

**Chittagong Veterinary and Animal Sciences University**  
**One Health Institute**  
**Masters in Public Health (MPH)**  
**July-December Semester Final Examination 2020**  
**Course title: Anthropology (Theory)**  
**Code: ANP-602**  
**Full marks: 40, Time: 2 hours**

(Figures in the right margin indicate full marks. Answer any 4 questions from the following)

1. What do you mean by 'veterinary anthropology' and 'medical anthropology'? 2+2+4  
How could you use anthropological knowledge to understand spillover risk before emergence? Discuss building behavioral sciences into one health surveillance in a resource-poor settings like Bangladesh with examples.
2. Nipah virus (NiV) outbreaks in Bangladesh have primarily been associated with raw date palm sap consumption, followed by human-to-human transmission. There has been a strong spatial clustering of observed NiV cases in the western part of the country, termed the Nipah belt. The bat reservoir, NiV, and sap consumption occur throughout Bangladesh. No human clusters of NiV encephalitis have been detected in the eastern part of our country. Previous studies show that Nipah virus circulates in bats across Bangladesh and that date palm sap consumption occurs in the East as well. In this context, how will you conduct a study with the anthropological approach and tools? 10
3. What is the 'anthropology of infectious disease'? Discuss the anthropological contribution to infectious disease control strategy with an example of any disease. 2+8
4. Why culture is important while understanding health-seeking behavior? Answer this question with examples. 4+6
5. What do you mean by 'infodemic'? Give examples of infodemic on COVID-19 pandemic. What strategies would you like to take managing it in the COVID-19 situation with the anthropological perspective? 2+3+5

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**Masters in Public Health (MPH)**

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**Course title: Health Economics, Policy Planning and Ethics (Practical)**

**Code: IEP-602**

**Full marks: 20, Time: 1 hour**

(Figures in the right margin indicate full marks. Answer any 4 questions from the following. Each question contains equal mark (4X05))

1. If the market interest rate is 12 %, and the inflation rate is 4 %, calculate the real rate of interest. After calculating the real interest rate, fill in the empty cells of the following table and calculate the undiscounted and discounted benefit-cost ratio, and interpret your results.

Year	Discount factor	Undiscounted		Discounted	
		Cost	Benefit	Cost	Benefit
1		40	0		
2		22	50		
3		15	30		
4		0	15		
Total					

$$PV = 1 / (1+r/100)^n$$

2. A person experienced heart failure at the age of 45. His life expectancy was 75 years. However, he will survive only 55 years due to heart failure. Due to this morbidity, he will have a disability adjustment for 10 years with a disability score of 0.5. If we treat the patient with a new heart failure treatment protocol, he will survive 65 years. In this case, he will have a disability adjustment for 8 years with a disability score 0.4. Calculate the DALYs aversion for the new treatment protocol.
3. 150 people are suffering from lumbar disk prolapse disease. There are three options available for treatment: bed rest, pain medication, and surgery. You are interested in spending 2,500\$ for achieving per quality-adjusted life years. The table represents a hypothetical cost-utility analysis for this scenario. First, Fill in the empty cells of the following table. What treatment option do you think is suitable for this condition compared to bed rest? Interpret your result.

Option	Cost per person	Total cost	QUALY gain	ICER
Bed rest	\$0	\$0	1100 QALY	NA
Pain medication	\$ 2500	\$ 500,000	1400 QALY	
Surgery	\$ 5000	\$	2300 QALY	

4. The following table gives the cost increase in life years and rating of the quality of life for four different treatments.

Treatment	Cost	Increase in life years	Rating of quality of life	QUALY	Cost: QUALY
A	6000	15	0.20		
B	8500	22	0.24		
C	7000	17	0.22		
D	9000	23	0.26		

- Calculate the QUALY for each treatment.
- Calculate the Cost: QUALY for each treatment.
- Based on QUALY only, which treatment would be most effective.
- Based on Cost: QUALY, which treatment would be most effective.

5. Write down the difference between:

- Scarcity Vs. Shortage
- Cost-benefit analysis Vs. Cost-utility analysis
- Economics vs. Health Economic

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Masters in Public Health (MPH)  
July-December Semester Final Examination 2020  
Course title: Environmental and Occupational Health  
Code: EOH-602  
Full marks: 40, Time: 2 hours  
Group – A [ Environment]

Marks : 4 X 5= 20

(Figures in the right margin indicate full marks. Answer any 4 questions from the following)

1. a. What is water pollution ? b. Briefly narrate different diseases originated from swimming pool. 5  
How this can be prevented ?
2. A sedentary male worker in Bangladesh daily required 2400 Kcal energy. On the basis of proximate principle of food, calculate the protein, carbohydrate and fat requirement in grams for that energy gain. 5
3. a. Enumerate the importance of ecological triad for disease causation. b. Why the people of Bangladesh yet free from yellow fever ? 5
4. a. Waste disposal is important for health of the society- explain. b. Illustrate the waste disposal system of Chattogram city corporation. 5
5. a. Arsenic contamination of drinking water is a major public health problem in Bangladesh-make a pen picture of this curse with the remedial measures. 5
6. Write short notes [ any two]  
a. CFC. b. BOA. c. BOD. d. Blocked flea. e. Ocular changes due to Vit. A deficiency. f. COVID-19 and the environment.

