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**Question Paper Code: 93106**

B.E. / B.Tech DEGREE EXAMINATION, NOV 2021

Third Semester

Civil Engineering

19UCE306 Surveying

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Surveys which are carried out to depict mountains, rivers, water bodies, wooded areas and other cultural details, are known as \_\_\_\_\_ CO1- U  
(a) Cadastral Surveys (b) City Surveys  
(c) Topographical Surveys (d) Plane Surveys
2. The principle of compass surveying is \_\_\_\_\_ CO1- U  
(a) Triangulation (b) Traversing (c) Parallelism (d) None of these
3. Among the classification of triangulation system, which posses the highest order? CO3- U  
(a) Primary (b) Secondary (c) Tertiary (d) Quaternary
4. In total station, data is stored in \_\_\_\_\_ CO5- U  
(a) Pen drive (b) Data card (c) Micro processor (d) External hardware
5. Which of the following is not a principle of remote sensing? CO1- U  
(a) Interaction of energy with satellite (b) Electromagnetic energy  
(c) Electro-magnetic spectrum (d) Interaction of energy with atmosphere

PART – B (5 x 3= 15 Marks)

6. Convert the following WCB system into RB system. WCB =  $122^{\circ} 30'$  and  $260^{\circ} 30'$  CO2- App
7. What is the relation between fundamental lines in theodolite? CO1- U
8. Define well conditioned triangle. CO1- U

9. What is meant by EDM? CO1- U
10. What is remote sensing. CO2- App

PART – C (5 x 16= 80 Marks)

11. (a) Convert the following WCB to RB CO2- App (16)
- (i)  $22^{\circ} 30'$  (ii)  $150^{\circ} 45'$  (iii)  $241^{\circ} 00'$  (iv)  $320^{\circ} 30'$
- (v)  $32^{\circ} 30'$  (vi)  $170^{\circ} 12'$  (vii)  $211^{\circ} 54'$  (viii)  $327^{\circ} 24'$

Explain it with line sketches

Or

- (b) The following bearings were observed while traversing with a compass. Mention which stations were affected by local attraction and determine the corrected bearings. CO3- Ana (16)

Line	Fore Bearing	Back Bearing
AB	$74^{\circ} 0'$	$254^{\circ} 0'$
BC	$91^{\circ} 0'$	$271^{\circ} 0'$
CD	$166^{\circ} 0'$	$343^{\circ} 0'$
DE	$177^{\circ} 0'$	$0^{\circ} 0'$
EA	$189^{\circ} 0'$	$9^{\circ} 0'$

12. (a) Illustrate the methods of measuring horizontal angles by using Theodolite survey. Conclude that which one is most precise method? Justify. CO3- Ana (16)

Or

- (b) Analyze the principle of stadia tachometry. CO3- Ana (16)

13. (a) Explain various types of curve with neat sketch. CO1- U (16)

Or

- (b) What is meant by triangulation and briefly explain their types. CO1- U (16)

14. (a) Explain the features of Total station. CO4- U (16)

Or

- (b) Explain about Geographical Information System. Where it can be applied in field? CO4- U (16)

15. (a) Briefly explain basic concept of photogrammetric surveying. CO5- U (16)

Or

- (b) What are the various implementation of remote sensing CO5- U (16)