FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI

SCHOOL OF ENVIRONMENTAL TECHNOLOGY

DEPARTMENT OF BUILDING TECHNOLOGY

RAIN SEMESTER EXAMINATION 2011/2012 SESSION

COURSE: **BDT 226 – COMPUTER AIDED DESIGN** **Time** : 3 hrs

Instructions: 1. Answer any four questions. **2.** Use of computer is not allowed.

QUESTION 1

(a) What are the functions of "object snap overrides" in AutoCAD? With the help of a schematic diagram, explain the steps involved in using the object snap overrides.

(b) Explain the steps involved in using "running object snaps" in AutoCAD 2010 software

(c) Fig.Q1 was drawn, using running object snap and object snap overrides settings. Describe how you would create this figure using the above settings in the AutoCAD 2010 software.

QUESTION 2

(a) Explain the procedures involved in the following object manipulation commands:

(i) Move command, (ii) Copying objects with the copy command, (iii)Rotating objects, (iv) Mirroring object, (v) Creating a rectangular array of objects, (vi) Creating a polar array of objects.

(b) Fig. Q2 was created using Tan, Tan, radius circle command and the 2-point circle. Describe the procedures you would have followed in creating the same object in AutoCAD 2010 environment. Take radius of smaller circle as 2.0 units.

QUESTION 3

(a). State four advantages of using polar tracking and polar snap in AutoCAD drawing. Describe the procedures involved in using the polar tracking and polar snap features.

(b). What is Cartesian coordinate system? Distinguish between Absolute and Relative coordinates.

(c) Fig. Q3 shows geometry with lines created at precise distances and angles using polar tracking and polar snap features. Describe the steps you would have employed to create the same geometry with AutoCAD 2010 software, assuming the use of absolute polar coordinate system.

DATA: AB = KL = 70; AD =BC = EF =FG = 25; CF = DE =GI = HJ =15.

Incremental Angle = 15^0

QUESTION 4

(a) In a tabular form, state the functions of the twelve (12) keyboard function keys.

(b) Fig.Q4 is a simple mechanical bracket created using the basic geometry commands such as line, circle, Arc, Rectangle, Polygon etc. Describe how you would create this object, assuming working in the AutoCAD 2010 environment.

DATA: AB = AH = 100; BC = FG = 25; EF = CD = 50; Radius of circle =7.5; No of sides of polygon = 6; Radius of circumscribed polygon = 8

QUESTION 5

(a). What is a workspace? Name the default workspace configurations of the AutoCAD 2010 application software.

(b). What are line types? Use line images to show any four common line types used in drafting and design.

(c) By the use of a schematic diagram, identify and explain the nine (9) key interface elements of the AutoCAD 2010 application software.