SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

COIMBATORE-35

Accredited by NBA-AICTE and Accredited by NAAC – UGC with A++ Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

COURSE NAME: 23EET206/ Measurements and Instrumentation

II YEAR / IV SEMESTER

UNIT 3 - ELECTRICAL AND ELECTRONIC MEASUREMENTS

Topic 4 – Instrument Transformers

SUCCESSFUL STUDENT

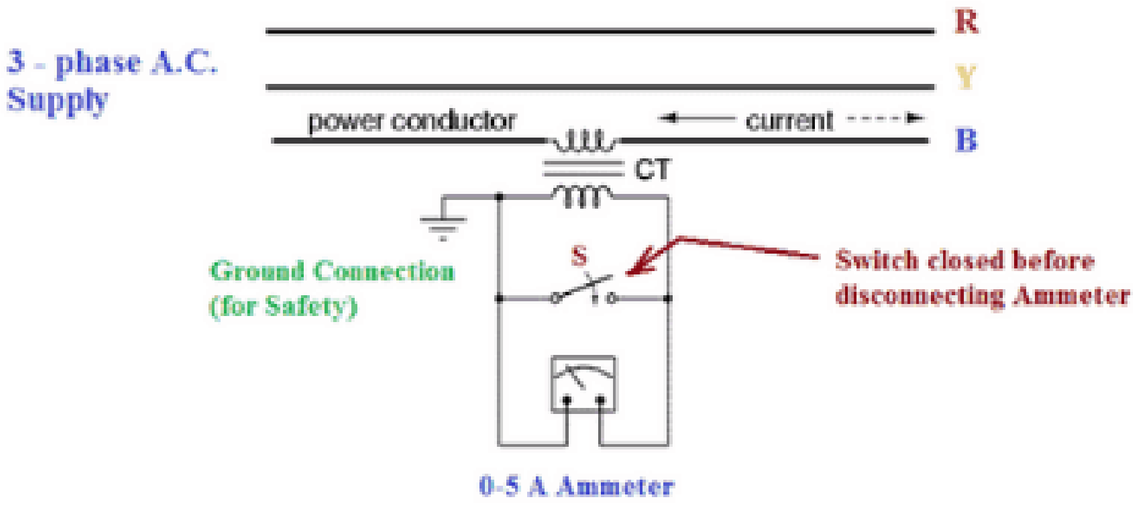
Positive Attitude

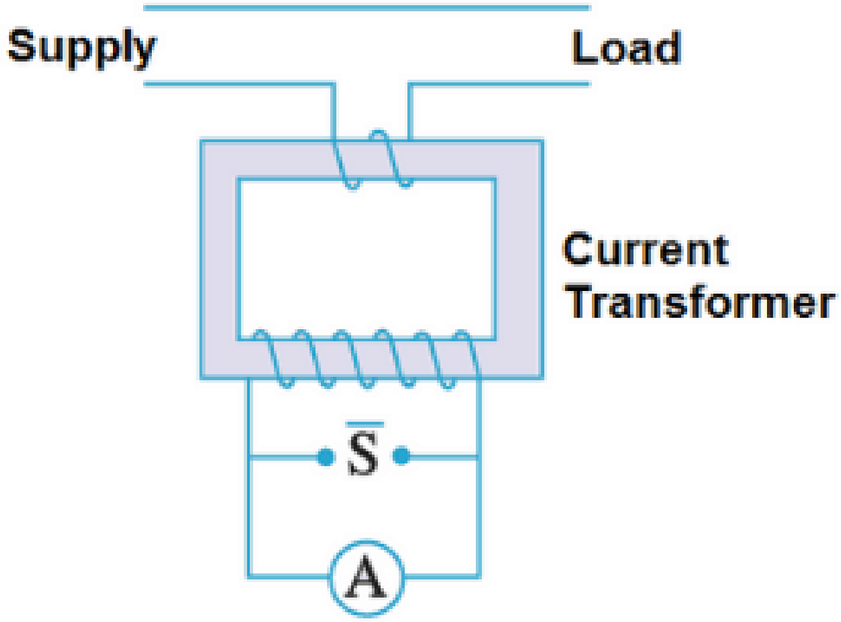
Professionally Groomed

Socially Interactive

Technically Skillful

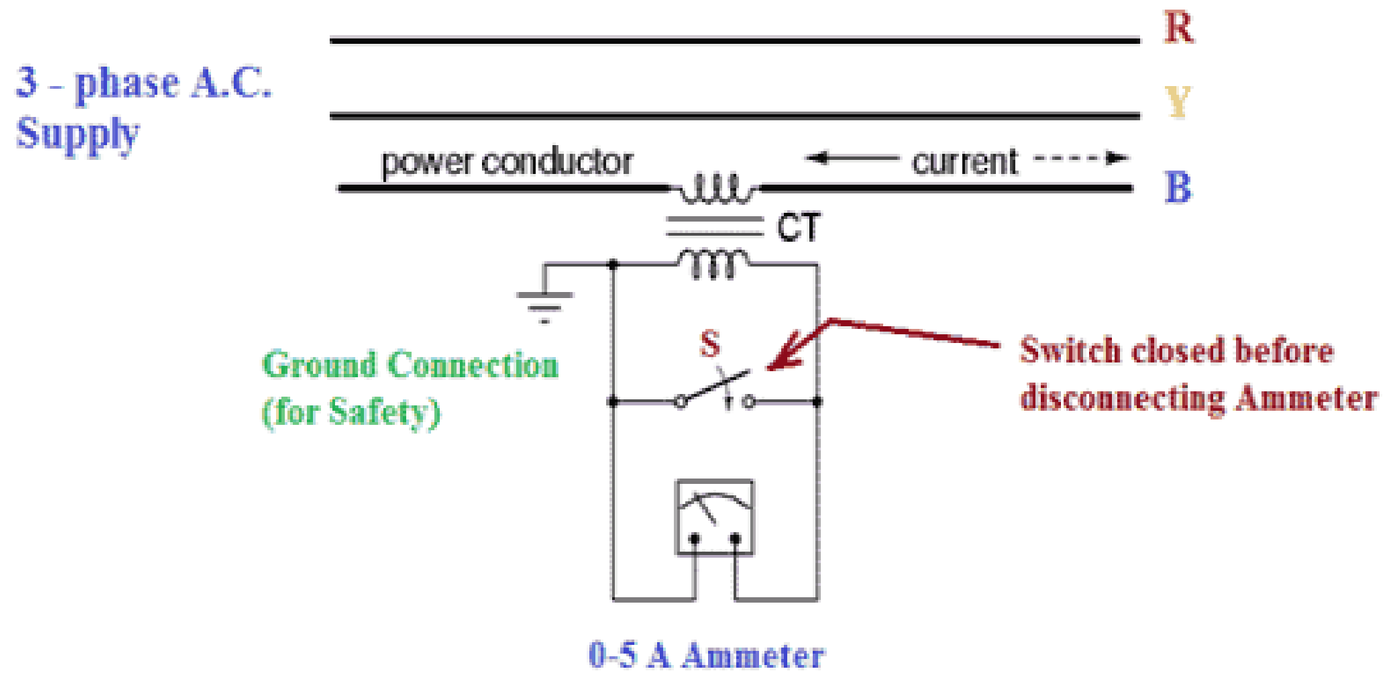
What is Instrument Transformer?



