**DAILY ASSESSMENT FORMAT**

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| **Date:** | **30/June/2020** | **Name:** | **DIVYASHREE LV** |
| **Course:** | **Satellite photogrammetry and its applications** | **USN:** | **4AL17EC030** |
| **Topic:** | **Concept of stereophotogrammetry** | **Semester & Section:** | **6th A** |
| **Github Repository:** | **Divyalv** |  |  |

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| **Image of the session** |
| **Report – Report can be typed or hand written for up to two pages.**  **The most common class of 3D surface imaging system is based on digital stereophotogrammetrical technology. These systems are capable of accurately reproducing the surface geometry of the face, and map realistic color and texture data onto the geometric shape resulting in a lifelike rendering. The mathematical and optical engineering principles involved in the creation of 3D photogrammetric surface images have been thoroughly described. The combination of fast acquisition speed and expanded surface coverage (up to 360 degrees) offer distinct advantages over older surface imaging modalities like laser scanning.**  **The name photogrammetry comes from two Greek words, phos 'light' and gramma 'writing'; it has been defined as the art, science and technology of obtaining reliable quantitative information about physical objects and the environment through the process of recording, measuring and interpreting images and patterns of radiant or transmitted energy derived from sensor systems. Since its inception over a century ago, the principal application of photogrammetry has been the compilation of topographic maps and plans on the basis of measurements and information obtained primarily from aerial photographs and employing optical, mechanical and mathematical analogies for an analogue or digital evaluation. The primary characteristic of photogrammetry is that the measurements are carried out indirectly, not on the object itself. Classically, the object to be evaluated was photographed from two or more locations and the measurements made on the photographs using a wide range of methods. Such photographs provide a stereoscopic pair, or stereogram, which, after correct viewing alignment, can yield a solid, three-dimensional view of the scene either by using a viewing aid (stereoscope), or by viewing the left and right picture each by a separate eye, separately and simultaneously (Adams, 1974). The ability of the human brain to turn two pictures of the same object taken from two points of view, into a solid, three-dimensional space object, is known as stereoscopy. Stereo photogrammetry is concerned with obtaining precise three dimensional (X, Y, Z) coordinates of common discrete points appearing on a stereoscopic pair of images. The use of hard-copy photographs has remained the dominant force in applications of close-range photogrammetry;**  **Provided that certain fundamental photogrammetric rules of stereoscopy are followed, this can provide a three-dimensional view of the object being studied or a precise derivation of (X, Y, Z) coordinates of discrete common image points appearing on the stereoscopic pair of Xray photographs.** |