2018

CBCS

3rd Semester

GEOLOGY

PAPER—C6T

(Honours)

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Sedimentary Petrology

Group—A

1. Answer any *five* questions :   5×2

(a) Why quartz is more common constituent of sedimentary rock ?

(b) Match the Column 'A' with Column 'B'.

A	B
Gravel	Suspension load
Sand	Saltation load
Mud	Traction load

(c) What is breccia ?

(d) What is microbial microitisation ?

(e) What is meant by textural inversion ?

(f) Differentiate between a solution breccia and a collapse breccia.

(g) Define sorting and standard deviation.

(h) What do you mean by liquefied flow ?

Group—B

2. Answer any *four* questions : 4×5

(a) Write down the Dunham's classification of limestone.

5

(b) Differentiate between (any *two*) : 2×2½

   (i) Orthospar and neomorphic spar.

   (ii) Graded bedding and repetitive bedding.

   (iii) Lithic arenite and greywacke

(c) (i) Define Reynolds Number (R_e) and Froude Number (F_r) and mention their geological significances.

   (ii) What are debris flows and mud flows ?   3+2

(d) (i) Write down the Bauma sequence mentioning the dominant fluid flow responsible for such sequence.

   (ii) Differentiate between current ripple and wave ripple.   3+2

(e) What are the factors that control the precipitation of $CaCO_3$ in oceans and how ?   5

(f) What factors control the textural maturity in sedimentary rocks such as sandstone ? What is textural inversion ?

Group—C

3. Answer any *one* question :   1×10

(a) Write a note on the diagenetic processes involved in the lithification of siliclastic sediments.

(b) Describe any *four* of the following sedimentary structure with neat sketches (wherever necessary) :   4×2½

   (i) Flaser bedding

   (ii) Convolute lamination

   (iii) Stromatolites

(iv) Load cut and flame structure

(v) Hummocky cross-stratification.

———