Group – B [ Occupational Health]

Marks : 4 X 5= 20

(Figures in the right margin indicate full marks. Answer any 4 questions from the following)

1. a. Narrate the types of occupational hazards. b. Mention the problems faced by the garments workers of Bangladesh. 5
2. a. What are the causes of industrial accidents ? b. How the morbidity and mortality of this hazard can be controlled ? 5
3. a. Enumerate skin diseases of different professions. b. What skin changes occur in case of Arsenicosis ? 5
4. a. Why stress develop among the farmers of Bangladesh ? b. Illustrate the remedial measures to lessen the stress. 5
5. a. What are the objectives of occupational health? b. Road traffic accidents can be controlled by the 4 E, discuss. 5
6. Write short notes [ any two]  
a. First aid, b. Heat stroke, c. PPE, d. Offensive trades, e. Farmer's lung , f. LOTO device. 5

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**Code: HEP-602**  
**Full marks: 40, Time: 2 hours**

(Figures in the right margin indicate full marks. Answer any 5 questions from the following)

1. Define health economics. Write its importance. Briefly describe different types of economic Evaluation. 8
2. What is opportunity cost. Hydrocele operation in Government hospital is not cost effective now a days- Justify. 8
3. Define ethics. Briefly describe principles of ethics. Write very important 04 articles of Helsinki declaration. 8
4. Briefly describe research ethics related to vulnerable groups. Briefly describe 04 issues of publication ethics. 8
5. Write 4 goals of national health policy. What are the common problems of our health care delivery system. . 8
6. Draw planning cycle. Describe components of planning process. 8
7. Write about patients' rights & Doctors' responsibilities to patients. 8

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**Code: ANP-602**

**Full marks: 20, Time: 1 hour**

(Figures in the right margin indicate full marks. Answer any 4 questions from the following)

You will be given a context of highly pathogenic avian influenza (HPAI) and Live Bird Markets (LBMs) in Bangladesh. Based on the given context below develop a research question, propose data collection method, develop data collection guidelines, sampling techniques, and coding keywords.

**Context:**

Bangladesh reported its first outbreak of highly pathogenic avian influenza (HPAI) in poultry in 2007. Since then, a total of 556 outbreaks of AIV in poultry have been reported in Bangladesh. Evidence shows, rapidly increasing demand for poultry products, poor biosecurity, and the trade of poultry via live poultry markets is contributing to the spread of HPAI H5N1 and other HPAI in this country. In addition, researchers have also identified the Live Bird Market (LBM) as a hub of AIV transmission. Between 2007 and 2012 the World Bank disbursed 9.5 million dollars to increase public awareness of avian influenza and to implement several biosecurity and disease surveillance strategies, including monitoring and reporting mechanisms of unusual bird deaths. Moreover, to combat AIV, the Government of Bangladesh (GoB) adopted the first national preparedness and response plan in 2006. There have been numerous efforts to detect, track, and combat AIV from several organizations of government and non-government. However, it is yet to be understood/explored how much has changed since the beginning of AIV in Bangladesh.

This overall situation is a concern for biosecurity and safety for both humans and poultry. Now you will develop a research question, select data collection tools, sampling techniques, participants' inclusion criteria, and develop coding keywords.

1. Based on the given context, develop research questions. 5
2. Select appropriate data collection methods that would be suitable to meet your research question on LBMs? 5
3. What will be your sampling strategy? Who will be your potential respondents conducting this study? 2+3
4. Describe your analytical framework 5
5. Develop coding keywords- Five (5) main themes, ten (10) sub-themes 5

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**Course title: Ecology**

**Code: ECO-602**

**Full marks: 20, Time: 2 hours**

(Figures in the right margin indicate full marks. Answer any 4 (FOUR) questions from the following)

1. a) Compare between the concept of one health and eco-health? 2  
b) What are the key principles of integrating ecosystem thinking into health? 3
2. a) What are the three major principles of ecosystem? 2  
b) Illustrate the linkage between trophic level and biomass productivity. 3
3. a) Describe nitrogen cycle and its importance in brief. 2  
b) What is tropical ecosystem? Can you link some public health issues to tropical ecosystem? 1-2
4. a) Define biodiversity? How do impacts to ecosystems affect public health? 1-2  
b) Name few zoonotic diseases linked to altered food-web which are going to be major health concern in the future 2
5. a) Mention few examples of environmental changes that are linked to effects of public health. 2  
b) What are major pollutions in Bangladesh affecting public health? 3
6. a) Briefly explain zoonotic diseases with examples. 2  
b) Can you establish the support for one health by using COVID pandemic as a case? 3
7. a) Elaborate the concept of ecosystem services. 3  
b) Explain climate regulation as an ecosystem service. 2

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**Course Title: Communication and Behavior (Theory)**  
**Code: COB-602**  
**Full marks: 40, Time: 2 hours**

(Figures in the right margin indicate full marks. Answer the following questions)

5X8=40

1. Define public health communication? What is the importance of communication in public health?
2. What are the components of communication? How are you overcome the barrier of communication?
3. How would you communicate for the importance of physical activity on basis of theory of reason action?
4. Name some important theories of communication. Briefly describe health believe theory.
5. 'What is social cognitive theory? How do you apply this theory for encouraging breastfeeding?



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**Full marks: 20, Time: 1 hour**

(Figures in the right margin indicate full marks. Answer the question)

1. How would you develop communication model for the prevention of covid 19 on the basis of health belief model? What are the pros and cons of this model?