time that money, conditions, and benefits are not enough. Employees also need other things to motivate theme. Also, I have been conducting some random confidential interviews with some of our hourly people, and they tell me that they are very discouraged because, no matter how hard they work, they get the same pay and opportunities for advancement as their coworkers who are just scraping by. "Pat then replied: "Okay, you are the motivation expert; what do we do about it? We have to increase their performance".

Questions:

(a) Explain the "motivation problem" in this organization in term of the content model of Maslow and Herzberg.

(b) Do you think this manager is internally or externally controlled? How?

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স্কুল অব বিজনেস
Bangladesh Open University
MBA Program
Semester: 162 (2nd Level)

Course: Human Resource Management   Due on: October 20, 2017

Instructions

➢ **Answer all the questions in your <u>own handwriting</u> on <u>A4 size white paper</u>.**

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Questions

1. (a) What is Human Resource Management (HRM)? Why is it important to an organization?

   (b) What is globalization? Discuss the implications of culture on human resource management?

2. (a) State in brief the process of human resource planning.

   (b) What role does HR manager play in making forecasts of future human resources demand and supply? Explain.

3. (a) What is recruitment? State the dual objectives of recruitment.

   (b) State in brief the steps involved in the selection of employees in an organization.

Note: Submit your assignment to the Coordinator of the Study Center you are attached with.

Bangladesh Open University
MBA Program
Semester: 162 (2nd Level)

Course: Human Resource Management   **Due on: December 15, 2017**

(Answer all the questions in own handwriting on A4 size white pages)

1. (a) What are the differences between orientation and socialization?

   (b) Describe the steps of a training program.

   (c) Explain different methods of training and development.

2. (a) State the purposes of performance appraisal.

   (b) Explain the critical incident method of performance appraisal.

3. **Read the following passage and answer the question that follow:**

   No Matter where You Turn

   John Carlos is a twenty-six year-old white male who was honorably discharged from the service four years ago. Since that time, John has been attending a local college studying personnel management. Entering his last semester, John decided that he should be preparing for his job search. Putting together the necessary materials, he mailed his resumes to a number of companies. Six weeks later, he received a positive response from the Saturn Corporation, a large supplier of defense machinery to the federal government.

   Interviewing for the position of personnel assistant, John knew that he had sound qualifications. He learned however, that he was competing with Beverly Simpson, a twenty-two-year-old white female college classmate. During the interview process, it was determined that both John and Beverly were equally qualified. John, however was given preference and was subsequently offered the job. Beverly, on the other hand, filed a suit against Saturn claiming that she was a victim of sex discrimination.

   Questions:

   1. Do you believe that the Saturn Corporation discriminated against Beverly in giving preference to John? Discuss.

   2. As a personnel specialist at Saturn, what explanation would you give to Beverly?.

   3. Are there any laws that would be supportive of John's hiring?.

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Bangladesh Open University
MBA Program
Semester 162 (2nd Level)

Course: Managerial Economics   **Due on: October 20, 2017**

Instructions

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Questions

1. Distinguish Microeconomics from Macroeconomics. What are the uses and limitations of Microeconomic Theories?

2. Explain demand schedule, demand curve and demand function. Derive curve from the demand function Q = 50 – 10P.

3. What is price elasticity of supply? How is it measured?

4. What is utility? Is it measurable? Describe different approaches to the measurement of utility.

5. Explain the behavior of cost curves in short run. Show the relationship between marginal cost, average variable cost, and average total cost.

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Bangladesh Open University
MBA Program
Semester 162 (2nd Level)

Course: Managerial Economics   **Due on: December 15, 2017**

(Assignment is to be presented in own handwriting on A4 size white pages)

1. What are the characteristics of perfect competition? Under what market conditions a firm is a price taker?

2. Explain the equilibrium of a monopoly firm in the short run. Is monopoly price always higher than the competitive price?

3. How GDP is calculated as sum of expenditure flows.

4. "Economists like to distinguish between nominal and real GDP, because nominal GDP comparisons for different time periods cannot provide a true picture of physical output changes". Do you agree? Give reasons.

