

# CBSE | DEPARTMENT OF SKILL EDUCATION

## GEOSPATIAL TECHNOLOGY (SUBJECT CODE - 818)

**Blue-print for Sample Question Paper for Class XII (Session 2024-2025)**

Max. Time: 3 Hours

Max. Marks: 60

**PART A - EMPLOYABILITY SKILLS (10 MARKS):**

UNIT NO.	NAME OF THE UNIT	OBJECTIVE TYPE QUESTIONS	SHORT ANSWER TYPE QUESTIONS	TOTAL QUESTIONS
		1 MARK EACH	2 MARKS EACH	
1	Communication Skills - IV	1	1	2
2	Self-Management Skills - IV	2	1	3
3	ICT Skills - IV	1	1	2
4	Entrepreneurial Skills - IV	1	1	2
5	Green Skills- IV	1	1	2
<b>TOTAL QUESTIONS</b>		<b>6</b>	<b>5</b>	<b>11</b>
<b>NO. OF QUESTIONS TO BE ANSWERED</b>		<b>Any 4</b>	<b>Any 3</b>	<b>07</b>
<b>TOTAL MARKS</b>		<b>1 x 4 = 4</b>	<b>2 x 3 = 6</b>	<b>10 MARKS</b>

**PART B - SUBJECT SPECIFIC SKILLS (50 MARKS):**

UNIT NO.	NAME OF THE UNIT	OBJECTIVE TYPE QUESTIONS	SHORT ANS. TYPE QUES.- I	SHORT ANS. TYPE QUES.- II	DESCRIPTIVE/ LONG ANS. TYPE QUESTIONS	TOTAL QUESTIONS
		1 MARK EACH	2 MARKS EACH	3 MARKS EACH	4 MARKS EACH	
1.	Remote Sensing	9	2	1	2	14
2.	Geographic Information System	9	1	1	2	13
3.	Global Positioning System	6	1	1	-	8
4.	Trends in Geospatial Technology	5	1	-	-	6
5.	Application of Geospatial Technology	3	-	-	1	4
<b>TOTAL QUESTIONS</b>		<b>32</b>	<b>5</b>	<b>3</b>	<b>5</b>	<b>45</b>
<b>NO. OF QUESTIONS TO BE ANSWERED</b>		<b>26</b>	<b>Any 3</b>	<b>Any 2</b>	<b>Any 3</b>	
<b>TOTAL MARKS</b>		<b>1 x 26= 26</b>	<b>2 x 3 = 6</b>	<b>3 x 2 = 6</b>	<b>4 x 3 = 12</b>	<b>50 MARKS</b>

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## GEOSPATIAL TECHNOLOGY (SUBJECT CODE - 818)

### Sample Question Paper for Class XII (Session 2024-2025)

Max. Time: 3 Hours

Max. Marks: 60

#### General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of **24 questions** in two sections – Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. **Out of the given (6 + 18 =) 24 questions, a candidate has to answer (6 + 11 =) 17 questions in the allotted (maximum) time of 3 hours.**
5. All questions of a particular section must be attempted in the correct order.
6. **SECTION A - OBJECTIVE TYPE QUESTIONS (30 MARKS):**
  - i. This section has 06 questions.
  - ii. There is no negative marking.
  - iii. Do as per the instructions given.
  - iv. Marks allotted are mentioned against each question/part.
7. **SECTION B – SUBJECTIVE TYPE QUESTIONS (30 MARKS):**
  - i. This section contains 18 questions.
  - ii. A candidate has to do 11 questions.
  - iii. Do as per the instructions given.
  - iv. Marks allotted are mentioned against each question/part.

## SECTION A: OBJECTIVE TYPE QUESTIONS

Q. 1	Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)	
i.	List out any two factors that affect active listening in the communication process.	1
ii.	What is Stress? Explain.	1
iii.	Elucidate the term Extrinsic motivation.	1
iv.	What is the shortcut key to underline text in a spreadsheet?	1
v.	Mention any two barriers in entrepreneurship.	1
vi.	The _____ set up by the government, can be utilized to provide support activities like technology dissemination, training awareness to the local youth and farmers for collection, storage and reuse of agro-waste.	1

Q. 2	Answer any 5 out of the given 7 questions (1 x 5 = 5 marks)	
i.	Maximum reflection of vegetation occurs in _____. A. Visible B. Near Infrared C. Middle Infrared D. Far Infrared	1
ii.	Black body is an ideal body which absorbs all ..... without any reflection. A. Radiation B. Reflection C. Emission D. Refraction	1
iii.	Which remote sensing technology will be used to measure the concentration of pollutants in your city's atmosphere? A. SONAR B. RADAR C. LIDAR D. All the above	1
iv.	If the moisture is low in leaves of the plants then it _____ more energy in all bands. A. Absorb B. Reflect C. Scatter D. Transmit	1
v.	What is the spectral resolution of SPOT?	1

	A. 1 band B. 4 bands C. 5 bands D. 7 bands	
<b>vi.</b>	_____ is any unwanted disturbance in the image data due to limitation in the sensing instrument. A. Geometric distortion B. Image noise C. Non-systematic distortion D. None of the above	<b>1</b>
<b>vii.</b>	Which of the following is not a function of GIS? A. Capturing B. Managing C. Displaying D. Allocating	<b>1</b>

