

**FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI**  
**SCHOOL OF ENVIRONMENTAL SCIENCES**  
**DEPARTMENT OF ARCHITECTURE**  
**2015/2016 Harmattan Semester Exam**  
**Descriptive Geometry Arc.305 (2 Units)**

**Time: 9am-11am (2 hours)**

**Date: 07/05/2016**

**Instruction: Answer all three questions bellow**

1.(a) What is descriptive geometry?

(b) In short notes explain the contributions of these scientists to descriptive geometry as a course of study.

(i) Leonardo Da Vinci (ii) Leon Batista Alberti (iii) Albert Dyer (iv) Gaspard Monge (v) Vitrovi

(c) Explain the three (3) major objectives of descriptive geometry

**(25 marks)**

2(a) Elaborate with their characteristics the following geometric elements of the space-form.

(i) The point (ii) The line (iii) The plane (iv) The volume

(b) Clearly expound the types of projection methods common in descriptive geometry.

**(20 marks)**

3(a) In a crystal clear figures show the:

**Projection of Point:**

i. A – freely located in space

ii. A – on plane  $P_1$

iii. A – on plane  $P_2$

iv. A – on the horizontal plane of projection.

v. A – (-4, -2,), (5,6), (-8,11), (2,-10) and indicate their respective quadrants.

(b) What quadrants are situated above the horizontal plane of projection, below the horizontal plane of projection, in front of the plane of projection, behind the vertical plane of projection?

**(25 marks)**