

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
DEPARTMENT OF INDUSTRIAL AND TECHNOLOGY EDUCATION
SECOND SEMESTER EXAMINATION
2021/2022 SESSION

Course Title: Electrical Drafting

Course Code: ITE 561

Credit Units: 2 units

Time Allowed: 2 hours

Instructions: Answer any four questions.

1. (a). Define public address system (PAS) and give any five examples of where it is being used.
(b). Clearly differentiate between Overhead and Underground transmission and distribution systems.
(c). List 10 components of overhead lines
(d). List any five important requirements of the insulating materials to be used On underground cables.
2. (a). Define estimating and state its purpose.
(b). As an expert in Electrical installation work, what are the facts you must know to be able to prepare an estimate for an internal wiring job?
(c). Write short notes on the following components of estimating:
 - (i). Profit
 - (ii) Electrical Schedule
 - (iii) Catalogues
 - (iv) Market Survey and Source Selection
 - (v) Contingencies
3. (a). Sketch the connection of a ring circuit diagram of six socket outlets and two spurs, and give some of its advantages over a radial type.
(b). In a tabular form, mention the types of material and their application of the following cross-sectional areas of conductors: (i) 1.5mm^2 , (ii) 2.5mm^2 , (iii) 4.0mm^2 , (iv) 6.0mm^2 , (v) 16mm^2 , and (vi) 25mm^2
(c). What type of cable is a MUST use in electrical wiring for residential houses and why?
4. (a). Define Electrical Drafting and state any five requirements that a complete set of working drawings for the average electrical system in large projects should have.
(b). Sketch the flow chart for single and three phase supply building wiring regulations.
5. (a). State any two general requirements that made fire alarm increasingly sophisticated and reliable in recent years.
(b). Differentiate very clearly between single-line and three-line diagrams.
(c). State any five factors that must be taken into consideration in the design of service-entrance equipment.