<b>Q. 3</b>	<b>Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)</b>	
<b>i.</b>	Which of the following is not a vector overlay method? A. Clip B. Union C. Query D. Intersection	<b>1</b>
<b>ii.</b>	_____ is a computer application program that stores spatial and non-spatial information in a digital form. A. GIS B. GPS C. RS D. LBS	<b>1</b>
<b>iii.</b>	Which of the following is not a spatial data of a river? A. Location of a river B. Drainage area of a river C. Length of a river D. Cultural significance of a river	<b>1</b>
<b>iv.</b>	If you wish to demarcate the impact area of a river flooding, which spatial analysis tool will be used? A. Merge B. Overlay C. Buffer D. Query	<b>1</b>
<b>v.</b>	_____ data model is used where spatial phenomenon varies continuously. A. Raster B. Vector	<b>1</b>

	C. Both raster and vector D. None of the above	
<b>vi.</b>	How many orbits are there in the GLONASS? A. 3 B. 4 C. 5 D. 6	<b>1</b>
<b>vii.</b>	Which of the following is not a part of vehicle tracking system? A. In vehicle unit B. Base station C. Communication link D. Vehicle accessories	<b>1</b>

<b>Q. 4</b>	<b>Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)</b>	
<b>i.</b>	Which type of GPS can provide horizontal accuracy within a cm? A. Recreational B. Mapping C. Survey D. Navigational	<b>1</b>
<b>ii.</b>	What is an average accuracy in autonomous mode of operation in GPS? A. 1 cm-5 cm B. 20 cm-1 m C. 0.5 m- 5 m D. 15 m-100 m	<b>1</b>
<b>iii.</b>	Which among the following sensors have the highest resolution? A. IKONOS B. Cartosat-2 C. Quickbird D. Geoeye	<b>1</b>
<b>iv.</b>	What is SYMAP? A. A Grid based mapping program B. A 3D and Flythrough software C. A manufacturer of GPS chip cells D. A GPS based mobile game	<b>1</b>
<b>v.</b>	Which GIS face the reliability issues? A. Mobile GIS B. Enterprise GIS C. Web GIS D. None of the above	<b>1</b>
<b>vi.</b>	Which state is worst affected by flooding in river Kosi? A. Uttar Pradesh B. Bihar C. West Bengal D. Assam	<b>1</b>

<b>Q. 5</b>	<b>Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)</b>	
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i.	_____ describes the ability of a sensor to discriminate very light differences in energy.	1
ii.	_____ lidar is used to measure the velocity of a target.	1
iii.	_____ is a series of triangles constructed using elevation data points taken from coverages.	1
iv.	_____ analysis is used for identifying area surrounding geographic feature.	1
v.	_____ based navigation systems are developed and used in world war II.	1
vi.	_____ GIS creates and maintains an inventory of asset locations and attribute information.	1

<b>Q. 6</b>	<b>Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)</b>	
i.	Name any two fields of utility departments.	1
ii.	What is Histogram normalization?	1
iii.	What is Map projection?	1
iv.	How does the Troposphere create error in GPS signals?	1
v.	Explain the term Datum.	1
vi.	Name the multi-criteria decision making technique of flood hazard mapping.	1

## **SECTION B: SUBJECTIVE TYPE QUESTIONS**

**Answer any 3 out of the given 5 questions on Employability Skills (2 x 3 = 6 marks)**

**Answer each question in 20 – 30 words.**

<b>Q. 7</b>	There are four parts of communication, which help us to understand others. Discuss in brief.	2
<b>Q. 8</b>	Mention any two types of personality disorders in emotional and impulsive category.	2
<b>Q. 9</b>	Write down the steps for Inserting images in the presentation	2
<b>Q. 10</b>	Discuss some of the major functions performed by an entrepreneur.	2
<b>Q. 11</b>	List some ways by which we can reduce the amount of waste generated.	2

**Answer any 3 out of the given 5 questions in 20 – 30 words each (2 x 3 = 6 marks)**

<b>Q. 12</b>	How linear contrast stretching is different from non-linear contrast stretching? Explain.	2
<b>Q. 13</b>	What is thermal remote sensing? Explain	2

<b>Q. 14</b>	Define Raster data structure?	<b>2</b>
<b>Q. 15</b>	Mention the 4 types of GPS	<b>2</b>
<b>Q. 16</b>	Explain the control segment of GPS.	<b>2</b>

**Answer any 2 out of the given 3 questions in 30– 50 words each (3 x 2 = 6 marks)**

<b>Q. 17</b>	Explain the spectral signature of water. Discuss the factors cause variation in this signature.	<b>3</b>
<b>Q. 18</b>	Define the properties of spaghetti data structure.	<b>3</b>
<b>Q. 19</b>	What is Survey grade GPS? Explain its uses.	<b>3</b>

**Answer any 3 out of the given 5 questions in 50– 80 words each (4 x 3 = 12 marks)**

<b>Q. 20</b>	Distinguish between supervised and unsupervised image classification	<b>4</b>
<b>Q. 21</b>	Remote sensing is an essential tool for smooth governance. Explain	<b>4</b>
<b>Q. 22</b>	What are coordinate systems? Differentiate between Geographic and Projected coordinate systems.	<b>4</b>
<b>Q. 23</b>	Elaborate the functions of GIS in step-by-step manner.	<b>4</b>
<b>Q. 24</b>	GIS plays a crucial role in disaster management by providing valuable tools and technologies for collecting, analyzing and visualizing geospatial data. Explain the key roles of GIS in disaster management.	<b>4</b>