

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: M.TECH
BRANCH: ENV SC & ENG

SEMESTER : III
SESSION : MO/19

SUBJECT: CE563 CLIMATE CHANGE AND ADAPTATION

TIME: 3 HOURS

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
-

- Q.1(a) Illustrate the radiation budget of shortwave and long wave radiations. [5]
Q.1(b) Explain any two important climatic factors which can influence the natural climate. [5]
- Q.2(a) Compare natural and anthropogenic causes of climate change. [5]
Q.2(b) Annual anthropogenic emissions of CO₂, CH₄ and N₂O are estimated to be 27000MtCO₂/yr, 370MtCH₄/yr, and 6Mt/ N₂O/yr. Calculate the carbon dioxide equivalence for 100years. GWP₁₀₀ for CH₄=24, N₂O=296. [5]
- Q.3(a) Write the influence of climate change in glacier melting and its consequences. [5]
Q.3(b) Critically write the uncertainties in climatic projections in climate models. [5]
- Q.4(a) Summarize the adaptation and risk management practices for climate change. [5]
Q.4(b) List and explain international initiatives for combating climate change. [5]
- Q.5(a) Assess the carbon credit and emission trading systems. [5]
Q.5(b) Give an outline of carbon footprint concept. [5]

:::::27/11/2019:::::M