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BICE-004

B.Tech. CIVIL ENGINEERING (BTCLEVI)

Term-End Examination

00923

June, 2018

BICE-004 : ADVANCE SURVEYING

Time : 3 hours *Maximum Marks : 70*

Note : *Attempt any* ***five*** *questions. All questions carry equal marks. Assume missing data, if any, suitably. Use of scientific calculator is permitted.*

1. Describe the following terms in detail : $4 \times 3\frac{1}{2} = 14$

(a) Tachometry

(b) Triangulation

(c) Photogrammetry

(d) Trilateration

2. (a) Explain the principle of stadia methods. 5

(b) Differentiate between tangential and substance bar systems. 4

(c) Describe the three-point problem in hydrographic surveying and its solution. 5

3. (a) Explain compound curves, reverse curves and transition curves. 6

(b) Describe the process of setting out curves by offsets and by theodolite. 8

4. (a) Explain "Reduction to Center" applied in triangulation. 8

(b) Differentiate between primary and secondary triangulation. 4

(c) What is parallax in photogrammetry ? 2

5. (a) Describe, in detail, EDM and its advantages. 6

(b) Discuss the use of automatic laser level for precise levelling. 6

(c) What do you understand by trigonometric levelling ? 2

6. (a) How do you determine the latitude and longitude of a place on Earth ? 6

(b) Explain the following terms : Celestial equator, Hour angle, Azimuth and Right ascension. 8

7. (a) Differentiate between aerial and terrestrial photogrammetry. *4*

(b) What is relief displacement ? *2*

(c) Describe the different types of satellite imagery and their uses for different applications. *8*