Register No.:

582

October 2017

Time – Three hours
(Maximum Marks: 75)

[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory. Answer any FOUR questions from the remaining in each PART – A and PART – B.

(2) Answer division (a) or division (b) of each question in PART-C.

(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and 10 marks in PART – C.]

PART – A

1. What are the principles involved in surveying?
2. What do you mean by tape correction?
3. Define back bearing and fore bearing.
4. What is declination?
5. What are the accessories used in levelling?
6. What are the classifications of levelling?
7. What is check levelling?
8. Write any two uses of contour.

PART – B

9. Explain any one cross staff.
10. Explain about plane surveying and geodetic surveying.
11. What is meant by compass traverse? Write their types.
12. What are the causes of local attraction?
13. What is automatic level? Write its advantages.
14. Explain any three errors in levelling.
15. Explain direct methods of contouring.
16. Write all the benefits of GIS.

[Turn over.....

PART – C

17. (a) Explain about the principles involved in surveying.

(Or)

(b) What are the instruments used for chain surveying? Explain about it.

18. (a) The following bearings are observed to run a closed compass traverse ABCDE. At what station do you suspect local attraction? Find the corrected bearings.

Line	FB	BB
AB	75° 05'	254° 20'
BC	115° 20'	296° 35'
CD	165° 35'	345° 35'
DE	224° 50'	44° 05'
EA	304° 50'	125° 05'

(Or)

(b) Calculate the included angle from the bearing given for an anti-clockwise close traverse ABCDE. Apply check.

Line	FB	BB
AB	107° 15'	287° 00'
BC	22° 00'	202° 00'
CD	281° 30'	101° 30'
DE	189° 15'	90° 15'
EA	124° 45'	304° 45'

19. (a) What are levelling staffs? Explain its types.

(Or)

(b) Explain the following technical terms in levelling:
(i) Back sight (ii) Fore sight (iii) Intermediate sight (iv) Line of collimation and (v) Bubble line.

20. (a) Write the field procedure for profile levelling with neat sketch.

(Or)

(b) Explain check levelling and reciprocal levelling.

21. (a) The area enclosed by contours at the site of reservoir and the face of proposed dam as computed by Planimeter are as shown below. Taking 1000m as the bottom level of reservoir and 1030m as the highest level as achievable, compute the capacity of reservoir.

Contour level	Area in m^2
1000	400
1005	1500
1010	3000
1015	8000
1020	18,000
1025	25,000
1030	40,000

(Or)

(b) What are the various types of maps in GIS? Explain it.
