



ELIZADE UNIVERSITY, ILARA-MOKIN
DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING
CVE 413 : ENGINEERING SURVEYING AND PHOTOGRAMMETRY
EXAMINATION FOR FIRST SEMESTER 2020/2021 SESSION

Instructions: Answer **four** questions in all, **Questions 2 and 3** are compulsory,

Time Allowed: 3 Hrs **3 units**

A handwritten signature in black ink, appearing to be 'A. A. A.' followed by a flourish.

HOD'S SIGNATURE

Question 1.

20marks

- a) Direct methods of contouring requires finding vertical and horizontal controls of the points which lie on the selected contour line. What instrument is commonly used for finding the
- i. vertical control
 - ii horizontal control. **(3 marks)**
- b) With the aid of diagrams briefly (two to four sentences) explain the following methods of contouring.
- i. Method of Cross-Section
 - ii. Radial Line Method or Tacheometry Method
 - iii. Method of Cross-Section is mostly suitable for what type of project?
 - iv. Radial Line Method or Tacheometry Method is suitable for what type of project? **(6 marks)**
- c) Study the contour map in Figure Q1 and identify the contour features present. Identify the features at points with label 1 to 10 as well as one (2) other additional point or area. **(11 marks)**

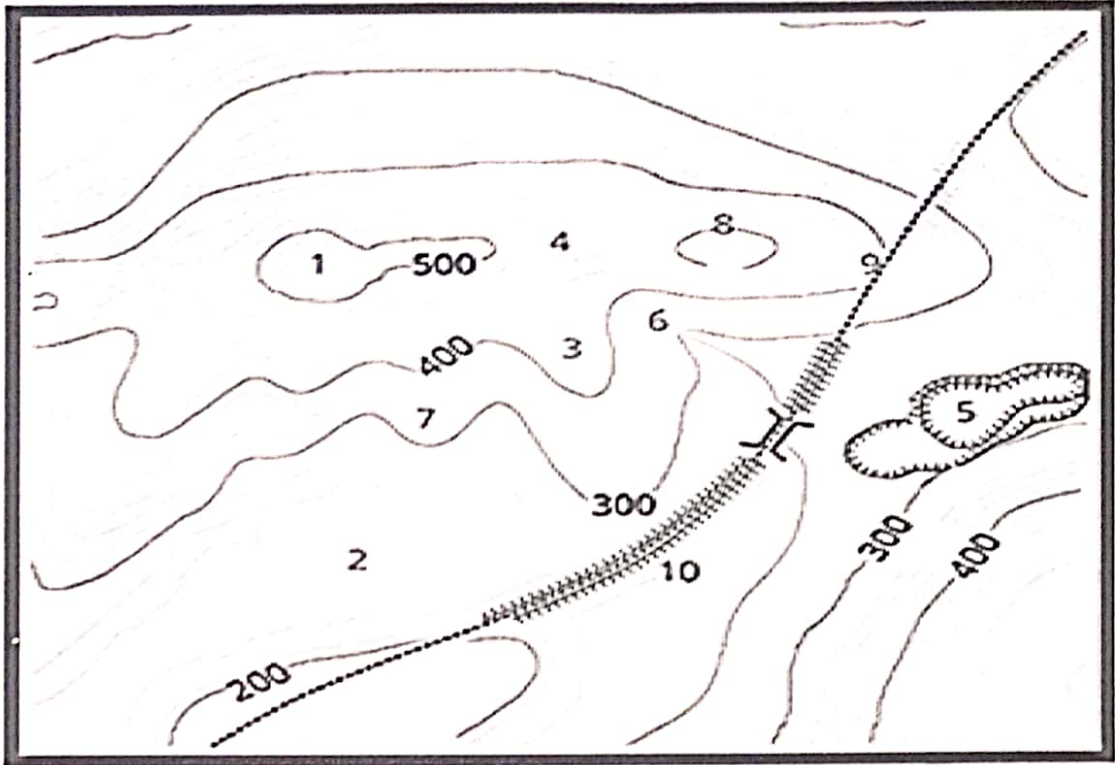
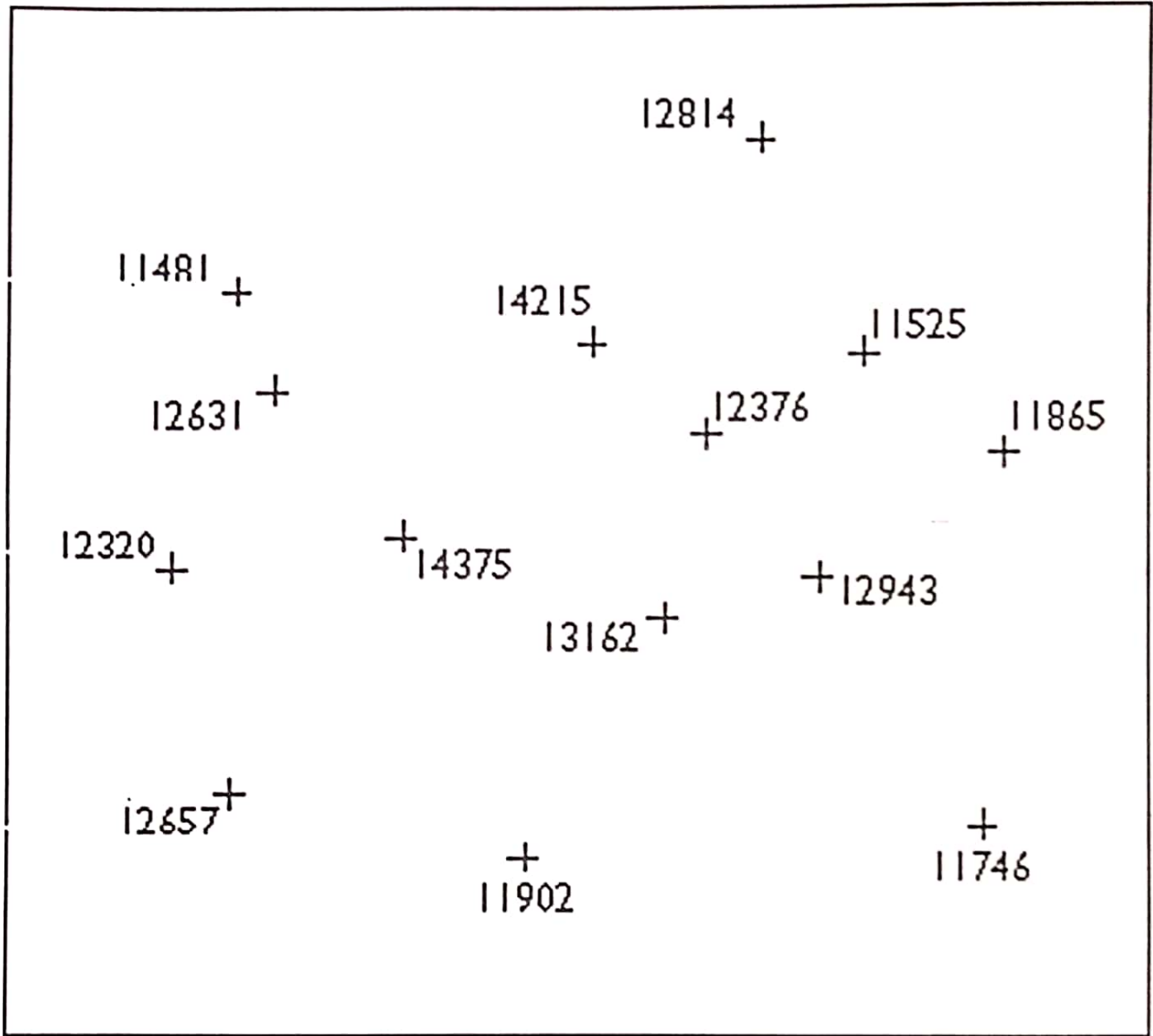


Figure Q1

Question 2.

20marks

Figure Q2 shows the spot elevations in meters of a place, with the use of interpolation by arithmetic calculation, draw the contour map of the area.



Contour Interval = 500

Question 3.

