



ELIZADE UNIVERSITY, ILARA-MOKIN,
ONDO STATE, NIGERIA

DEPARTMENT OF MECHANICAL ENGINEERING

SECOND SEMESTER EXAMINATIONS

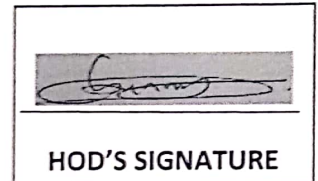
2018/2019 ACADEMIC SESSION

COURSE: MEE 304 – Engineering Drawing (CAD) (3 Units)

CLASS: 300 Level Mechanical Engineering

TIME ALLOWED: Section A (2 Hours), Section B (1 Hour)

INSTRUCTIONS: Answer questions 1 and any other TWO (2) from section A and then answer section B on your computer



Date: July, 2019

SECTION A

Question 1 (10 MARKS)

Identify the following icons in Autodesk inventor



(a)



(b)



(c)

- (d) List the steps involve in performing Extrude in Autodesk inventor
- (e) List the steps involve in performing Resolve in Autodesk inventor
- (f) What is the full meaning of FEA?
- (g) What is full meaning iam?
- (h) To understand CAD, the engineer must have an in-depth knowledge of the Design process.
True/False
- (i) Name two classifications of design
- (j) The various design related tasks which are performed by the CAD system can be grouped into four functional areas. Name two of the functional areas.
- (k) What is Orthographic projection?
- (l) State the two projections in orthographic drawing.

Question 2 (15 MARKS)

- (a) Define CAD?
- (b) State any five benefits of using CAD over the manual design (use of pencil and set squares)
- (c) State five create commands in Autodesk inventor?
- (d) Mention the properties that a solid model or an abstract solid should capture mathematically

Question 3 (15 MARKS)

- (a) List and explain the Shigley design modeling technique.
- (b) State the most important step in (a) above and state your reason(s).
- (c) State five editing commands in Autodesk inventor and state their uses.

Question 4 (15 MARKS)

- (a) As a computer aided design user, you are tasked with the responsibility of design and fabrication of a chair,
 - (i) what are the factors you will consider?
 - (ii) explain the factors stated in (i) above.
- (b) State two types of simulation. Then, why is simulation carried out on designs.
- (c) Provide the full meaning for the following acronyms:
 - (i) CIM (ii) CAE (iii) CAAD (iv) CAD (v) CAC
 - (vi) CAQA (vii) CAPPS (viii) CAST (ix) CAPL (x) CAM

SECTION B

Question 5 (20 MARKS)

Using computer, reproduce the drawing below and save with your name and matriculation number.

