UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2017

Program: **B. Tech. GIE** **Semester VII**

Subject (Course): Applications of Geoinformatics I **Max. Marks : 100**
Course Code : GIEG 401 **Duration: 3 Hrs**
No. of page/s: 2

Section –A

Answer all Questions **(5X4 = 20)**

1. Write note on different types of urban plan and RS data requirements for preparing these maps [4]

2. List RS derived indicators of irrigation system performance evaluation [4]

3. Write brief note on global initiative of RS satellite based program to address environmental and climate change [4]

4. Write short note RS & GIS based national crop production forecasting project – FASAL [4]

5. Give empirical relationships for deriving agricultural drought indices based on satellite based NDVI and Temperature [4]

Section –B

Answer all Questions **(4x10 = 40)**

6. Schematic flowchart of methodology of national snow cover mapping project using RS satellite data [10]

7. Give brief account of use of hyperspectral RS technique in hydrocarbon exploration [10]

Or

Give an account on rainfall runoff modeling using SCS method utilizing RS inputs and GIS.

8. Discuss satellite multi-temporal spectral mixture analysis method of LULC change analysis [10]

9. Discuss with flowchart of methodology of landslide hazard zonation and risk mapping using RS & GIS.

[10]

Section –C

Answer all Questions **(2X20 = 40)**

10. Discuss NUIS (National Urban Information System) the objectives, data layers available and flowchart of methodology of this information system. [10+10]

OR

Give flow charts of methodology of national wet land mapping project and approach of flood forecasting modeling using RS and GIS [10 +10]

11. Discuss briefly characteristics of various types of landforms / geomorphic units and give flow chart showing steps followed for preparing geomorphological map using satellite data [10 +10]