

ACTIVITY CODE: 1903106021

B. Sc. 6th Semester (Honours) Examination, October 2020

GEOLOGY

Course ID: 62016

Course Code: SH GEL-603DSE-3(T)

Course Title: River Science

Time: 1 Hour 15 Minutes

Full Marks: 25

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

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

1. Answer *any five* of the following questions:

1×5=5

- a) Where does the River Ganges enter into plain tract?
- b) What is a floodplain?
- c) Define an Effluent River.
- d) What do you mean by power of a stream?
- e) What is a valley fill?
- f) Mention three sediment transport processes in river.
- g) What is ox-bow lake?
- h) What is knickpoint?
- i) Define sediment yield.
- j) Mention three main components of fluvial weathering.

2. Answer *any two* of the following questions:

5×2=10

a) Match the following columns:

<u>Column-I</u>	<u>Column-II</u>
(i) Thalweg	(i) Unstable (erodible) banks
(ii) Point bar	(ii) Catchment areas
(iii) Ephemeral river	(iii) Deepest part of a channel
(iv) Drainage basin	(iv) Seasonal river
(v) Braided rivers	(v) Meandering river

b) What are the important parameters of palaeohydrological studies? How do the palaeohydrological studies useful in basin analyses?

2+3 = 5

Contd.....2

- c) Define catchment area of a river. Draw a drainage network showing different orders of stream channels within a fifth-order catchment area. $2+3 = 5$
- d) What are the four end types of river channel patterns? Compare between the longitudinal and cross profile of a river. $2+3 = 5$
- e) Describe briefly different depositional landforms of a river.

3. Answer *any one* of the following questions: $5 \times 2 = 10$

- a) Mention different types of drainage patterns with sketches. How does the drainage pattern of an area help to infer about the subsurface geology? $5+5 = 10$
- b) Describe the response of river to tectonic and human disturbances.
- c) Define fluvial geomorphology. Describe the major applications of fluvial geomorphology. $5+5 = 10$
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