

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

FIRST SEMESTER EXAMINATION

2012/2013 SESSION

INTRODUCTION TO TECHNICAL DRAWING:

COURSE CODE - TCD 111

TIME ALLOWED = 1HR: 30 MINS.

INSTRUCTION = ANSWER QUESTION (1) ONE AND ANY OTHER (3) QUESTIONS.

NOTE: GOOD TITLE BLOCK = 4MKS, GOOD PENCIL WORK = 1MK, NEATNESS = 1MK, LEGIBILITY = 1MK, PROPORTIONALITY = 1MK TOTAL = 8MKS.

- Q1. Construct a regular heptagon of given side AB 4CM to produce the remaining sides of the polygon using trial and error method. Shows every construction work 13mks
- Q2. Construct a regular pentagon with the given length of side AB 60mm so that perpendicular OP = AB, the diagonal line PQ =  $\frac{1}{2}$  AB and point D from R. 13mks
- Q3. Inscribe a regular pentagon in a given circle with a diameter of 70mm AM to produce the first side of the polygon EA from H2E. Shows every construction work. 13mks
- Q4. Circumscribe a circle to a given triangle ABC such that angle CAB =  $112.5^{\circ}$  and angle ABC =  $15^{\circ}$  inverse. Take AB = 7.5CM. Shows all constructions work of the angles. 13mks
- Q5. Construct an equilateral triangle and inscribed three (3) circles, each circle to touch two sides and two other circles. Take AB 60mm. Shows every construction work. 13mks
- Q6. Inscribe (4) equal circles in a given square so that each circle touches one side and two other circles. Take AB 55mm. 13mks