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| **Government Engineering College, Dahod**  **Department of Civil Engineering**  **Syllabus Mid-semester Examination, Sept.-2020**  **Open Elective-I\_Remote Sensing and GIS\_** **3150617** **Semester –V** |
| Definition –Components of Remote Sensing –Active and Passive Remote Sensing – Electro Magnetic Spectrum – Interaction of EMR With the Earth’s Surface – Interactions with the Atmosphere Energy Sources and Radiation. Active and Passive Remote Sensting. Energy Interaction in the Atmosphere. Energy Interaction with the Earth Surface Features. Data Acquisition and Recording. Remote Sensing Data Products. |
| Introduction to Digital Image and Imaging Sensors- Data Formats of Digital Image- Display of Digital Image -– Digital Image Processing – Rectification and Restoration – Enhancement of Image – |
| GEOGRAPHIC INFORMATION SYSTEM -  Introduction to GIS- Definitions of GIS and related terminology - Components of GIS – GIS Data – Georeferenced data – introduction to data input and output in GIS– Fundamentals of data quality and Management |
| SPATIAL DATA ANALYSIS -Characteristics of Map Coordinate systems- Introduction to Map projections- Geo-referencing Frameworks and Reference Coordinate Systems. |