TELANGANA STATE PUBLIC SERVICE COMMISSION

Notations :

1.Options shown in green color and with ✔ icon are correct.

2.Options shown in red color and with ✖ icon are incorrect.

Question Paper Name :	122 Paper Code 1st Dec 2021 Shift 1
Subject Name :	122 Paper Code
Duration :	180
Calculator :	Normal
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console? (SA type of questions will be always auto saved) :	No

122 Paper Code

Group Number :	1
Group Id :	881891306
Group Maximum Duration :	0

Group Minimum Duration :	180
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	0
Is this Group for Examiner? :	No
Revisit allowed for group Instructions? :	Yes
Maximum Instruction Time :	0
Minimum Instruction Time :	0
Group Time In :	Minutes

122 Paper Code

Section Id :	881891306
Section Number :	1
Section type :	Offline
Mandatory or Optional :	Mandatory
Number of Questions :	1
Number of Questions to be attempted :	1
Section Marks :	0
Display Number Panel :	Yes
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes

Section Instructions :

English :

Absolute

Sub-Section Number :	1
Sub-Section Id :	881891306

122

Total No. of Questions : 7]
Total No. of Pages : 2]

November - 2021
Computation Test, (Part - I)
Trigonometry, Geometry, Traverse Computation & Traverse Plotting
(Without Books)

Time : 3 Hrs.]   [Marks :100

Note :   1)   Candidate should attempt <u>SIX</u> Questions subject to alternatives or
                  limitations, if any, mentioned herein, or in each question. If more
                  are answered, the last extra answers will be ignored.

           2)   Parts of the same question must be answered together and must not
                  be interposed by answer(s) to other question(s).

           3)   Authorities should be quoted in support of the answers wherever
                  necessary.

           4)   Question No.1 is compulsory.

           5)   Candidate should answer the paper in English only, except
                  language Test or Surveyors Test, which should be answered in the
                  language chosen only. In case of non-compliance, such Answer
                  Script shall be invalidated.

1) **a)** Standing on the balcony of a building 'A'; the angle of elevation to the top of the building 'B' across the street is 47^0, and the angle of depression to the bottom of the building 'B' is 58^0. If the buildings are 42 metres apart, find the height of the building 'B' across the street?

   b) What is closing error in traverse?

   [2x10=20]

2) What is the purpose of traversing? How many methods of plotting the traverse are there? **[16]**

3) What type of triangle is used to calculate heights and distances? How the words angle of elevation, line of sight and angle of depression related one another? **[16]**

4) **a)** An observer 1.5 metre tall is 20.5 metre away from a tower 22 high. Determine the angle of elevation of the top of the tower from the eye of the observer?

   b) What are the types of polygons with specimen sketch?

   [2x8=16]

5) **a)** List out the reciprocal of Trignometric Ratios?

   b) How do you solve reciprocal problems? Write the reciprocal of $\frac{2}{3}$ in a fraction? **[2x8=16]**

6) Write short notes on the following?

   a) Declination
   b) Spherical co-ordinates
   c) Oblique angle
   d) Quadrilateral

   [4x4=16]

7) Discuss - How this advanced terminologies like azimuth, co-ordinates, theodolite, GPS etc., are applicable to our old survey records? **[16]**