

**DEPARTMENT OF GEOLOGY & GEOPHYSICS  
INDIAN INSTITUTE OF TECHNOLOGY  
KHARAGPUR – 721 302**

Date..... FN/AN TIME: 2 Hrs Full Marks: 70 No. of Students: 25 M.Sc. 1<sup>st</sup> year (2-Yr)  
Mid Spring Semester, 2010 Sub No. GG40012 Sub. Name: *Applied Paleontology*

*Instruction:* Attempt all the questions. Marks are indicated against each.

- Q. 1 Describe different steps in processing of calcareous microfossils? (10)
- Q. 2 What are the importance of micropaleontology in paleoclimatic and paleoceanographic reconstructions? (10)
- Q. 3 Describe biostratigraphic importance of planktic foraminifera? Write various climate zones with their characteristic planktic foraminiferal assemblages. (10)
- Q. 4 Write short notes on any *four* of the following: (4x5=20)
- (i) Paleoceanographic importance of calcareous nannofossils
  - (ii) Marine diatoms as time markers and productivity indicators
  - (iii) Microhabitat of Radiolaria
  - (iv) Paleoecology of Ostracodes
  - (v) Importance of Conodonts in biostratigraphy
- Q5. What are the different techniques for deciphering paleobiology? 6
- Q6. What is the basic morphological design of Agnatha? Discuss on the morphological changes that occurred during the evolutionary path comprising Placodermi → Osteichthyes → Amphibia. 4+10=14