40 marks

- a) Some contouring features are shown from Figures Q31 to Q34. Identify them by names and define each of the features in words. (12 marks)
- b) Define the following; (4 marks)
 - i. . Cliff
 - ii. Gentle slope

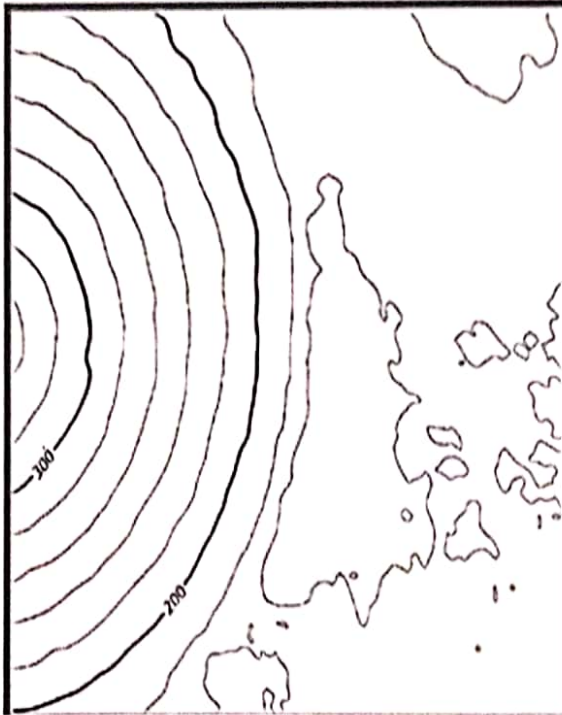


Figure Q31

Figure Q32

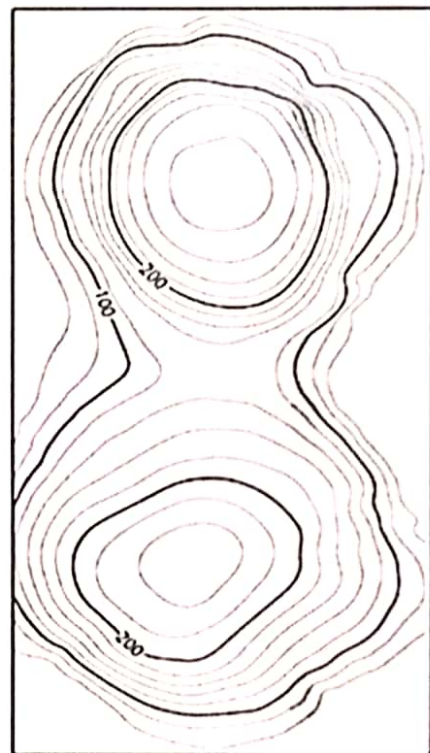
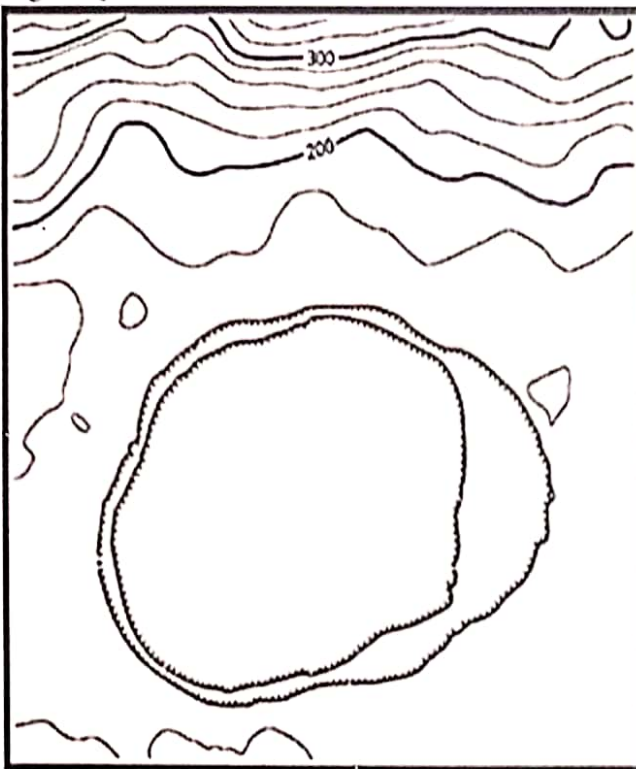


Figure Q33

Figure Q34

- c) Using the topographic map in Figure 3a and the answer sheet provided in this question, answer the following questions

- (i) Give the elevation of the following point (give the elevation as a range) a, b, c, d, e, f, g, h, i, j and k (8 marks)
- (ii) Which direction is the river shown in the topographic map flowing (2 mark)
- (iii) Construct the profile along line AA' and BB' in the sheet provided (10 marks)
- (iv) Calculate the gradient of the hill slope between d and g on the topographic map in m/km (2 marks)
- (v) What is the actual horizontal distance between point d and f (2marks)

- i) a....., b....., c.....
 d....., e....., f.....
 g....., h....., i.....
 j.....k.....
- ii)

iii)

