2020

GEOLOGY — HONOURS — PRACTICAL

Paper : CC-1P

Full Marks : 30

The figures in the margin indicate full marks.

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

1. The arrival time of P waves (t_p) and S waves (t_s) are recorded in the following stations.

(a) Plot the arrival time differences ($t_s - t_p$) against arrival time of P wave to produce a Wadati diagram.

(b) Determine the time of occurrence (t_0) of the earthquake. 10+5

Recording Station	Time of day (hr : min)	t_p(sec)	t_s(sec)
A	23 : 26	44.34	47.90
B	23 : 26	47.34	52.16
C	23 : 27	00.48	6.55
D	23 : 27	1.80	09.00
E	23 : 27	1.90	10.10
F	23 : 27	2.23	10.10
G	23 : 27	3.11	12.00
H	23 : 27	3.49	12.79
I	23 : 27	06.06	18.36
J	23 : 27	07.07	19.69
K	12 : 25	08.30	21.40
L	12 : 25	11.10	26.30
M	12 : 25	11.50	26.20
N	12 : 25	27.70	37.60

2. In an area, a soil profile shows dark humus rich soil followed by ashy grey or white coloured soil. Below it, lies hard rock. Identify the soil and draw a labelled sketch of the soil profile. Also denote the climate where it is formed. 9

3. Draw a labelled sketch of the soil profile (*any one*) and give a brief description

(a) Podzol

(b) Oxisol 6
