

B.E. / B.Tech. (Civil Engineering) Model Curriculum Semester-V
PCC-CE505 - Surveying-II

P. Pages : 2

Time : Three Hours



GUG/W/24/13728

Max. Marks : 80

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- Notes : 1. All questions carry equal marks.
2. Assume suitable data wherever necessary.

1. a) Write down the element of compound curve. 6
- b) In a road curve between two straights having deflection angle of 108° . Bernoulli's Limescale is used as a curve transitional through. Make necessary calculation for setting out the curve if apex distance is 20m. 10

OR

2. a) Determine the offset to be set out of $\frac{1}{2}$ chain interval along the tangents to locate a 16-chain curve, the length of each chain is 20m. 8
- b) Describe the method of setting out a simple curve by offset from the chords produced. 8
3. a) Find GMT corresponding to LMT. 10
- i) 9 hr 40 min 12 sec at place in Longitude $42^\circ 36'W$
- ii) 4 hr 32 min 10 sec at Place in longitude $56^\circ 32'W$.
- b) Define Astronomical terms. 6

OR

4. a) The apparent altitude of Alpha cause at its upper transit was observed as $23^\circ 22' 20''S$ what is observes latitude? if declination of Alpha cruse was $52^\circ, 32' 20''S$. 8
- b) Explain the purpose of field Astronomy. 8
5. a) Describe celestial sphere and Astronomical terms. 10
- b) Explain the concept of motion of sun and stars. 6

OR

6. Determine the hour angle and declination of a star from the following data: 16
- Altitude - $22^\circ 36'$
- Azimuth - $42^\circ W$
- Latitude of the places = $40^\circ N$

7. a) Explain current and discharge method of hydrographic surveying. **8**
- b) Define tide and explain the concept of Lunar tide. **8**

OR

8. a) Explain the method of locating soundings by observation with sextant method. **10**
- b) Write a note on- **6**
- i) Spring tides
- ii) Neap tides

9. a) Define- **10**
- i) True value of quantity ii) Most probable value
- and explain the laws of weight.
- b) Write down the types of errors. **6**

OR

10. Find the most probable value of the Angle A from the following observation equation: **16**
- $A = 30^{\circ} 28' 40''$;
- $3A = 91^{\circ} 25' 55''$;
- $4A = 121^{\circ} 54' 30''$
