1/73 **0305E339** Candidate's Seat No :_____

M.Sc. (Sem.-II) Examination

407

Climate Change

Time : 3 Hours] **May-2017** **[Max. Marks : 70**

Q 1 A) What are the impacts of climate change on water resources and quality. (07)

OR

Q 1 A) Describe the impacts of changes in water resources on other sectors. (07)

Q 1 B) What is water cycle and what are the possible impacts of climate change on the same? (07)

OR

Q1 B) What is sustainable infrastructure and describe the same with respect to water sense. (07)

Q2 A) Write a brief note on crop cycle and add a note on impact of climate change on the same. (07)

OR

Q2 A) Give and account of impacts of climate change on agriculture sector as a whole. (07)

Q 2 B) Write a note impacts of climate change on Fishery sector and global food economy. (07)

OR

Q 2 B) Give a brief account of Climate change impacts on Human health sector. (07)

Q 3 A) What are the adaptation mechanisms of species to counter the stressful conditions arising from climate change? (07)

OR

Q 3 A) What is Forest dispersion ? How climatic changes leads to such shifting ? (07)

Q 3 B) Write a note on ecophysiological responses with respect to temperature and water availability (07)

OR

Q 3 B) Give an account of impacts of climate change on Transportation sector. (07)

Q 4 A) What is Solar Energy ? Write down the production mechanism and planning for Solar PV. (07)

OR

Q 4 A)Describe Climate and Energy Systems and its relevance to various stakeholders in the energy Sector (07)

Q 4 B) Define Renewables. And add a note on Wind Energy as a whole. (07)

OR

Q 4 B)Give a brief account on potential impacts of forest biomass being used for fuel production (07)

Q 5) Describe in few lines for the following: (2 marks each x 7 =14)

1. Hydropower
2. Biomes and Climate Change
3. Watershed Management
4. Tree responses to climate change
5. Forest fires
6. Non renewable energy
7. Habitat shifting

1/73 **0505E388** Candidate's Seat No

M.Sc. (Sem.-II) Examination

408

Climate Change

Time : 3 Hours] **May-2017** **[Max. Marks : 70**

1 A) What do you understand by the term 'impact assessment'? Explain the key determinants of impacts of climate change. (07)

OR

Q 1 A) Highlight the effect of complexities of analysis in impact assessment. (07)

Q 1 B) Write a note on effect of complexities of analysis in vulnerability assessment (07)

OR

Q1 B) Discuss in detail the approaches of sensitivity, vulnerability and adaptability. (07)

Q2 A) What is GIS, adding a note on its applications? (07)

OR

Q2 A) What are the components of GIS ? Elaborate on the same. (07)

Q 2 B) What is Remote Sensing ? Give its advantages and its components. (07)

OR

Q 2 B) Explain in brief the importance of Remote Sensing in any one sector. (07)

Q 3 A) What are the fundamental laws of physics used in global climate models? Describe them in detail. (07)

OR

Q 3 A) With examples, define the difference between climate change and climate variability? (07)

Q 3 B) Make a diagram of earth's radiation budget. And describe the same. (07)

OR

Q 3 B) What are Important climate model components, describe its importance in Climate modeling. (07)

Q 4 A) What are the advantages and disadvantages of future characterization. (07)

OR

Q 4 A) What is an artificial experiment? Discuss the difference between plausible and implausible characterization? (07)

Q 4B) Define analogue. Discuss the difference between temporal and spatial analogue. (07)

OR

Q 4B) What is sensitivity analysis? Using the same how can we make predictions. (07)

Q 5 Describe in few lines for the following: (2marks each x7=14)

1) What is the difference between a vulnerable and resilient natural system?
2) What is the full form of CCIAV
3) What is comprehensive characterization?
4) Discuss the concept of 'time lag'
5) Name and describe One Sensor type
6) What type of sensor is a Thermal camera? And Who is credited with the development of GIS Application?
7) Temporal Resolution

