**Lesson Plan**

Name of the Teacher - Kamal deep kaur

Class - M.Sc.Maths final

Name of Subject with Code- Topology(MTHCC-2301)

|  |
| --- |
| **Week1,**  |
| 01-08-18 | Topological space |
| 02-08-18 | Neighbourhood ,closed set ,closure |
| 03-08-18 | Interior,exterior,boundary of set |
| 04-08-18 | Adherent point |
|  |  |
| **Week 2,** |  |
| 06-08-18 accumulation point |
| 07-08-18 | Closure of a set as e set of adherent point |
| 08-08-18 | Derived set |
| 09-08-18 | Properties of closure operator,dense subset |
| 10-08-18 | Properties of neighbourhood,closure,interior,exterior,boundary points |
| 11-08-18 | Base for a topology |
|  |  |
| **Week 3,**  |
| 13-08-18 | Subbase  |
| 14-08-18 | Neighbourhood system |
| 16-08-18 | Properties of Nbd system |
|  |
|  |  |
| **Week 4,** |  |
| 20-08-18 base for Nbd system  |
| 21-08-18 | Subspace and relative topology |
| 22-08-18 | First countable |
| 23-08-18 | Second countable |
| 24-08-18 | Sarable space |
|  |  |
| **Week 5,**  |  |
| 27-08-18 | Their relation and hereditary properties |
| 28-08-18 | Countability of collection disjoit open set in saparable space |
| 29-08-18 | Lindelof’s theorem |
| 30-08-18 | TEST  |
| 31-08-18 | Discussion |
|  |  |
| **Week 6,** |  |
| 01-09-18 | Comparison of topologies |
| **Week 7,** |  |
| 04-09-18 | About intersection, union |
| 05-09-18 | Infimum of topologies on a set |
| 06-09-18 | Supremum of topologies on a set |
| 07-09-18 continous function |
| 08-09-18 | Example of continous function |
|  |  |
| **Week8,** |  |
| 10-09-18 | Characterization of continous function |
| 11-09-18 | Composition of continous function |
| 12-09-18 | Open and closed function |
| 13-09-18 | Homeomorphism  |
| 14-09-18 | Tychonoff product topology |
| **Week 9,**  |
| 17-09-18 | Base for product topology |
| 18-09-18 | Subbase for product topology |
| 19-09-18 | Projection maps |
| 20-09-18 | Characterization of product topology as smallest topology part 1 |
| 21-09-18 | Characterization of product topology as smallest topology part 2 |
| 22-09-18 | Continuity of function from space into product of space part1 |
|  |
| **Week 10,** |
| 24-09-18 | Continuity of function from space into product of space part 2 |
| 26-09-18 | Countability spaces  |
| 27-09-18 | Product spaces  |
| 28-09-18 | Revision |
| 29-09-18 | TEST |
|  |  |
| **Week 11,**  |
| 1-10-18 | Discussion |
| 3-10-18 | Separation axiom  |
| 4-10-18 | T0,T1,T2 Space |
| 5-10-18 | Regular spaces |
| 6-10-18 | T3 space |
|  |  |
| **Week 12,**  |
| 8-10-18 | Characteristic of T3 space |
| 9-10-18 | Hereditary properties |
| 10-10-18 | Product property of T1 and T2 space |
| 11-10-18 | Completely regular space |
| 12-10-18 | Tychonoff space |
| 13-10-18 | Their herediatory properties |
|  |
| **Week 13,**  |
| 15-10-18 | SESSIONAL EXAM |
| 15-10-18 | SESSIONAL EXAM |
| 16-10-18 | SESSIONAL EXAM |
| 17-10-18 | SESSIONAL EXAM |
| 18-10-18 | SESSIONAL EXAM |
|  |  |
| **Week 14,** |  |
| 22-10-18 normal space |
| 23-10-18 | T4 space |
| 25-10-18 | Normality of regular space |
| 26-10-18 | Uryshn’s lemma |
|  |  |
| **Week 15,** |  |
| 29-10-18 | Complete regularity of regular normal space |
| 30-10-18 T4 implies tychonoff space |  |
| 31-10-18 | Tietze’s extension theorem |
|  |  |
| **Week 16,** |  |
| 02-11-18 | Revision |
| 03-11-18 | TEST |
|  |  |
| **Week 17**  |
| 05-11-18 | Discussion |
| 10-11-18 | Connected space |
|  |  |
| **Week 18** |  |
| 05-11-18 | Saparation of topological space  |
| 10-11-18 | Definition of connectedness in terms of separation |
|  |
|  |  |
| **Week 19** |  |
| 12-11-18 | Characterization of connectedness |
| 13-11-18 | Connected subset |
| 14-11-18 | Their properties |
| 15-11-18 | Continuity and connectedness |
| 16-11-18 | Connectedness and product space |
|  |  |
| **Week 20** |  |
| 19-11-18 | Compactness |
| 20-11-18 | Example of compact space |
| 21-11-18 | Compact subsets |
| 22-11-18 | Compactness in term of FIP |
| 24-11-18 | Continuity and compact set |
|  |  |
| **Week 21** |  |
| 26-11-18 | Compactness and separation  |
| 27-11-18 | Revision |
| 28-11-18 | TEST |
| 29-11-18 | Discussion |
| 30-11-18 | Revision |