MIT WORLD PEACE UNIVERSITY, PUNE.
Basics of Civil Engineering (BCE)
ASSIGNMENT – 1 [Based on Module 1,2,3] 2021-2022

Submission date – 21/05/2022

1. '21st century is the era of interdisciplinary engineering'. Explain the statement.
2. Differential between 'Roadways' and 'Railways'.
3. Explain the project cycle with neat diagram.
4. Briefly explain the Resource Management.
5. Describe how Drone technology is helpful in Civil Engineering.
6. Define resource management. Explain briefly 'how to create resource management plan'.
7. The following bearings were observed in running a compass traverse. Calculate the included angle and correct the Fore bearing and Back bearing if necessary.

Line	Fore Bearing	Back Bearing
AB	66˚ 15'	244˚ 00'
BC	129˚ 45'	313˚ 00'
CD	218˚ 30'	37˚ 30'
DA	306˚ 45'	126˚ 45'

8. Explain with neat sketch two principle of surveying. Differentiate between plane surveying and geodetic surveying.
9. The following consecutive readings were taken with a level and a 4mt. leveling staff on a continuously sloping ground at common intervals of 30 m: 0.855(onA),1.545,2.335,3.115,3.825,0.455,1.380,2.055,2.855,3.455,0.585,1.015,1.850,2.755,3.845(on B)
   Enter the readings on a level field book and work out the staff readings on that, Find the R.L of different points using Collimation Plane Method. RL of the BM is 500.000m. Calculate the slope of the ground.
10. Discuss in brief 'remote sensing with application'.
11. Enlist application of
    a. GPS
    b. GIS
    c. photogrammetry

Extra Questions for practice

1) Enlist any TWO applications
   a. Project Management
   b. Geotechnical Engineering
   c. Irrigation Engineering
   d. Quantity Surveying
2) The bearings of the sides of a triangle ABC are as follows. Compute the interior angles. AB 60˚, BC 130˚ and CA 270˚.
3) The following is the page of leveling field-book. Fill up the missing reading and complete the page. Apply usual check.

Sr. No.	B.S.	I.S.	F.S.	Collimation plane	R.L.	Remark
1	2.650			*	100.000	B.M.
2		3.740			*	
3		*			98.820	
4	4.640		*	*	98.380	CP1
5		0.380			*	
6	1.640		*	*	102.060	CP2
7		2.840			*	
8	*		3.480	104.900	*	CP3
9			*		102.700	Last point

4) The following is the page of leveling field-book. Fill up the missing reading and complete the page. Apply usual check.

Sr. No.	B.S.	I.S.	F.S.	Rise	Fall	R.L.	Remark
1	*					463.875	B.M.I
2		*		0.550		*	
3	0.965		3.655		*	*	C.P.I
4	*		1.400		*	461.885	C.P.II
5			1.025	*		463.875	B.M.I

5) Enlist application of
   d. GPS
   e. GIS
   f. Google Maps
   g. Total Station
6) Explain in brief Theodolite Survey.
7) Explain in brief working principle of EDM.
8) Elaborate on the classification of surveying based on various categories.

9) Explain the characteristics of contour lines with neat sketches.
10) Study any four types of maps and explain their uses. [students can select maps by using google maps and explain the salient features of the same]
11) Discuss the necessity of automation in construction industry with suitable examples.
12) Explain the project feasible studies.
13) Enlist the software used in project management. Explain any one in brief.
14) Explain drone technology in brief with application.
15) Define the term ‘smart cities’. Explain briefly the typical features of smart city.