



ELIZADE UNIVERSITY, ILARA-MOKIN,
ONDO STATE, NIGERIA

DEPARTMENT OF MECHANICAL ENGINEERING

FIRST SEMESTER EXAMINATIONS

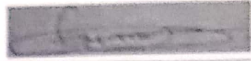
2019/2020 ACADEMIC SESSION

COURSE: MEE 505 – Mechanical Engineering Design III (3 Units)

CLASS: 500 Level Mechanical Engineering

TIME ALLOWED: 3 Hours

INSTRUCTIONS: Answer all questions


HOD'S SIGNATURE

Date: February, 2020

SECTION A

Question 1 (12 MARKS)

- (a) What is graphic design?
- (b) What is concurrent Engineering and how is concurrent Engineering different from the traditional approach?
- (c) Feasibility studies is a major step in the development of a new product: explain the major considerations.

Question 2 (12 MARKS)

- (a) What is ergonomics?
- (b) Which anthropometric data are vital to the design of auto-mechanic's car inspection pit?
- (c) What is simulation?
- (d) Explain two types of simulation

Question 3 (12 MARKS)

- (a) List and explain the Shigley design modeling technique.
- (b) Mention the most important step in (a) above and why.
- (c) What is philosophy of design?
- (d) In DFA, there are three criteria against which each part must be examined as it is added to the assembly. State the three criteria and their implication.

SECTION B

Question 4 (12 MARKS)

Using Autodesk Inventor on your computer, reproduce Figure 1 in 3D, generate the different views and save with your name.

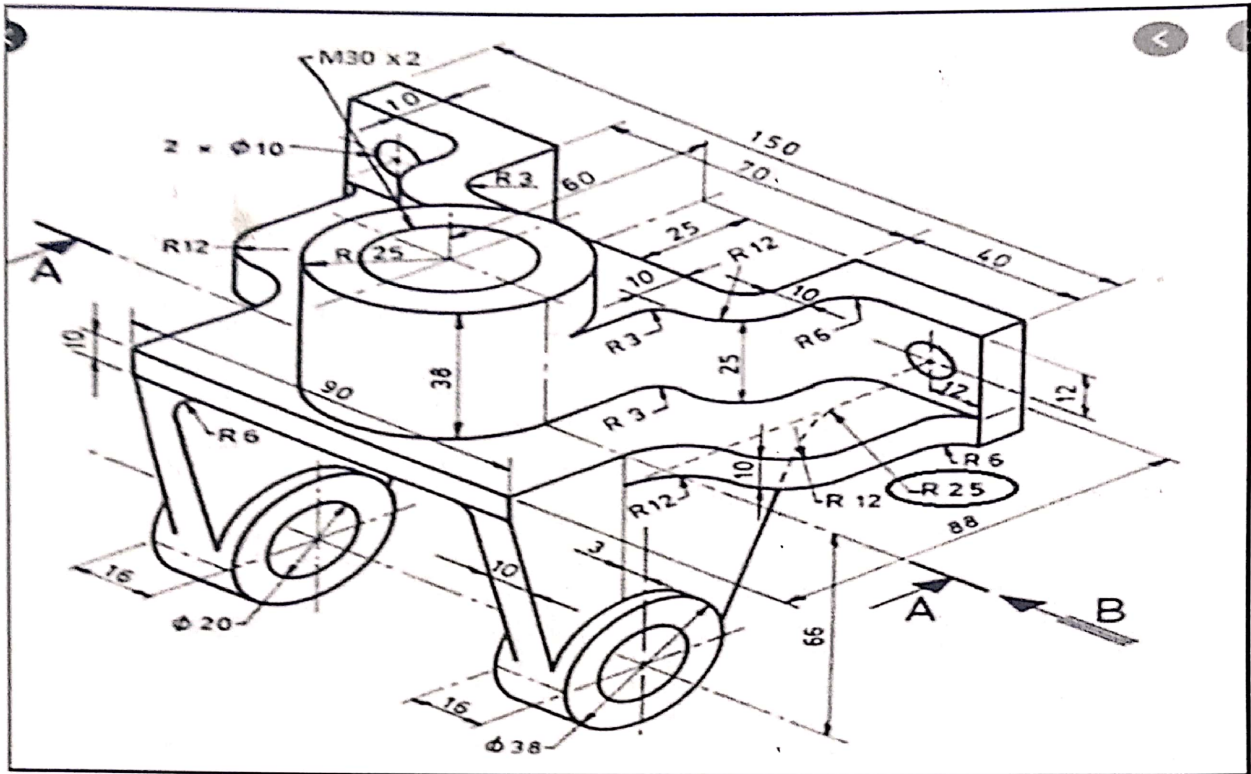


Figure 1

Question 5 (12 MARKS)

Using Autodesk Inventor on your computer, reproduce Figure 2 in 3D, generate the different views and save with your name.

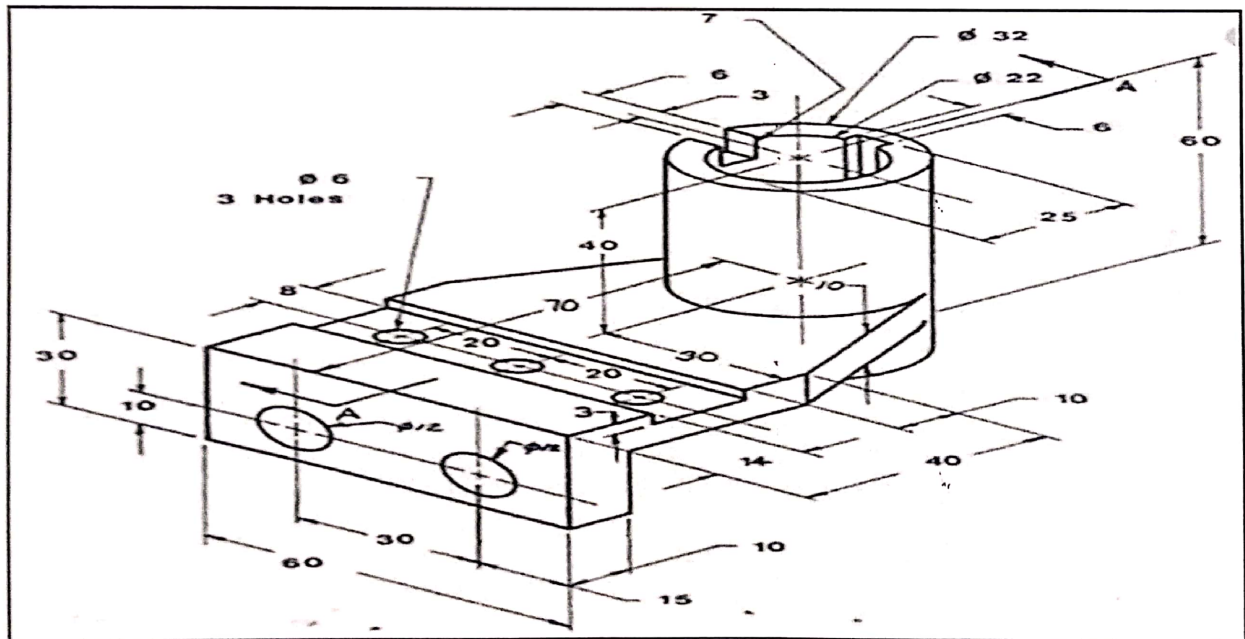


Figure 2