

PART II (20 Marks)

6. Answer **any Two** questions : 7×2=14
- a) What are the probable causes that lead to the movement of Antarctic Bottom Water (AABW) current? What are the characteristics of AABW?
 - b) What are the different types of plate boundaries? In which type of plate boundaries do you expect 'Black-smokers' and 'White-smokers'? What are the probable causes of variation of these colors?
 - c) Do you consider presence of Mn-Oxide 'Halo' surrounding sulfate or sulfide deposit as an essential criterion? Justify your answer with necessary sketches.
7. Write notes on (**any Two**) : 3×2=6
- a) Cyprus type sulfide deposits;
 - b) Enrichment process of Mn-nodules;
 - c) Characteristics of Galapagos 'Rose Valley'

B. SC. (GEOLOGICAL SCIENCES) EXAMINATION, 2022

(3rd Year, 2nd Semester)

OCEANOGRAPHY AND MARINE SCIENCE**PAPER – DSE/TH/03B**

Time : Two hours

Full Marks : 40

(Use a separate Answer script for each Part)

PART I (20 Marks)**(Answer any four questions) (4×5=20)**

1. Discuss briefly that primary production of microorganisms varies geographically and seasonally.
2. Describe the major features of the continental shelf and continental slope.
3. Describe the most common types of cosmogenous sediment and write the probable source of these particles.
4. Why couldn't Alfred Wegener convince most scientists that the continents were indeed moving across the earth's surface?
5. Write short note (**any two**) on :
 - a) Vertical distribution of nutrients in the oceanic province
 - b) Depth zonation of oceanic province
 - c) Biogenous sediments