

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 – A

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

1. (a) Compare the general characteristics and conditions for formation of cyclone and tornado. (20)
(b) Critically describe the regulatory framework for disaster management in Bangladesh. (15)
2. (a) Compare the direct and indirect consequences of riverbank erosion and drought in Bangladesh from economic and social perspective. (20)
(b) Explain the importance of naming cyclones from the perspective of disaster management. (5)
(c) Briefly describe the characteristics of riverbank erosion in Bangladesh. (10)
3. (a) Every year Bangladesh is affected by cyclone. Suppose, as a planner you are entitled to work in a team to prepare a cyclone risk reduction plan for Bangladesh. Describe how would you prepare the plan. (21)
(b) Describe the disaster management strategies required to be adopted for riverbank erosion at different phases of the disaster. (14)
4. (a) "Disaster Management Act, 2012 enacted to make the activities about disaster management coordinated, object oriented and strengthened, and to formulate rules to build up infrastructure of effective disaster management to fight all types of disaster" — Explain. (20)
(b) Explain how occurrences and effects of drought are enhanced by human activities. (8)
(c) Explain how the state of development in coastal regions can influence impact of tropical cyclone. (7)

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SECTION – B

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

5. (a) With the help of Pressure and Release model — explain the context of urban flooding in Dhaka. (22)
- (b) Briefly discuss the importance of conducting post disaster review. What are the aspects covered in a post disaster review? (5+8)
6. (a) Explain the concept of mainstreaming of disaster risk reduction. (8)
- (b) Networking and partnership among institutions can play a significant role towards disaster risk reduction — Elaborate with relevant example. (10)
- (c) What are the major challenges associated with earthquake resilient development in urban areas of Bangladesh? (17)
7. (a) Explain the structural and non-structural mitigation measures of flood. Briefly discuss the importance of land use planning as a non structural mitigation measure of flood in case of Dhaka. (4+6)
- (b) Briefly discuss the six pillars of Bangladesh Climate Change Strategy and Action Plan, 2009. (18)
- (c) In future, what are the major challenges of flood management in Bangladesh? (7)
8. (a) What do you understand by the term "Risk Sensitive Land Use Planning" (RSLUP)? Explain the activities that needed to be incorporated in the steps of planning process to ensure Risk Sensitive Land Use Planning in Bangladesh. (23)
- (b) Describe the determinants of vulnerability to earthquake. (12)
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Sub : **PLAN 453** (Environmental and Resource Economics)

Full Marks: 210

Time : 3 Hours

USE SEPARATE SCRIPTS FOR EACH SECTION

The figures in the margin indicate full marks.

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

1. (a) Define 'Backstop' and 'Scarcity Rent'. (8)
 (b) Explain different elicitation methods of CVM. (16)
 (c) In efficient groundwater market, how would water price change over time? (11)
2. (a) Specify the reasons that cause "U-shaped Marginal Price Path" of non-renewable resources over time. (10)
 (b) What are the limitations of travel cost method? (10)
 (c) Discuss the difference between "Bio-Centrism" and "Anthropocentrism". (5)
 (d) Write down the real-world scenarios for which Hotelling Rule might not be applicable. (10)
3. (a) "For dynamically efficient allocation of a non-renewable, non-recyclable resource, price has to grow at augmented marginal price"- explain the statement. (20)
 (b) Explain the factors that need to be addressed to ensure sustainable management of common pool resources. (15)
4. (a) What is the possible solution when marginal net benefits are not equalized among competing water users? Illustrate with graph. (15)
 (b) What are the characteristics of 'Spot Pricing'? (10)
 (c) How is "Option Value" different from "Bequest Value" of an environmental element? (10)

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

TERMS AND ABBREVIATIONS HAVE THEIR USUAL MEANINGS.

