

Sub : **PLAN 471** (Natural Hazards and Disaster Management)

Full Marks : 210

Time : 3 Hours

The figures in the margin indicate full marks.

USE SEPARATE SCRIPTS FOR EACH SECTION

SECTION – AThere are **FOUR** questions in this section. Answer any **THREE**.

1. (a) Explain the factors influencing storm surge. (13)
- (b) Describe the different categories of drought. (12)
- (c) A cyclone is travelling south with a storm centre velocity of 25 mph and a cyclone wind velocity of 117 mph. With respect to the centre of the cyclone, on which side will the strongest wind appear? (10)
2. (a) Describe the maturity and dissipation stage of the life cycle of tornado. (12)
- (b) What measures can be taken to protect river bank erosion? (18)
- (c) "A place can have higher hazard but lower risk". Do you agree with the statement? Justify your answer. (5)
3. (a) Describe the prerequisite atmospheric and oceanic conditions for the development of a cyclonic storm with necessary illustrations. (12)
- (b) Describe the causes of desertification. (8)
- (c) Write down the different forms of tornado. Describe any three of them. (15)
4. (a) Describe the operational procedure of Cyclone Preparedness Program. (12)
- (b) Draw a diagram, showing the organizational structures of Disaster Management Institutions of Bangladesh at national and sub-national level. (18)
- (c) Write short note on 'Standing Order on Disaster'? (5)

SECTION – BThere are **FOUR** questions in this section. Answer any **THREE**.

5. (a) Explain why urban flooding is a concern for Bangladesh due to natural, anthropogenic and climate change factors. (12)
- (b) Distinguish between the terms "Mitigation" and "Preparedness". Briefly discuss the measures included in the preparedness phase of disaster management. (6+8)
- (c) Briefly discuss the financial and economic tools for disaster risk reduction. (9)

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6. (a) "Comprehensive disaster risk reduction covers a wide range of disciplines, sectors and institutions, calling for diverse and expanded forms of partnership" – explain this statement and discuss how this partnership can be developed. (11)
- (b) "Pressure-Release Model" is a framework that outline a hierarchy of casual factors that together create the preconditions of disaster – explain this statement in relation to a potential hazard of Bangladesh. (18)
- (c) Briefly discuss any two environmental management tools those play significant role towards disaster management. (6)
7. (a) Differentiate between "Traditional Model of Disaster Management" and "Expand Contract Model". (14)
- (b) 'Earthquake safety self-evaluation check list' included a number of components – discuss briefly. (15)
- (c) Soil liquefaction and fire are two potential major secondary phenomenon of earthquake in case Dhaka – explain why? (6)
8. (a) How the concept of Risk Sensitive Land Use Planning (RSLUP) can be incorporated in the phases of planning process? (19)
- (b) Briefly discuss the key components of Bangladesh climate change strategy and Action Plan. (16)
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Sub : **PLAN 413** (Urban Management and Governance)

Full Marks : 210

Time : 3 Hours

The figures in the margin indicate full marks.

USE SEPARATE SCRIPTS FOR EACH SECTION

SECTION – AThere are **FOUR** questions in this section. Answer any **THREE**.

1. (a) What is the difference between government and governance? (13)
 (b) List out the features of good governance. (7)
 (c) Recently served difficulties and complexities from legal and governance perspectives were experienced while introducing Uber Taxi service in Dhaka. Describe the existing and potential governance issues involved in it. (15)
2. (a) Why urban governance is becoming complex day by day? (10)
 (b) The World is rapidly urbanizing and number of megacities is increasing. These megacities are governed in diversified ways. Summarize the governance frameworks of these megacities with special reference to the institutions and agencies involved for land use planning, transport development, housing etc., capacities of these agencies, their jurisdiction and coordination. (25)
3. You are employed to improve internal and external governance of a municipality in Bangladesh.
 (a) What sectors or aspects will you consider for improvement? (5)
 (b) What changes or interventions will you make in those sectors or aspects? (18)
 (c) How and why do you think that your intervention will improve governance? (12)
4. (a) What is informal governance? Why understanding and acknowledging informal governance is important, particularly in developing countries? (5+7)
 (b) "Slums are the product of governance failure". Do you agree with the statement? Justify your answer. (10)
 (c) Approaches of governance may be categorized into four types. Name and briefly outline them. (13)

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SECTION – B

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

Draw diagrams where required.