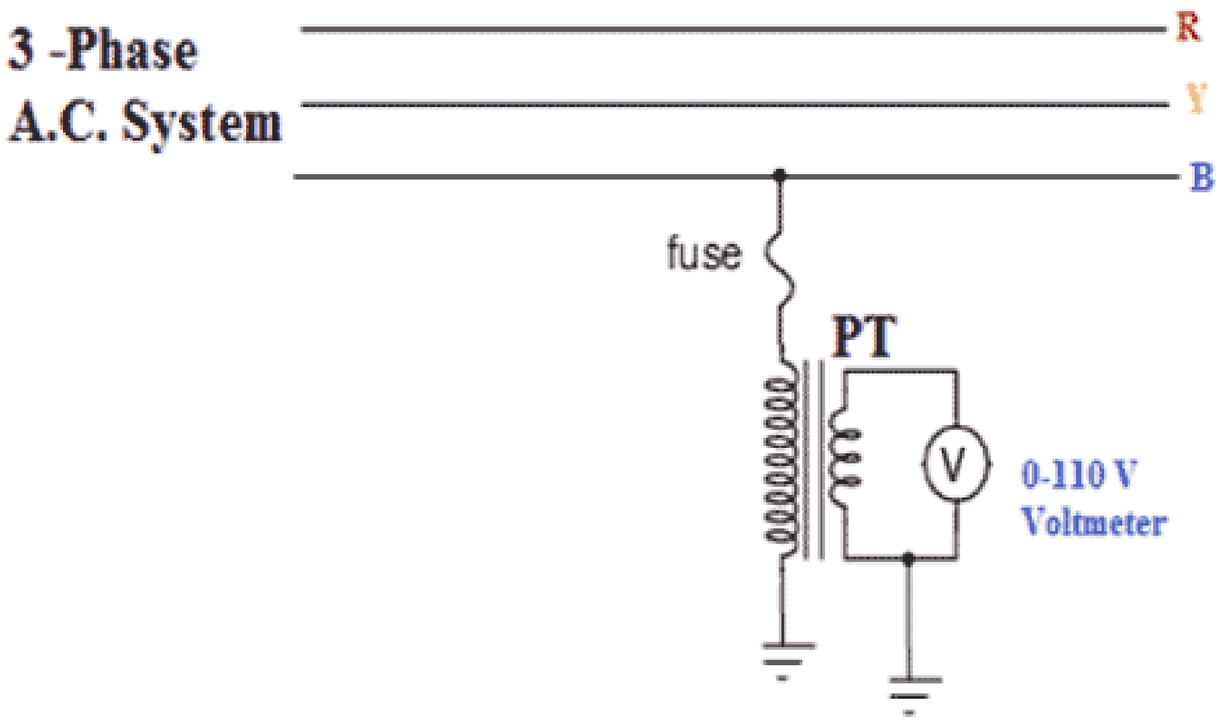


Advantages of Instrument Transformers

1. A small rating measuring instrument can be used to measure the large current and voltage of the AC Power system i.e., 5 A, 110 – 120 V.
2. Measuring instruments can be standardized by using instrument transformers. Which results in the reduction in the cost of measuring instruments. If the measuring instruments are damaged, they can be replaced easily by healthy standardized measuring instruments.
3. Instrument transformers provide electrical isolation between measuring instruments and high voltage power circuits, which reduces the electrical insulation requirement for protective circuits and measuring instruments and also assures the safety of operators.
4. Several measuring instruments can be linked through a single transformer to a power system.
5. Due to the low current and voltage levels in measuring and protective circuits, there is low power consumption in measuring and protective circuits.

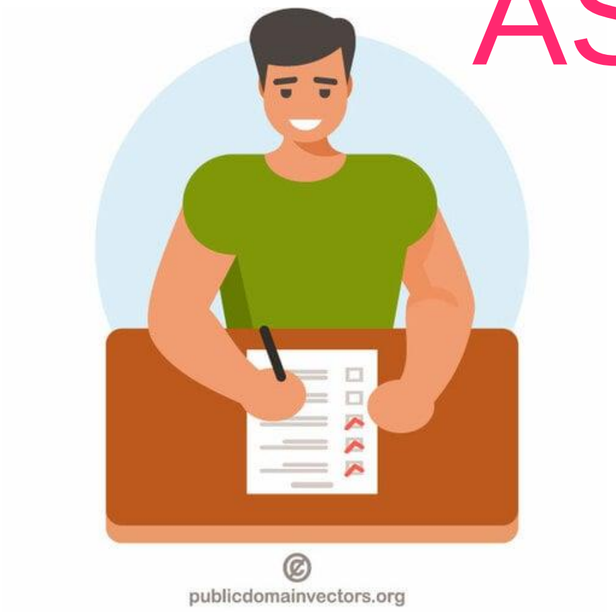


Current Transformer (C.T.)



Potential Transformer (P.T.)

ASSESSMENT



REFERENCE

TEXT BOOKS

T1 **A. K. Sawhney, “A Course in Electrical & Electronic Measurements & Instrumentation”, Dhanpat Rai & CO., New Delhi, 2022.**

T2 **S. Gupta and J. John , "Virtual Instrumentation using Lab VIEW", Tata McGraw-Hill Publishing Company Limited, New Delhi, 2010.**

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R1 **David A.Bell, "Electronic Instrumentation and Measurements”, Oxford Higher Education, 2013**

R2 **Bouwens A J, “Digital Instrumentation”, Tata Mc Graw Hill, New Delhi2016**

R3 **Martin U. Reissland, “Electrical Measurement – Fundamental Concepts and Applications”, New Age International (P) Ltd., 2015**

R4 **J. B. Gupta, “A Course in Electronic and Electrical Measurements and Instrumentation”, S. K. Kataria & Sons, Delhi, 2013**

R5 **M. S. Anand, “Electronics Instruments and Instrumentation Technology”, Prentice Hall India, NewDelhi, 2012.**

WEB REFERENCES

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W3 **https://hombredelamancha.com/products/ebook-electrical-and-electronic-measurements-and-instrumentation?srsltid=AfmBOorTb5k9Ga1rsImj69-l3SximYYra7U8VhGcqYahqsfk9BR9rC7k**

THANK YOU!!