



KILIMANJARO INDUSTRIAL DEVELOPMENT TRUST-KIDT VTC
P.O. BOX 8734, MOSHI, KILIMANJARO TANZANIA.
MOBILE 0766 415 696, / 0717157640
MAWASILANO KWA WHATSAPP-0679 120 619 /0717 157 64
MASOMO KWENYE MTANDAO-www.tareo-tz.org/kidt-vtc-2
MAWASILANO KWA Email: kidtcollage@gmail.com



ELECTRICAL INSTALLATION

LEVEL III

INSTRUCTION:

- Attempt all questions.
 - Test duration 2HRS
 - Scientific calculator allowed.
1. a) Define the term transformer.
b) A transformer with a 4:1 voltage ratio has a secondary voltage of 1440v. A 144Ω load is connected across the secondary. Calculate the secondary and primary currents.
 2. a) Distinguish between core type and shell-type transformer.
b) A 50KVA single phase transformer has a turns ratio of 2200/200. The primary winding is connected to a 2200v, 50HZ supply. Calculate: (i) The secondary voltage (ii) The primary and secondary current.
 3. (a) State the differences between an autotransformer and double wound transformer.
(b) The ideal autotransformer is used to step down 600v to 480v. The 480V output is to supply a 24KW resistive load. Determine:
 - I. The load current.
 - II. The input current
 - III. The current between terminal 1 and 2
 - IV. the current between terminal 3 and 2.
 4. a) State Ohm's law in word and by symbol.
b) Three resistors having resistance of 4.8Ω , 8Ω and 12Ω all connected in parallel, are supplied from a 48V supply. Calculate the current through each resistor and the current taken from supply.
 5. Draw power circuit and control circuit of DOL

QUIZ 2. TECHNICAL DRAWING.. LIII

(DEVELOPMENT)

1. Draw the development of the complete surface of a cylindrical drum. Diameter is 40 mm and height 60 mm.
2. A hexagonal prism, edge of base 20 mm and axis 50 mm long, rests with its base on HP such that one of its rectangular faces is parallel to VP. It is cut by a plane perpendicular to VP, inclined at 45° to HP and passing through the right corner of the top face of the prism.

(i) Draw the sectional top view.

(ii) Develop the lateral surfaces of the truncated prism.

Take your time to answer the above questions.