5. The philosophy of "helping those who help themselves" have in reality helped to build fair and equitable cities. Frame your answer in this light of excellent achievements of countries of the world. **(35)**

 6. (a) Discuss the global and local impacts of rapid urbanization. **(15)**
(b) "A good city is a clean, spacious and safe city" – Discuss the experiences of other countries that can help Bangladesh to achieve and manage such quality cities. **(20)**

 7. What are strategies towards achieving sustainable cities? Discuss briefly. **(35)**

 8. (a) What is "good density" in the experts opinion? **(10)**
(b) Show in a chart the myth and reality of high density. **(15)**
(c) Provide examples, with diagrams, where high density did conflict with quality of life or the quality of the cities. **(10)**
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Sub : **PLAN 453** (Environmental and Resource Economics)

Full Marks : 210

Time : 3 Hours

The figures in the margin indicate full marks.

USE SEPARATE SCRIPTS FOR EACH SECTION

SECTION – AThere are **FOUR** questions in this section. Answer any **THREE**.

1. (a) Provide a comparative discussion between traditional view of economics and environmental view of economics with necessary examples. (10)
- (b) Differentiate between "Cowboy Economy" and "Spaceship Economy". Which one you think is more desirable from environment economists perspective? Explain your reasoning. (6+6=12)
- (c) Discuss the process of reaching social optimum level of pollution through bargaining between polluter and sufferer in Coase's theorem. (13)

2. (a) "General thoughts related to Neoclassical economies are: (i) Resources are infinite or substitutable, (ii) Cost benefits are internal, (iii) Long term effects are discounted, (iv) Growth is good." – Do you think these thoughts included environmental consideration? Discuss with appropriate examples. (4×3=12)
- (b) How do you think social optimum level of output varies from market optimum level of output? Discuss with necessary illustration. (10)
- (c) Identify and briefly explain the pareto optimal point in the theory of 'Prisoners' Dilemma'. How these concepts are related with environmental economics? (13)

3. (a) While managing environmental pollution, which one you think is more cost efficient : setting standard or tax imposition? Explain with necessary illustrations. (25)
- (b) Discuss the international problems related with Green Tax. (10)

4. (a) Discuss with example the way tradable permit works. (17)
- (b) How do you think the rate of social discounting affects the sustainability movement? How is it related with investment decision of such projects? Discuss briefly with necessary examples. (15)
- (c) What do you understand by the term 'social choice theory'? Mention the name of two such theories. (3)

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SECTION - B

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

5. (a) Distinguish between – **(5×2=10)**
- (i) Renewable and non-renewable resource.
 - (ii) Stated preference and revealed preference approach.
- (b) Suppose that the wetlands at eastern fringe will disappear in near future and you have got a chance to estimate people's willingness-to-pay in order to guarantee the use of these wetlands for the inhabitants living surrounding this area.
- (i) What method will you use to estimate people's willingness-to-pay? Why will you select the method? **(1+2=3)**
 - (ii) How will you administer your questions to respondents? **(2)**
 - (iii) What steps will you follow to estimate the demand curve for the wetlands of the eastern fringe? **(20)**
6. (a) Distinguish between 'open access' and 'common-pool' resources. **(10)**
- (b) 'Sustainable self governance' is a set of rule systems/institutions that can be applied for managing common-pool resources. Explain the statement. **(15)**
- (c) The computation of costs for protecting and enhancing the natural environment requires assumption on the opportunity cost of environmental regulation. Do you agree with the statement? Justify your answer. **(10)**
7. (a) Marginal Net Benefit (MNB) needs to be equalized for all users while allocating water among competing users. Why does efficient allocation require equal MNB? **(10)**
- (b) How does 'restrictions on transfer' encourage inefficient allocation of water resources? What could be the potential remedies of such problems? Explain briefly. **(20)**
- (c) Define 'augmented marginal cost'. **(5)**
8. Write short notes on the following – **(5×7=35)**
- (a) Hotelling's rule.
 - (b) Dynamic optimization.
 - (c) National Water Policy of Bangladesh (1999).
 - (d) Hedonic Price
 - (e) Indirect costs of protecting the natural environment.
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