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0805E438

Candidate's Seat No :

M.Sc. (Sem.-II) Examination

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Climate Change

Time : 3 Hours] **May-2017** **[Max. Marks : 70**

Q 1 A) What is Montreal protocol. Explain the status of ratification and phases of removal. (7)

OR

Q1 A) Explain in brief: Gothenburg protocol (7)

Q 1B) Write a short note on UNFCCC (7)

OR

Q1B) Write a short note on subsidiary bodies of CDM. (7)

Q2 A) Explain JI in detail using an example (7)

OR

Q2 A) Give the Structure, Objective and commitments of Kyoto protocol (7)

Q 2 B) Explain Emission Trading, Cap and trade giving an example. (7)

OR

Q 2 B) Explain: Environmental Problems in details (7)

Q 3 A) India's Technology Needs Assessment under National Action Plan on Climate Change (NAPCC) (7)

OR

Q 3 A) Describe briefly National Action Plan of USA (7)

Q 3 B) Give an account on GHG reduction initiatives by different countries (7)

OR

Q 3 B) Discuss Clean energy and energy efficiency related regulations in India (7)

Q 4 A) Write a short note on Cost benefit analysis (7)

OR

Q 4 A) Discuss worldwide Climate Change related policies (7)

Q 4B) How to address climate change adaptation with the help of Policies (7)

OR

Q 4 B) Describe in detail India's Response to Climate Change (7)

Q 5 OBJECTIVES (1x14=14)

1. Why emissions are stated in Mt CO_2 eq?
2. Which country has the highest per capita emission of GHG?
3. Eutrophication
4. Define Annex -1 Countries
5. National Solar Mission
6. Recently, COP was held when and Where
7. When did Kyoto protocol come into force?
8. UNFCCC and IPCC
9. COP and MOP
10. When was the use of CFCs banned?
11. Afforestation
12. AAU
13. Trade
14. Where (country) and when (year) did COP 8 happen?

1005E478

Candidate's Seat No :___

M.Sc. (Sem.-II) Examination

410

Climate Change

May-2017

Time : 3 Hours] [Max. Marks : 70

Q 1 A) Discuss the case study of acid rain in Canada in detail. (7)

OR

Q1 A) What factors are considered while choosing an IAM? Discuss the benefits of integrated assessment. (7)

Q 1B) Discuss different tools in mitigation of Climate change (7)

OR

Q1B) What is the difference between integrated assessment and integrated assessment modeling? What are the limitations of an IAM? (7)

Q2 A) Explain 'Burdens' in a Climate Change context (7)

OR

Q2 A) Write a Shortnote on Developed vs Developing country (7)

Q 2 B) Define Load Sharing with Case Study of Nepal (7)

OR

Q 2 B) Explain in brief Equity Principles and Burden sharing Rules. (7)

Q 3 A) Write a Shortnote on 'Climate Justice' (7)

OR

Q 3 A) Describe briefly Climate Intervention (7)

Q 3 B) Are Climate Spectics Right? Discuss Global Warming Skeptics' Arguments (7)

OR

Q 3 B) Write a shortnote on Climate Ethics (7)

Q 4 A) Define Sustainable Development? Discuss any four Sustainable Development goals. (7)

OR

Q 4 A) What is Ecological Foot Print? Give a proper Case study for the same. (7)

Q 4B) Give a comment on 'Sustainable Cities- Why they matters' (7)

OR

Q 4 B) Give an account on Multi-stakeholder partnerships & voluntary Commitments with respect to Sustainable Development (7)

Q 5 OBJECTIVES (1x14=14)

1. Ecological Foot print
2. Define 'Sustainable Energy for all'
3. IAM
4. GCM.
5. RIO+20
6. ALBEDO MODIFICATION POSES
7. BECCS
8. CER.
9. Purpose to construct an IAM
10. Ocean Iron Fertilization
11. Developing Countries
12. Carbon Foot Print
13. UNEP
14. Carbon Sequestration