## KWAME NKRUMAH UNIVERSITY OF SCIENCE & TECHNOLOGY

## College of Engineering Department of Mechanical Engineering Mid- Semester Exams Aptril, 2021 First Year, BSc. Computer & Biomedical Engineering

ME 159: TECHNICAL DRAWING

Take Home: 24hrs

## **Instructions to candidates:**

Construct borderlines and Title Block.

The Title Block must show the following details:

K.N.U.S.T	MID- SEMESTER EXAMINATIONS	
College of Engineering	DRAWN BY: INDEX NOINITIALS	
Dept. of Computer/Biomedical Eng.	CHECKED BY: FKAN	
ED 1 COE/BME	DATE:	SCALE 1:1

All dimensions are in mm.

## Attempt all questions

1. Prove (by geometric construction) that the circumference of a 70 mm circle is approximately 220 mm. Display your percentage deviation by the geometry.

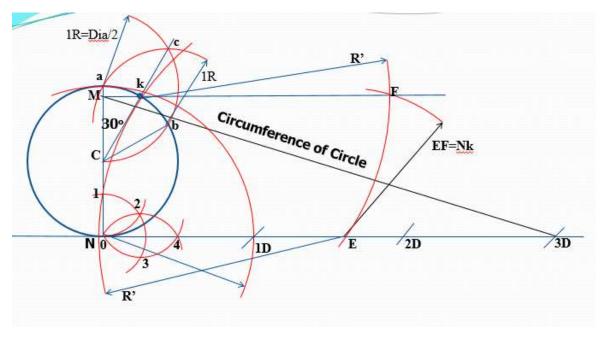


Figure 1

2. Using the approximate method, construct polygons (up to a nonagon) given that the side AB=60 mm.

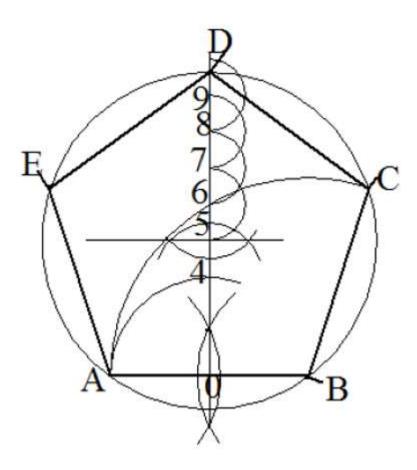


Figure 2

3. Construct the machine part shown in figure 3 using the principle of tangency

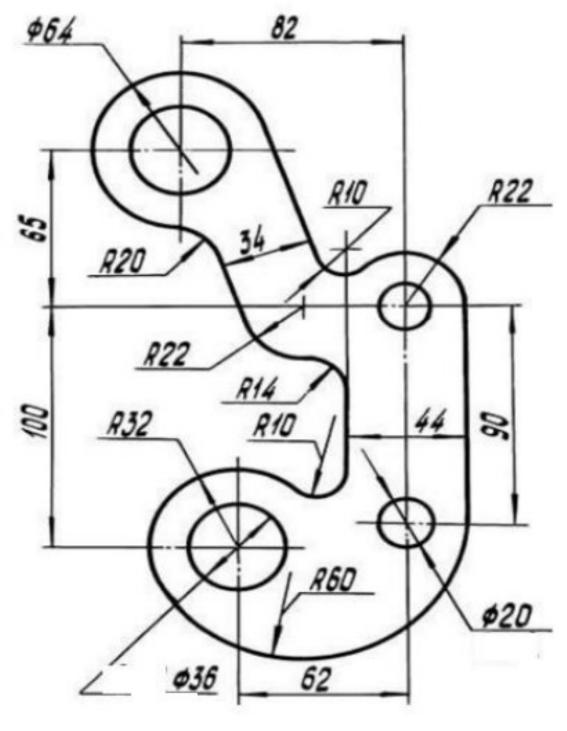


Figure 3

4. Construct the machine part shown in figure 4 using the principle of tangency

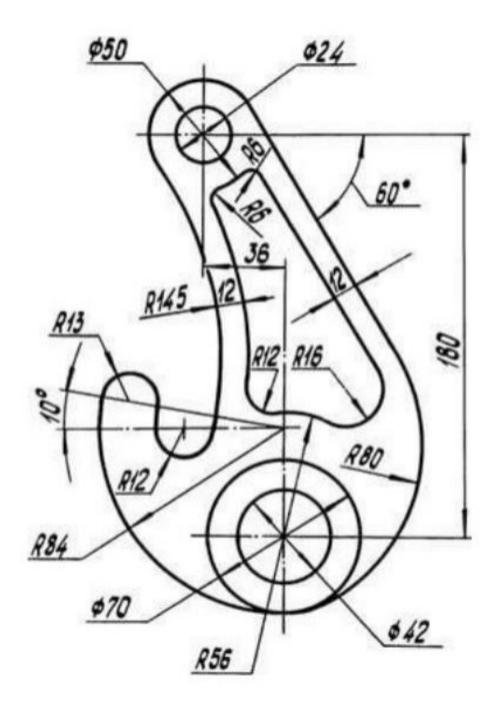


Figure 4