CE (New)

G 1550 (Pages : 2) Reg. No.....

Name.....

SAINTGITS COLLEGE OF ENGINEERING LIBRARY KOTTAYAM

B.TECH. DEGREE EXAMINATION, MAY 2015

Fourth Semester

Branch : Civil Engineering

CE 010 405—SURVEYING—II (CE)

(New Scheme—2010 Admission onwards)

[Regular/Improvement/Supplementary]

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*
Each question carries 3 *marks.*

1. Explain phase of signals.
2. What do you mean by base net ?
3. List the different methods of locating soundings.
4. What is the principle of total station ?
5. What do you mean by Astronomical triangle ?

(5 × 3 = 15 marks)

Part B

Answer **all** *questions.*
Each question carries 5 *marks.*

6. What do you mean by strength of figure ?
7. Explain method of correlates.
8. Differentiate between microwave and visible light instruments.
9. Explain the concept of remote sensing.
10. Define and explain celestial sphere.

(5 × 5 = 25 marks)

Part C

Answer **all** *questions.*
Each full question carries 12 *marks.*

11. Explain eccentricity of a signal. How would you correct the observations made upon an eccentric signal ?

Or

12. How could you determine the intervisibitily of triangulation stations ? Give in a tabular form the classification of triangulation based upon accuracy.

Turn over

SAINTGITS COLLEGE OF ENGINEERING LIBRARY KOTTAYAM

13. Determine the most probable values of the angles of a triangle ABC, where :

$\angle A = 62° 14' 12''$, Weight = 1

$\angle B = 48° 12' 14''$, Weight = 3

$\angle C = 69° 33' 28''$, Weight = 2

Or

14. Find the most probable values of angles α, β, γ from the following observations at one station :—

$\alpha = 38°12' 26.5''$ Weight = 1

$\beta = 32° 45' 13.2''$, Weight = 2

$\alpha + \beta = 70° 57' 38.6''$, Weight = 2

$\alpha + \beta + \gamma = 126° 28' 0.6''$, Weight = 3

$\beta + \gamma = 88° 15' 37.8''$, Weight = 1

15. Describe the various methods of plotting the soundings.

Or

16. Discuss the principle of electromagnetic distance measurement. Explain how EDM lines are reduced.

17. (a) Explain how do you determine the focal length of the Camera lens of a photo-theodolite.

(5 marks)

(b) The distance from two points on a photographic print to the principal line are 42.36 mm to the left and 38.16 mm to the right. The angle between the points measured with a transit is 30º 45'. Determine the focal length of lens.

(7 marks)

Or

18. The scale of an aerial photograph is 1 cm = 160 m and the size of the photograph is 20 cm × 20 cm. If the longitudinal lap is 65% and side lap = 35%, determine the number of photographs required to cover an area of 232 km^2.

19. Determine the azimuth and altitude of a star with the following data :—

Latitude of observer	= 48° N
Hour angle of star	= 43°
Declination of star	= 18° 20' N

Or

20. Write notes on :

(i) Spherical triangle. (ii) Zenith and Nadis.

(iii) Declination. (iv) Right ascension.

(5 × 12 = 60 marks)