Final Examination Questions for the Course "Remote Sensing"

1. Explain the main components of a remote sensing system and its process steps.
2. Explain in detail the satellites, aircraft, drones, and ground platforms used in remote sensing.
3. Explain the range of electromagnetic waves, their types, and a description of each.
4. From a distance probing systems structure and artificial satellite images Explain in detail the tools for formation and visualization.
5. Explain how many spectral bands multispectral images typically contain and how these bands are analyzed based on practical examples.
6. Explain, using specific examples, how monitoring processes are carried out in agriculture using multispectral and hyperspectral imagery.
7. Explain the processes of reflection, absorption, and emission, namely the interaction of sensors and electromagnetic energy with an object in a remote sensing system.
8. From a distance probing information again work tools and SNAP from the program explain the use
9. From a distance probing information again work tools and Erdas Imagine from the program explain the use
10. From a distance probing information again work tools and ENVI from the program explain the use
11. From a distance probing information again work for online tools and Google Earth Explain the engine using practical examples.
12. Artificial satellite on devices asset and passive sensors description and main Explain its properties with practical examples .
13. Artificial satellite platforms and Sentinel platforms and their main Explain the tasks in detail.
14. Artificial satellite platforms and Landsat platforms and their main Explain the tasks in detail.
15. Explain the importance and application areas of various spectral bands in remote sensing using practical examples .
16. Explain the characteristics and purpose of each band (Band 1 – Band 9) in the Landsat system.
17. Artificial satellite platforms and WordView platforms and their main Explain the tasks in detail.
18. Copernicus Sentinel-2 mission purpose and artificial satellite device Explain the description using analytical examples.
19. USGS Landsat-8 mission purpose and artificial satellite device Please explain the description in detail.
20. Explain the functional and technical differences between the Copernicus program and the Sentinel satellites.
21. Explain the classification methods and their specific features using the Semi-Automatic Classification Plugin in QGIS .
22. From a distance probing systems accuracy ability, spatial, spectral and Explain radiometric accuracy using practical examples.

23. Sentinel-2 and Landsat-8 platforms spatial and spectral accuracy Compare and illustrate using practical examples.
24. Images geometric mistakes correction and geometric mistakes correction Explain the methods .
25. From a distance probing platforms channels combination through various in appearance artificial Explain in detail the formation of satellite images.
26. From a distance probing information visualization and “Natural "color", "True" "color" and "False" Describe the types of "color" and illustrate their differences using practical examples.
27. Explain in detail the method for determining the NDVI index of an area through remote sensing and the formula for calculating NDVI and its application.
28. Explain in detail how the environmental monitoring process is carried out using the NDWI index based on remote sensing data.
29. Artificial satellite devices orbit (LEO, MEO, (HEO) features Explain with practical examples.
30. From a distance of probing electromagnetic spectra mutual Explain the relationship in detail with examples.
31. RGB, thermal and other kind of sensors remotely in the probe role and use Explain the areas using practical examples.
32. Sentinel and Landsat artificial companions main Explain the differences in detail .
33. Pix4D software from the tool UAV (Unmanned Aerial Vehicle) images in formation use Explain the stages.
34. Space the images digital processing in giving spectral libraries with work Explain the process using practical examples.
35. UAV (Unmanned Aerial Vehicle) taken from a drone images initial processing to give for Pix4D in the program done Explain in detail the steps to be taken .
36. From a distance probing information geometric correction main Explain the steps with practical examples.
37. SNAP in the program space images filtration to do for used Explain the methods with examples.
38. Explain with examples the steps of monitoring agricultural areas using remote sensing technologies .
39. Aerospace of images spectral features in visualization channels Explain the combination in detail.
40. Digital village farm in monitoring artificial satellite from images of use Explain the advantages with examples.
41. Landsat-8 platform spatial and radiometric Explain the characteristics in detail .
42. Geometric mistakes in correction main tools and Explain the methods using practical examples .
43. UAV (Unmanned Aerial Vehicle) drones area information collection for preparation Explain the stages.
44. From a distance probing technologies using ecological monitoring organization

to grow Describe the stages based on analytical data.

