CBSE | DEPARTMENT OF SKILL EDUCATION

GEOSPATIAL TECHNOLOGY (SUBJECT CODE 818)

CLASS XII (SESSION 2021-2022)
BLUE-PRINT FOR SAMPLE QUESTION PAPER FOR TERM -1

Max. Time Allowed: 90 Minutes (1½ Hrs.) **Max. Marks: 30**

PART A - EMPLOYABILITY SKILLS (05 MARKS):

UNIT NO.	NAME OF THE UNIT	NO. OF QUESTIONS (1 MARK EACH)
1	Communication Skills-IV	2
2	Self-Management Skills-IV	2
3	Information and Communication Technology Skills-IV	2
TOTAL QUESTIONS		**6 Questions**
NO. OF QUESTIONS TO BE ANSWERED		**Any 5 Questions**
TOTAL MARKS		**1 x 5 = 5 marks**

PART B - SUBJECT SPECIFIC SKILLS (25 MARKS):

UNIT NO.	NAME OF THE UNIT	NO. OF QUESTIONS (1 MARK EACH)
1	Remote Sensing	20
2	Geographic Information System (till GIS modeling)	12
TOTAL QUESTIONS		**32 Questions**
NO. OF QUESTIONS TO BE ANSWERED		**25 Questions**
TOTAL MARKS		**1 x 25 = 25 MARKS**

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General Instructions:

1. Please read the instructions carefully
2. This Question Paper is divided into 03 sections, viz., Section A, Section B and Section C.
3. Section A is of 05 marks and has 06 questions on Employability Skills.
4. Section B is of 20 marks and has 25 questions on Subject specific Skills.
5. Section C is of 05 marks and has 07 competency-based questions.
6. Do as per the instructions given in the respective sections.
7. Marks allotted are mentioned against each section/question.
8. All questions must be attempted in the correct order

SECTION A

Answer any 5 questions out of the given 6 questions on Employability Skills (1 x 5 = 5 marks)

1.	Which is not a barrier to active listening? A. Being pre-occupied B. Noise distraction C. Being attentive D. Prejudices	**1**
2.	MINTS refers to – A. Active listening rules B. Capitalization rules C. Speaking rules D. Grammar rules	**1**
3.	What should be the first step to become result oriented? A. Use the right resources B. Prepare an action plan C. Make a calendar D. Set clear goals	**1**

4.	If a person is interested in learning new things, meeting new people and making friends, and likes visiting new places, the person can be called _____. A. Open Minded B. Extrovert C. Conscious D. Agreeable	**1**
5.	Google Sheets is similar to- A. Microsoft word B. Microsoft Docx C. Microsoft Page D. Microsoft Excel	**1**
6.	Which keys are used for print Command? A. Ctrl+O B. Ctrl+P C. Ctrl+N D. Ctrl+S	**1**

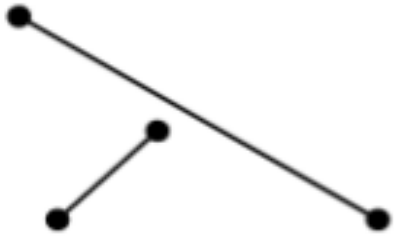
SECTION B

Answer any 20 questions out of the given 25 questions **(1 x 20 = 20 marks)**

7.	If moisture increases in vegetation, the spectral reflectance graph will be- A. Lower B. Higher C. Similar D. Uneven	**1**
8.	Which resolution can show 1023 colurs? A. 6 bit B. 8 bit C. 10 bit D. 12 bit	**1**
9.	What is the temporal resolution of IRS 1A/1B? A. 3 days B. 5 days C. 20 days D. 22 days	**1**
10.	In NDVI, extreme negative values represent _____. A. Water B. Soil C. Vegetation D. Rocks	**1**
11.	What is the other name of K-means approach? A. Maximum likelihood B. Minimum distance C. Aiisce D. Iso data	**1**

12.	Parallel piped algorithm is used in- A. Unsupervised classification B. Supervised classification C. Rectification D. Noise removal	**1**
13.	This image belongs to the category of-  A. Vertical Aerial photograph B. Low oblique Aerial photograph C. High Oblique Aerial photograph D. Stereo photograph	**1**
14.	Stereo photography includes taking a photograph from two positions, which corresponds to two- A. Eye position B. Hand position C. Leg position D. Ear position	**1**
15.	Which is the most important interpretation key in the given satellite image?  A. Size B. Association C. Pattern D. Shadow	**1**

