**BHARATI VIDYAPEETH INSTITUTE OF TECHNOLOGY**

**Question Bank (I-Scheme)**

**Name of subject: Advanced Surveying Unit Test: II** **Subject code: 22301 Course: CE Semester: III**

**CHAPTER 4 (Curve Setting)**

**(2 Marks)**

a. Define horizontal curve and vertical curves.

b. Enlist the types of curves used in roads & railway alignment.

**(4 Marks)**

a. Explain with sketch notations of simple circular curve.

b. Explain offset from long chord methods of curve setting.

c. Draw a neat sketch of circular curve & show the following element:

(i) Tangent length

(ii) Deflection angle

(iii) Apex distance

(iv) Length of long chord

d. Calculate the ordinates at 25 m interval to set a circular curve having long chord of 300 m & versed sine of 10 m.

**CHAPTER 5 (Advanced Surveying Equipment)**

**(2 Marks)**

1. State uses of Total Station.
2. State any two features of digital theodolite.

**(4 Marks)**

a. State the procedure of building setout using total station.

b. State the features of electronic theodolite.

c. List any four features of total station.

d. State the principle of EDM with sketch.

e. State fundamental axis and lines of theodolite and give relations between them.

f. State 4 component parts of digital theodolite & state their purpose.

g. Explain the procedure of measurement of vertical angle using one second micro optic theodolite.

h. Write short notes on:

(i) Uses of digital level

(ii) Salient features of total station

i. Explain procedure of measuring distance using EDM.

**CHAPTER 6 (Remote Sensing, GIS & GPS)**

**(2 Marks)**

a. State uses of GPS.

b. State the object of remote sensing.

**(4 Marks)**

a. Define active and passive sources.

b. State various applications of GIS.

c. Define the following terms & give any 2 components of each:

(i) GIS

(ii) GPS

d. Explain the applications of remote sensing in the following area:

(i) Land use

(ii) Disaster management

(iii) Environment

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