**UNIT III**

**(Surveying & Mapping)**

**Q1. What do you understand by Remote Sensing and write its applications in details.**

**Q2. What do you understand by the term Contours? Explain contour interval and horizontal equivalent.**

**Q3. Write the properties of Contour.**

**Q4. Write the uses and application of contours.**

**Q5. Determine the area in meters between the line AB and a meandering stream for offsets taken at a regular interval of 20 m along the line AB, using trapezoidal rule for following details –**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Point** | **A** |  |  |  |  |  |  |  | **B** |
| **Distance (m)** | **0** | **20** | **40** | **60** | **80** | **100** | **120** | **140** | **160** |
| **Offset length (m)** | **23** | **40** | **42** | **30** | **32** | **60** | **10** | **14** | **22** |

**Q6.Calculate the volume of earthwork in an embankment using Trapezoidal Formula for which the cross sectional area at 30 m interval are as follows –**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Distance (m)** | **0** | **30** | **60** | **90** | **120** | **150** | **180** |
| **Offset length (m)** | **24** | **46** | **27** | **61** | **81** | **62** | **11** |

**Q7.Calculate the volume of earthwork in an embankment using Prismoidal Formula for which the cross sectional area at 30 m interval are as follows –**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Distance (m)** | **0** | **30** | **60** | **90** | **120** | **150** | **180** |
| **Offset length (m)** | **24** | **46** | **27** | **61** | **81** | **62** | **11** |

**Q8. Explain Plane Table surveying in details; also explain any three important methods of it.**

**Q9. Determine the area in hectares between the line AB and a meandering stream for offsets taken at a regular interval of 20 m along the line AB, using simpsons rule for following details –**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Point** | **A** |  |  |  |  |  |  |  | **B** |
| **Distance (m)** | **0** | **20** | **40** | **60** | **80** | **100** | **120** | **140** | **160** |
| **Offset length (m)** | **23** | **40** | **42** | **30** | **32** | **60** | **10** | **14** | **22** |

**Q10. The following offsets were taken from a chain to an irregular boundary line at an interval of 15 m , the ordinates are 0 , 3.50 , 4.50, 6.00,5.60, 4.20, 0, compute area between the chain line and irregular boundary by using (i) Mid -ordinate rule (ii)The average -ordinate rule (iii)The trapezoidal rule (iv)Simpson’s rule.**