5. (a) "Neo-classical economical thinking is often blamed for environmental degradation"— do you agree? Justify your answer with appropriate diagram. (10)

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- (b) Compare 'Material balance Model' with 'Material flow Model' as perceived by environmental economist. **(05)**
- (c) Explain with appropriate diagram how market can reach optimum output for society. **(10)**
- (d) What is 'steady state' economy? Write down the basic covenants of steady state economy. **(2+8=10)**
6. (a) "If there are three or more discrete choices no voting system can convert rank preferences of individual preferences over community wide ranking while meeting certain set of criteria"— explain. **(18)**
- (b) "Both consumer and producer bear the cost of pigovian tax in the long run"- do you agree? Justify your answer with appropriate diagram. **(17)**
7. (a) Considering Marginal Abatement Cost (MAC) of three firms explain with appropriate diagram why economic instruments (like tax) are better than command and control instruments (like standard). **(17)**
- (b) What are the considerations one has to make before introducing any tool to avoid market failure? **(18)**
8. Write short notes (Any Five): **(5×7=35)**
- (i) Hick and Kaldor's compensation principle
 - (ii) Median Voter theorem
 - (iii) Logic of collective action
 - (iv) Spaceship and Cowboy economy
 - (v) Tradeable environmental permit
 - (vi) Three efficiency conditions for attaining pareto optimality
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SECTION – A

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

1. (a) Why "Pluralism in Governance" approach is preferable than "Shared Governance" approach? (10)
- (b) What is the difference between "Devolution" and "Deconcentration"? (5)
- (c) Write down the existing governance challenges in transport sector of Dhaka City. (15)
- (d) What are the indicators that need to be checked to ensure transparency in governance approaches? (5)

2. (a) What are the performance criteria needed for urban governance improvement action program? (5)
- (b) Write down your understanding about local governance challenges caused by the existing structure of local government. (20)
- (c) How "Governing Urbanism" is different from "Governing Urbanization"? (10)

3. (a) Explain the overlapping responsibilities of multiple actors in different institutions of urban governance system. (15)
- (b) What are the political economy constraints in effective governance system? (10)
- (c) What are the reasons behind the shift from contemporary governance towards networked governance? (5)
- (d) Specify the difference in scope between governance and government. (5)

4. (a) How "Informality in Urban Settlements" is reshaping formal governance approach? (7)
- (b) Explain the challenges and the opportunities of different elements of effective governance. (20)
- (c) What are the outcomes of "Pro-Growth Governance" and "Welfare Governance"? (8)

SECTION – B

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

5. (a) "Urban Management is understood within a set of rules, under a prevailing institution and practice of particular governance mechanism. Even if the existing support mechanism is not up to the mark to ensure best output, there are much scopes to improve the situation". Do you agree with this statement? Justify your answer. (12)

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- (b) There are many examples around the world where success is achieved in urban service delivery including that in water supply, sanitation and waste management; mobility management; managing slums and informal settlements. What are things those are common in them – discuss, with appropriate examples, with respect to project planning, challenges faced in implementation, innovation in designing solutions and awareness building? (18)
- (c) Differentiate among 'formula grant', 'ad-hoc grant' and 're-imbusement grant'. (5)
6. (a) Traditionally National government's transfers is the main revenue source for local government in developing countries. But there are many other sources. List out them. (10)
- (b) Local government taxation can be evaluated through six criteria. Discuss them. (15)
- (c) There are ten policies for urban infrastructure management. Discuss any five of them. (10)
7. (a) Take the example of Bangladesh Road Transport Authority (BRTA) and explain the limitation of 'traditional approach' to urban management as far as road safety and efficient mobility are concerned. (12)
- (b) If BRTA follows 'market based approach' there will also be problem. Explain why and how? (10)
- (c) Explain how 'participatory' and 'third-way' approaches can improve the performance of BRTA. (13)
8. (a) Discuss the advantages and disadvantages of different urban growth management tools in the context of Dhaka City. (11)
- (b) "Climate change is a new concern for urban managers". Explain why and how? (10)
- (c) How can new technology help to improve urban experience – discuss with respect to digitalization of land management system and application of ICT and GIS in urban transport? (14)
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