

BIRLA INSTITUTE OF TECHNOLOGY MESRA - 835215, RANCHI, INDIA

UG

| Name: | Roll No.: |
|---------|-------------------------------|
| Branch: | Signature of Invigilator: |

Semester: VIth Date: 26/04/2022 (MORNING)

Subject with Code: CE425 REMOTE SENSING IN CIVIL ENGINEERING

| Marks Obtained | Section A | Section B | Total Marks |
|----------------|-----------|-----------|-------------|
| | (30) | (20) | (50) |
| Marks Obtained | | | |

INSTRUCTION TO CANDIDATE

- The booklet (question paper cum answer sheet) consists of two sections. <u>First section consists of MCQs of 30 marks</u>.
 Candidates may mark the correct answer in the space provided / may also write answers in the answer sheet provided. <u>The Second section of question paper consists of subjective questions of 20 marks</u>. The candidates may write the answers for these questions in the answer sheets provided with the question booklet.
- 2. The booklet will be distributed to the candidates before 05 minutes of the examination. Candidates should write their roll no. in each page of the booklet.
- 3. Place the Student ID card, Registration Slip and No Dues Clearance (if applicable) on your desk. <u>All the entries on the cover page must be filled at the specified space.</u>
- 4. <u>Carrying or using of mobile phone / any electronic gadgets (except regular scientific calculator)/chits are strictly prohibited inside the examination hall as it comes under the category of unfair means.</u>
- 5. No candidate should be allowed to enter the examination hall later than 10 minutes after the commencement of examination. Candidates are not allowed to go out of the examination hall/room during the first 30 minutes and last 10 minutes of the examination.
- 6. Write on both side of the leaf and use pens with same ink.
- 7. The medium of examination is English. Answer book written in language other than English is liable to be rejected.
- 8. All attached sheets such as graph papers, drawing sheets etc. should be properly folded to the size of the answer book and tagged with the answer book by the candidate at least 05 minutes before the end of examination.
- 9. The door of examination hall will be closed 10 minutes before the end of examination. <u>Do not leave the examination hall until the invigilators instruct you to do so.</u>
- 10. Always maintain the highest level of integrity. Remember you are a BITian.
- 11. Candidates need to submit the question paper cum answer sheets before leaving the examination hall.

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI (END SEMESTER EXAMINATION)

CLASS: BTech SEMESTER: VI SESSION: SP/22

SUBJECT: CE 425 Remote Sensing in Civil Engineering

TIME:2hrs FULL MARKS: 50

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| Section | A: Multiple Choice Questions (30 M) | |
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| | | |
| Q.1 | FCC stands for: A) False Color Composites B). Fault Color Composites | 2 |
| | C). Fault color cans D). Falsed Columned Compositions | |
| Q.2 | The specific reflectance characteristic of a feature is known as its: A) Window B) Signature | 2 |
| | C) EMS D) Spectrum | |
| Q.3 | | 2 |
| Q.4 | Sun is a source of Energy in: A) Active Remote Sensing B) Passive Remote Sensing | 2 |
| | C) Low Resolution Sensor D) High Resolution Sensor | |
| Q.5 | LISS stands for : A) Linear Imaging Self Scanner B). Linear Image Selfie Scanning | 2 |
| | D) Line Image Self Scan D). Line Imaging Selfie Scanner | |
| Q.6 | The country of origin for LANDSAT Satellite is: A) India B) USA C) China D) France | 2 |
| Q.7 | The formula for NDVI is: A) NIR+R/NIR-R B)NIR-R/NIR+R C)NIR-R/R-NIR D)NIR+R/R-NIR | 2 |
| Q.8 | The formula for NDWI is: A)G-NIR/G+NIR B) G+R/G-R C)R-NIR/R+NIR D) NIR-G/G-NIR | 2 |
| Q.9 | Land use land cover assessment can be performed using: A) Supervised Classification | 2 |
| | B) Unsupervised Classification C). Both option A and B are correct D). None options are correct | |
| Q.10 | Short range UAVs have following range: A) 150Km and 8-10hrs endurance time | 2 |
| | B) 50Km with 4-6 hrs Endurance time C)5km with 1-2 hrs endurance time | |
| | D) 300km with 16hrs endurance time | |
| Q.11 | The Israeli IAI Malat Mosquito has a wing span of: A) 100cm B)70cm c)35cm D) 135cm | 2 |
| Q.12 | UAVs that can operate at an altitude of 30000feet is A) Mid range UAV B) Short Range UAV | 2 |
| | C) Endurance UAV D) Close Range UAV | |
| Q.13 | NDBI application is used for: A) Urban Planning B). Transportation Expansion | 2 |
| | C). Both A and B D). None of the options are correct | 2 |
| Q.14 | PAN in remote sensing stands for A) Panchromatic B)Pan Asian Network | |
| 0.45 | c) Panchromatic Aerial Node D) Pan Aerial Nations | 1 |
| Q.15 | The wing span of US Aurora Flight SS is: A) 100cm B) 80Cm C)60Cm D)120Cm | 2 |
| Costion | Pr Chart Anguar Overtions (20 M) | |
| Section | B: Short Answer Questions(20 M) | |
| Q.1 | Why does Vegetation appear Red in an FCC? | [4] |
| Q.2 Q.3 | Illustrate the application of high and low resolution sensors using examples Write down short notes on Laplace filtering technique | [4] [4] |
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| Q.4 | Giving suitable examples, discuss the various applications of UAVs. | [4] |
| Q.5 | Using either Indian or Global case study, give an application of remote sensing in Civil engineering | [4] |
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