**Lesson Plan Form**

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| Title: **Inversion of the z-Transform.** | Ref. No: **ETE 321/10** |
| Target Population: **25** | Duration: **90 minutes** |
| Aims/Rationale: **To teach the students about inversion of the z-transform and to illustrate its use in the characteristics of discrete-time signals.** |
| **Learning Outcomes: At the end of the session participant will be able to :**1. **Understanding the inverse transform for discrete-time signals.**
2. **Understand the properties of the inversion of the z-Transform.**
3. **Ability to compute transform and inverse transform**
4. **Ability** **to apply transform for analyzing linear time invariant (LTI) systems.**
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| **Content** | Method or Technique | Resource or Aid | Time |
| Introduction: **Welcome address****Rapport building****Bridging topic****Layout/ content outline****Attendance****Pre-assessment** | **Lecture****Q/A** | **W/B** | **10 minutes** |
| Development:Section-A: **Briefly Discussion of Inversion of the z-transform.****The Inverse z-Transform by Contour Integration.**Section-B**The Inverse z-Transform by Power Series Expansion.****The Inverse z-Transform by Partial-Fraction Expansion.**Section-C**Decomposition of rational Z-transform.** | **Lecture****Discussion****Do****Do** | **W/B****MMP****Video** | **10 minutes****30 minutes** **30 minutes** |
| Conclusion:**Recap main points****Feedback & answer****Assessment of LOs****Reference****Forward plan** | **Lecture****Discussion****Q/A** |  | **10 minutes** |
| Equipment & aids: **Optional** |