5. **Read the following case carefully and answer the questions that follow:**

Shanghai is China's financial and business hub. In late July 2004, with daytime temperatures reaching 37 degrees Celsius, the city's electricity consumption surged to a weekly record of 14.35 million kilowatt hours. The city authorities resorted to asking 2,100 businesses to operate at night, and a further 3,000 others to adjust operating hours.

Even high-profile multinational companies were not spared. General Motors and Volkswagen were ordered to suspend production for more than a week each. Shanghai Volkswagen spokesman Lu Jun explained, "It's a rule. We have to cut power for 10 days … We've cut power and so have had to stop production. It's all over Shanghai".

The Shanghai episode mirrored a nationwide shortage of electric power. In Beijing, on July 22, 2004, the Municipal Power Supply Bureau imposed the capital's first brownout of the year, disrupting supply to suburban areas for 47 minutes in the afternoon. The Chinese government has certainly been working tirelessly to resolve the power crisis. Thermal coal is the principal fuel used to generate electric power in China. In July, Premier Wen Jiabao exhorted, "Railway departments should do their utmost for the transport of coal for electricity generation".2 The Ministry of Railways increased train speed and freight loads, and allocated 90% of freight capacity to transport key materials. In the first half of 2004, Chinese railways shipped 480 million tons of coal, up 12.2% over the same period last year. The Ministry of Communications has also pitched in. It diverted ships from overseas routes to domestic coal

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transport and approved emergency coal transportation on various roads and waterways.

China is the world's second-biggest coal exporter. In 2003, China exported 93 million tons of coal, including 80.8 million tons of thermal coal. To assure supplies to the electric power industry, the Chinese government has limited coal exports to 80 million tons in 2004. China Coal Import & Export Vice President Zhou Dongzhou predicted that exports of thermal coal would fall to 70 million tons.

Since the 1960s, the Chinese government has regulated the supply of thermal coal to electric power plants. It requires coal mines to supply power plants with about one-quarter of coal purchases at a contract price. The government regulates the supply of coal to support its regulation of the electricity industry. In the late 1990s, the Chinese government dissolved the

Ministry of Electric Power, and divided its functions between the State Electricity Regulatory Commission (SERC) and the State Power Corporation of China.

The State Power Corporation owns five of the six transmission grids (Northwest, North, Northeast, Central, and East) and about half of the national generating capacity. Regulation is necessary to ensure that the State Power Corporation does not abuse its monopoly power. The SERC regulates all aspects of the electricity industry, except pricing. With regard to electricity pricing, the SERC's role is to advise the National Development Reform Commission (NDRC). To ensure that electric power generation is economically viable, mines are required to sell coal cheaply to power plants. Typically, the government sets the contract price below the spot market price. For instance, between 2003-04, while the spot market price of thermal coal rose by 25%, the contract price rose by only 10%. Many mines have ignored their contracts with power plants and sold coal on the spot market to earn higher profits. Some power plants cut back production, so exacerbating the national power shortage. Some estimate that the nationwide power shortage will soon reach 30 million kilowatts, which is more than double Shanghai's peak consumption.

With China headed for a power crisis, the government is under pressure to increase electricity prices. In June 2004, following persistent rises in the cost of fuel, the NDRC increased electricity prices by an average of 2.2 fen per kilowatt hour in the East, North, Central, and South grids. But, apparently, this increase has not been sufficient. The threat of a power crisis continues.

Questions:
1. Explain how the impact of a price increase on electricity consumption depends on the price elasticity of demand.
2. The price elasticity of the Indian demand for electricity has been estimated to be -0.65 among residential users and -0.45 among industrial users. If these elasticities apply to China as well, how will the impact of a price increase be spread between residential as compared with industrial users?
3. Many Chinese organizations ignore the market system. For instance, they borrow money from banks and refuse to repay, thus creating "bad debts" for lenders. Likewise, they might consume electricity without bothering to pay the power supplier. Do such organizations cause the demand for electricity to be more or less price elastic?
4. Suppose that the Chinese government regulates the electricity industry through marginal cost pricing.
a. How does the contract price of thermal coal affect an electric power plant's *marginal cost*?
b. If the contract price were raised to 99% of the spot market price, how would that affect

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the electric power plant's production?