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| **Training course of Well hydraulic pumping test procedure and pumping test data analysis and evaluation** | | | |
| Activities | Subject | Time | Date |
| Power point presentation  Chart, Graph, | * Recitation of holy Quran * Introduction of course participants * Well Drilling Methods and Construction * Well Hydraulic Analysis and Evaluation of Pumping Test Data * Basic Concepts of and Definition * Aquifer, Aquitard, Aquidlude and Aquifuge | 09:00 - 09:05  09:00 - 09:10  09:10 - 09:30  09:30 - 09:45  09:45 - 10:15 | 21/12/2013 |
|  | Tea break | 10:15 - 10:30 |
| Power point presentation  Graph and Chart | * Confined Aquifer ,Unconfined Aquifer ,Leaky Aquifer and Purched * Discharge Zone and Recharge Zone | 10:30 - 11:30  11:30 - 12:30 |
|  | Lunch break and Pray | 12:30 - 01:30 |
| Power point –presentation  Graph and Chart | * Static Water Level, Pumping Water Level , Drawdown , Well Yield and Specific yield * Water and Geology instruction * Groundwater resources evaluation | 01:30 - 02:00  02:00 - 02:30  02:30 - 03:00 |
| Power point presentation | * Groundwater versus contamination evaluation * Groundwater flow | 09:00 - 09:30  09:30 - 10:00 | 22/12/2013 |
|  | Tea break | 10:00 - 10:15 |
| Power point presentation  Graph and Chart | * Physical parameters * Porosity * Hydraulic conductivity * Transmisivity | **10:45**10:15 -  10:45 - 11:15  11:15 - 12:30 |
|  | Lunch break and pray | 12:30 - 01:30 |
| Power point presentation  Graph, map, and table | * Storitivity coefficient * Darcy Low * Well Pumping test * Well design ,site map * Select of pump for pumping test | 01:30 - 02:00  02:00 - 02:15  02:15 - 02:30  02:30 - 02:45  02:45 - 03:00 |
| Power point presentation  Table and Graph | * Water level measurement devices * Physical measurement devices * Sample bottle * Discharge measurement devices * Duration of the pumping test | 09:00 - 09:30  09:30 - 10:00 | 23/12/2013 |
|  | Tea break | 10:00 - 10:15 |
| Power point presentation  DACAAR experience and practices | * Format for field data * Field requirement and management * Field measurement during pump test * Time drawdown measurement * Flow rate measurement | **10:45**10:15 -  10:45 - 11:15  11:15 - 12:30 |
|  | Lunch break and pray | 12:30 - 01:30 |
| Power point presentation  DACAAR experience and practices | * Time Recovery Measurement data * Analysis and Evaluation of Pumping data * Plot of Time Drawdown Data in Simi logarithmic (group) * Plot of Time Recovery Data on the Simi Logarithmic (graph) * Plot Pumping Test Data on Simi Logarithmic graph * Calculation of Aquifer Parameters * Hydraulic conductivity ,Transmasivity | 01:30 - 02:00  02:00 - 02:15  02:15 - 02:30  02:30 - 02:45  02:45 - 03:00 |