16.	Which advanced remote sensing technique uses both airborne and spaceborne sensors? A. Lider B. Thermal C. Hyperspectral D. Radion	**1**
17.	3-5 µ and 8-14 µ bands are mainly used in – A. Visible remote sensing B. Thermal remote sensing C. Infrared remote sensing D. Radar remote sesning	**1**
18.	Which microwave band has maximum wavelength band? A. K B. X C. C D. P	**1**
19.	_____ is used to measure chemical concentration in atmosphere. A. DIAL B. Doppler C. Range finder D. Topographic Lidar	**1**
20.	Which data format is most efficient for CAD database? A. Raster B. Vector C. Spaghetti D. Topological	**1**
21.	What is a node? A. A series of points B. An intersection point C. Single XY coordinate D. Closed chain of lines	**1**
22.	Which property indicates the nearness of two spatial features? A. Relative direction B. Containment C. Adjacency D. Proximity	**1**
23.	ASCII format is used in- A. Satellite images B. GIS data C. GPS data D. Aerial photos	**1**

24.	In which data format lines can become broader from their original size? A. Raster B. Vector C. Spaghetti D. Topological	**1**
25.	 Identify the type of topological error in this figure. A. Overshoot B. Undershoot C. Duplicate lines D. Dissolve	**1**
26.	Transforming analog data to digital data is known as _____ A. Vectorization B. Rasterization C. Digitization D. Topological editing	**1**
27.	Georeferencing errors occur by- A. Selecting wrong control points B. Mis-shape lines C. Creating extra lines D. Missing lines	**1**
28.	_____ is a necessary operation before joining maps because lines from two maps rarely meet along the border. A. GIS editing B. Topology building C. Edge matching D. Removing undershoot	**1**
29.	Suppose we wish to mark the states located north and south of Vindhyachal range on the political map of India. Which Spatial tool will be used to remove the state boundaries and highlighting the desired result? A. Dissolve B. Merge C. Buffer D. Query	**1**
30.	Which overlay will be done with cell-by-cell process? A. Clipping B. Intersection C. Raster D. Union	**1**

31.	Which Spatial analysis tool uses Triangle by Triangle method? A. Buffer B. Query C. Merge D. TIN	**1**

SECTION C
(COMPETENCY BASED QUESTIONS)

Answer any 5 questions out of the given 7 questions **(1 x 5 = 5 marks)**

Read the given case study and answer the questions based on this case study-

After pandemic World is now facing several climatic disasters. North America Experiencing wildfires while unexpectedly wet weather in Europe, China and Australia led to massive flooding. Armin Laschet, governor of North Rhine-Westphalia, one of the worst-affected German regions was quoted saying that the country was experiencing a "flooding catastrophe of historic proportions."

In the course of these weather-induced crises, remote sensing has had a lot to contribute by way of responding to and managing the disaster. Aerial imagery shot from drones have provided detailed, higher resolution images and data from synthetic aperture radar at quicker response times compared to traditional methods of aerial survey.

Satellite imagery acquired for Germany, conducted by Maxar, have helped survey the extent of the devastating floods to not just better respond to the calamitous events, but also covered larger swathes than is otherwise possible, providing a broader perspective on the unfolding events.

In Australia, NASA Earth Observatory images using modified Copernicus Sentinel data (2021), processed by ESA and analyzed by the National Central University of Taiwan in collaboration with NASA-JPL and Caltech estimated flood severity for the Australia flooding event in March 2021.

In Canada, Advanced Very High Resolution Radiometer (AVHRR) imagery, Moderate Resolution Imaging Spectroradiometer (MODIS) imagery, and Visible Infrared Imaging Radiometer Suite (VIIRS) imagery were used for the fire monitoring, mapping and modeling (M3) system.

Remote sensing data, such as satellite images and aerial photos, allow us to map the variabilities of terrain properties. This detailed knowledge in turn can help manage disasters through engaging the 'disaster cycle'. The first step is to mitigate natural disasters by providing insights into the expected frequency, character, and magnitude of hazardous events in an area.

For any successful rescue operation, the critical component is time. A precise knowledge of locations and ongoing phenomena helps save time and reduces the risk to property and human lives. Remote sensing has helped assess situations in the recently occurred and currently ongoing catastrophes and have outlined the measures that needed to be taken. Past occurrences have been mapped and lessons have been drawn from them.

32.	Which part of Geospatial Technology include Drones? A. Remote Sensing B. Geographic Information System C. Global positioning system D. Global Navigation satellite System	**1**
33.	In which band of EMR the flooded areas will reflect maximum? A. Near Infrared B. Middle Infrared C. Far Infrared D. Visible	**1**
34.	What is the range of high spatial resolution remote sensing? A. Less than 4 meters B. 4-30 meters C. 30-1000 meters D. More than 1000 meters	**1**
35.	Which of the following Space Agency owns Copernicus Sentinel Satellite? A. NASA B. European Space Agency C. ISRO D. Russian Space Agency	**1**
36.	Identify the major difference between Satellite images and Aerial photo- A. Resolution B. Altitude C. Clarity D. Processing	**1**
37.	What is a Satellite's swath? A. Satellite's temporal resolution B. Satellite's spatial resolution C. The area imaged on the surface D. Number of bands used	**1**
38.	Which Geospatial Technology can help in knowing the precise location of affected areas? A. Remote Sensing B. Geographic Information System C. Global positioning system D. Global Navigation satellite System	**1**