45. "Copernicus" Sentinel from the platform remotely probing for use missions and Explain their characteristics in detail .
46. Electromagnetic radiation land atmosphere with mutual impact and this of the process What are the implications for remote sensing? Explain with examples.
47. SNAP software by means of NDVI index calculation process examples with Express it.
48. Image histogram change through his/her quality Explain the improvement in more detail with examples.
49. From a distance probing images linear and nonlinear filtration methods Please compare.
50. Artificial satellite images classification for SNAP from the program What are the advantages of using it? Explain based on analytical data.
51. UAV and artificial satellite platforms using remotely of probing mutual Explain the differences based on analytical data.
52. Artificial satellite " True" images Color” and " False" Color” methods with Explain visualization in detail .
53. Environment in monitoring artificial satellite from images What are the advantages of using and main Explain the existence of these properties based on analytical data.
54. Artificial satellite from platforms Sentinel-2 and Worldview platforms Compare and explain with examples.
55. Electromagnetic spectra types and remotely in probing their mutual Explain its significance based on analytical data.
56. Images radiometric accuracy and them increase Explain the methods in detail .
57. UAV images remotely in probing applicable main types and their Explain the differences based on analytical data.
58. Landsat platforms main missions and from them removable of images Describe the advantages based on analytical data.
59. Artificial satellite sensors active and passive types characteristics and SAR Explain in detail the use of data .
60. SNAP software by means of geometric correction for usable Explain algorithms based on analytical data with examples.
61. the role of RADAR technology in remote sensing and its basic working mechanism with examples .
62. Explain the differences between LiDAR and RADAR systems in terms of spatial resolution, weather effects, and object detection capabilities.
63. UAV using taken images initial processing of giving algorithmic stages Explain using the example of the Pix4D Mapper environment.
64. Sentinel from the platform spectral information loading and visualization Explain the steps based on examples.
65. Landsat-8 and Sentinel-2 platforms mutual Explain the comparison based on analytical examples and data.
66. Space the images in improvement histogram from the method of use Describe

the advantages based on analytical data.

67. SNAP in the program the images spectral analysis to do methods and Describe the stages based on detailed analytical data.
68. UAV and artificial satellite information based on taken NDVI index Explain the comparison based on practical data.
69. Artificial satellite images training selection based on classification Explain the steps with examples.
70. Environment in monitoring remotely probing technologies place and Describe its capabilities based on practical information.
71. Landsat platforms atmospheric radiation record in the making Explain the possibilities in detail.
72. Spectral libraries using the images again of work practical Describe the methods based on analytical data.
73. Pix4D Mapper in the program remotely probing information based on DEM model Describe the creation steps in detail.
74. SNAP in the program the images analysis to do for filtration algorithms Explain the choice in detail.
75. Explain with examples the steps of synchronizing UAV drones with positioning systems and processing based on RTK (Real Time Kinematics) .
76. Aerospace images spectral channels according to mutual Explain the comparison based on analytical data.
77. Space of images natural colored (true color) and fake colored (false color) Explain the combinations based on analytical data, giving examples.
78. Explain in detail, with examples, the methods of analyzing remote sensing data in digital format.
79. Sentinel-1 and WorldView platforms spectral accuracy Explain the comparison based on analytical data with practical examples.
80. UAV images Pix4D environment using georeferencing Describe the methods based on analytical and practical data.
81. From a distance probing information visualization for software tools Compare and explain based on analytical data.
82. Google Earth Engine using remotely probing information again Describe the possibilities of performance based on practical data.
83. Digital maps for remotely probing information use Explain the steps based on examples.
84. NDVI index calculation for images spectral channels Explain the choice based on detailed analytical data.
85. SNAP in the program aerospace of images spectral descriptions analysis Explain with examples what is important in doing this.
86. Landsat platforms development and from them usable main Give examples of the areas. Express your opinion based on analytical data .
87. Explain the technical elements of drones used in remote sensing (sensor, camera, GPS, control system) and their functions.
88. UAV images artificial satellite information with integration to do Describe the methods based on analytical data.
89. From a distance in probing geometric accuracy (geometric resolution) and spatial accuracy (spatial Describe the differences and interrelationships

between resolution based on analytical data .

90. Images in classification training indiscriminate of methods advantages and Describe its shortcomings based on analytical data.
91. UAV using village farm fields spectral observation Explain the methods based on modern practical examples.
92. SNAP and ENVI programs between differences and their application Describe the areas based on analytical examples.
93. Artificial satellite devices orbit and to them suitable incoming remotely probing Explain its applications based on practical examples.
94. WorldView platforms spatial accuracy and from them removable Present the data based on analytical data.
95. Pix4D software by means of high high-resolution " orthophoto" images create Describe the methods based on analytical data.
96. Landsat-8 your information village on the farm Explain its application using examples. Express your opinion based on analytical data.
97. UAV and artificial satellite sensors technician features Compare and explain based on analytical data with examples.
98. SNAP in the environment of images geometric mistakes determination and Please explain in full what the amendment covers.
99. Aerospace the images spectral the images analysis to do for channels What does the combination cover? Express your opinion based on analytical data.
100. Copernicus LMS on the platform remotely probing information management What are the possibilities? Express your opinion based on analytical data.