

Pakistan Institute of Public Finance Accountants

Model Solutions

Introduction to Climate Change, Policies and Implementation

AGP

Summer Exam-2024

MODEL SOLUTIONS – DISCLAIMER

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Summer Exam-2024 Introduction to Climate Change, Policies and Implementation

- **Q.1.** (i) Reduced water supply
 - (ii) Problems with vegetation
 - (iii) Frequent landslides
 - (iv) Urban flooding
 - (v) Intense rains
 - (vi) Fluctuating temperatures
 - (vii) Disruption of regular life
 - (viii) Drought
- **Q.2.** (i) Restore and protect large areas of cloud forest around the city
 - (ii) Plant more number of trees, it will regulate water flow
 - (iii) Enhanced watershed planning
 - (iv) Rainwater harvesting systems
 - (v) Vegetation to reduce soil erosion and landslides
 - (vi) Natural wetlands like streams and lakes act as sponges, drawing water down through the ground and recharging groundwater supplies
- **Q.3.** A suggestive list of risks:
 - (i) Institutional vulnerability fundamental institutional overlaps, misperception about disaster risk reduction terminologies, jurisdictional clashes, resource gaps
 - (ii) No clear institutional collaborations to attain the policy goals
 - (iii) Lack of clear demarcation between the roles of federal and provincial governments and relevant institutions
 - (iv) Financial resources being made available are inadequate
 - (v) Risk mapping of various disasters, if not done properly will become a challenge to handle
 - (vi) Policy disconnects
 - (vii) Developing a reliable early warning system
 - (viii) Communication between civilians and agencies responsible for early warning
 - (ix) Availability of infrastructure, including telecommunication, power, utilities and transport are resilient to the impact of climate change, particularly to extreme weather events

It can be anything as long as it is related to the policy measures written in the National Climate Policy 2012.

Q.4. A climate is defined as the average weather observed during a period of time. We speak of climate in terms of local, regional and sometimes even global weather. Climate change occurs when the climate deviates from the average climate during a long time period.

Climate change is a long-term shift in global or regional climate patterns. Often climate change refers specifically to the rise in global temperatures from the mid-20th century to present.

A change in the world's climate, persisting for an extended period of time. Climate change occurs as a result of natural conditions or anthropogenic sources changing the composition of the atmosphere or the land use type.

Examples

A suggestive list

- (i) Changing weather pattern
- (ii) Increase in average daily temperature
- (iii) Reduced duration of winter

- (iv) Increased duration of summers
- (v) Smog
- (vi) Urban flooding
- (vii) Decrease in agriculture income due to destruction of crop
- (viii) Decrease in the quality of breathing air
- (ix) Decrease in quantity of clean water
- (**x**) Food insecurity/food shortage

Q.4. b

	To minimize the risks arising from the expected
Changing weather pattern	intensity of extreme weather events such as
Changing Weather Pattern	floods, droughts and tropical
	storms
	To ensure water security, food security and
Decrease in quantity of clean	energy security of the country in
water	the face of the challenges posed by climate
	change
	To ensure water security, food security and
Food insecurity/food	energy security of the country in
shortage	the face of the challenges posed by climate
	change

Missing areas in policy

- (i) Smog
- (ii) Air quality

Q.5. Suggestive list

Transport:

- 1. Increase in the expenditure of the vehicle owner if proper vehicle maintenance is made mandatory
- 2. A fuel efficient public transport system will reduce the number of cars on the roads and the need of buying a new car
- 3. Enforce vehicle emission standards will improve environment and it will also be initially an economic burden on the owner until the time emission controlling devices are put on the vehicles
- 4. Mass transit systems in metropolitan cities will reduce the number of cars on the roads and the need of buying a new
- 5. Non-motorized modes of travel will definitely improve the socio-economic conditions of everyone involved
- 6. Introducing fuel efficient aircrafts while planning fleet upgradation will increase the cost of air travel
- 7. A deteriorating climate change will affect the seaports which will reduce the economic inflow and outflow and hence a negative impact on the economy and income of the people
- 8. A damaged transport network will have a negative impact on the tourism which will also have a negative socio-economic impact on the people of the area which depend heavily on tourism

Similar reasoning can be given for railways and waterways. **Industries**

1. Bringing in emission efficient or similar technologies in production increases the cost of production which will increase the price of the product and thus increasing the burden on an individual of spending more money

- 2. Corporate Social Responsibility will bring in positive changes in the lives of individuals as well as of the community as a whole (there are so many of them, candidate is free to choose whichever he/she deems fit as long as it is a CSR)
- 3. Estimate emissions locally for each industry will increase the price of the product in that industry, hence a negative impact
- 4. Efficient use of inputs such as energy, water and raw materials can make it both a positive impact (by reducing the inputs and emissions thus making living conditions more better) and negative impact because of the change in technology that is required (will increase the price of the product thus a negative impact on the economic conditions)
- **Q.6.** It impacts are both short run as well as long run:
 - 1. Human consumption of water
 - 2. Availability of water for agriculture
 - 3. Contributes to disasters such and floods and landslides
 - 4. Impacts the potential for hydropower development
 - 5. Results in soil erosion
 - 6. Glacial lake outbursts
 - 7. It can increase the groundwater level in short run
 - 8. In the long run it will result in a decrease in water flow and hence exacerbate water shortage
 - 9. Water levels will endanger the agricultural community and its livelihood
 - 10. Increased water floods will decrease the hydropower potential
 - 11. In the long run the required amount of water will not be available to run hydropower facilities
 - 12. It will impact tourism as downstream water melt will destroy the tourism infrastructure
 - 13. Glacial melt will make the mountain communities vulnerable to disasters
- **Q.7.** 1. Conduct nationwide surveys, on gender basis, to gauge women centric opinions regarding authority, decision-making power and resources and other such parameters
 - 2. Develop a national climate change awareness program especially designed for women
 - 3. Ensure advocacy and mass awareness regarding the importance of climate change for both stay-at-home women and working women, rural and urban
 - 4. Incorporate climate change related issues into the formal education systems at all levels of the female gender
 - 5. Arrange women centric climate change sensitization workshops for policy makers at national and provincial levels
 - 6. Integration of gender analysis and gender-sensitive tools (such as assessment, design, monitoring and evaluation) into all areas of adaptation planning, especially for the agriculture sector.

Q.8. Open ended answer, however the project should have the following points

- Baseline description of the project
- What it will achieve
- The impacts of the project (both short and long term)
- What deficiency in the existing system it is targeting
- Benefits accrued to the country/society/individual

Open ended answer, however the scope should cover the following important key words, as a minimum.

- Identification of environmental issue
- Significance of the project in relation to environment
- Potential impacts on the environment
- Mitigating measures
- Environmental impact assessment methods
- Offices/departments involved
- Reference to stakeholders
