FEDERAL UNIVERSITY OF TECHNOLOGY MINNA

SCHOOL OF ENVIRONMENTAL TECHNONOLOGY
DEPARTMENT OF SURVEYING AND GEOINFORMATICS
SECOND SEMESTER EXAMINATION 2017/2018 SESSION

COURSE CODE: SVG 221
COURSE TITLE: ENGINEERING SURVEY

TIME: 2 HOURS
INSTRUCTION: ANSWER QUESTION ONE (1) AND TWO (2) AND ANY OTHER ONE.

Q1 (a). Two roads having deviation angle 45° 48' 00" are to be joined by 180m radius curve. The change of the intersection point is 180m radius curve. The change of the intersection point is 3123.8m calculate the setting out data required to peg the curve at continuous chainnage with peg at 30m interval, tabulate your readings.

1 (b)

(i) Explain different types of curves; diagram is necessary.
(ii) Explain either double theodolite or theodolite and tape method of setting out a curve.

Q2 (a) Prepare a table of end areas versus depth of fill from 0 to 16m with an increment of 2m for level sections 30m wide level road bed and slid slope of 2 to 1. Do also calculate the volume of Earthwork requires to fill the depth using:

(i) Volume by mean area method
(ii) Volume by Trapezoidal rule
(iii) Volume by Prismodal rule
(iv) Apply prismodal correction to the calculated volume

(b) (i) Distinguish between volume and Area.

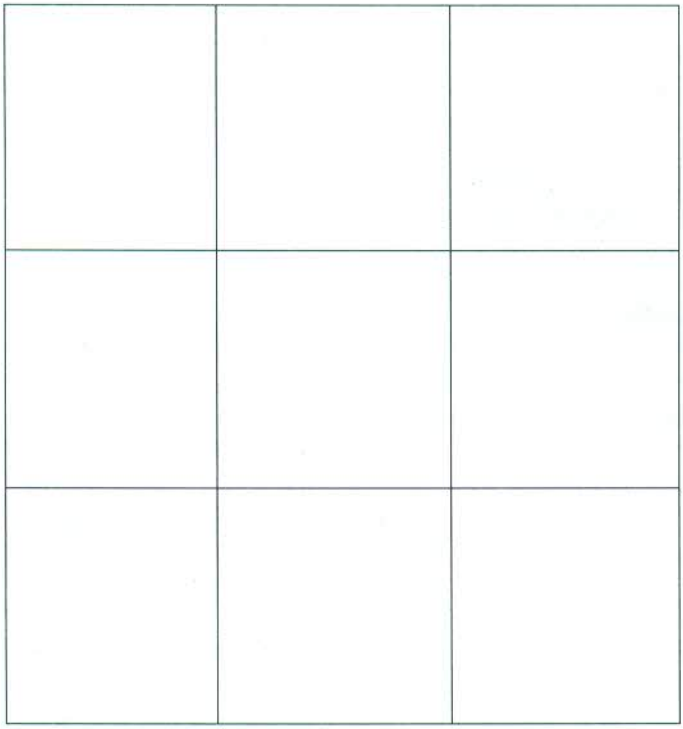
Q3 (a) The management of Federal University of Technology Minna, gives the Faculty of Environmental Technology a contract to construct a dam at Gidan Kwano Campus, explain the duty of the following professions in executing the job.

(i) Surveyor
(ii) Architect
(iii) Quantity Surveyor
(iv) Civil Engineer
(v) Builder

Q3. (b)

(i) Explain the procedure for carrying out route survey.
(ii) Enumerate the procedure for setting out simple circular curve.

Q4 (a) A grid of reduced levels taken on existing ground at the proposed site for building is shown in the figure below. The formation level for the excavation is to be at the reduced level of 10m. Calculate the volume of earthwork to be excavated.



Q4 (b)

(i) What is sectioning

(ii) Distinguish between Longitudinal and cross section

BEST OF LUCK