C.S.E. GEOLOGY (MAIN) - 2004 PAPER - I

Time Allowed: Three Hours

Maximum Marks: 300

Candidates should attempt Questions I and 5 which are compulsory and any three of the remaining questions selecting at least one question from each Section.

SECTION A

I.	 Write in about 200 words on any three of the following: (a) 'Orogeny' and 'Epeirogeny.' (b) Two major landforms. (c) Indian Remote Sensing Satellites. (d) Stress-strain relationship in elastic materials. 	20 x 3 = 60		
2.	Discuss in detail the concept of 'Plate Tectonics'. Is it 'Continental Drift'?	t synonymous with 60		
3.	Write about the following:(a) The basic concepts of Geomorphology.(b) Applications of Remote Sensing in Geology.	$30 \ge 2 = 60$		
4.	Discuss the classification and mechanics of folds. Make neat your answer.	sketches to illustrate 50+ 10=60		
SECTION B				
5.	 Answer any three of the following, each in about 200 words: (a) Preservation of fossils. (b) Lithostratigraphic classification of Sedimentary rocks. (c) Tectonic framework of India. (d) Rocks as construction material. 	20 x 3 = 60		
6.	Discuss the evolutionary trends in Hominidae.	60		
7.	Discuss the following:(a) Economic importance of Phanerozoic rocks of India.(b) Paleogeography of the Indian Subcontinent.	$30 \ge 2 = 60$		
8.	Write about the following:(a) Management of groundwater.(b) Geological investigations of a Dam site.	$30 \ge 2 = 60$		
PAPER – II				
Time Allowed: Three Hours Maximum Marks: 300				
Candidates should attempt Questions 1 and 5 which are compulsory and any three of the remaining questions selecting at least one question from each Section.				
SECTION A				

SECTION A

- 1. In about 200 words, explain any three of the following:20(a) Symmetry of Isometric System with forms and examples.20(b) Zoning in plagioclase feldspar and its genesis.20(c) Phase rule and metamorphism.20(d) Diagenesis as a sedimentary process.202. Give the salient features of structural classification of silicates. Describe arty one
- 2. Give the salient features of structural classification of silicates. Describe arty one mineral group belonging to the Nesosilicate class, giving the chemical composition, physical properties and occurrence. 60
- 3. Write explanatory notes on the following:

	(a) Ultramafic rocks in Ophiolite sequence, their petrography and petrogenesis.			
		30		
	(b) Facies of contact metamorphism and their characteristics.	30		
4.	Define sedimentary facies. Describe continental glacial and glacio-fluvial faci	ies		
	giving their salient characteristics with an Indian example.	60		
	SECTION B			
5.	In about 200 words each, write notes on any three of the Jollowing :			
	(ii) - ii-iig-ii-ii-ii	20		
	(b) Classification of resources and reserves of ore.	20		
	(c) Composition of meteorites, their classification and significance in geologic	cal		
		20		
	(d) Environmental impact of opencast mining.	20		
6.	Write notes on the following in brief:			
	(a) Lindgren's classification of Hydrothermal deposits and their salient chara teristics.	ac- 30		
	(b) Lower Gondwana coalfields of India; their geological setting and converse.	oal 30		
7.		.nd 60		
8.	Write notes on the following, in brief:			
	(a) Definition of trace elements. Goldschmidt's rules for the distribution of trace elements and later modifications of these rules.	ice 30		
	(b) Landslides as natural hazards, their causes, impacts and measures of the mitigation.	eir 30		