

CBSE | DEPARTMENT OF SKILL EDUCATION

GEOSPATIAL TECHNOLOGY (SUBJECT CODE- 818)

CLASS XII (SESSION 2021-2022) MARKING SCHEME FOR TERM - II

Max. Time Allowed: 1 ½ Hours (90 min)

Max. Marks: 30

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.
 - a) Questions numbers 1 to 4 are one mark questions. Attempt any three questions.
 - b) Questions numbers 05 and 06 are two marks questions. Attempt any one question.
4. Section B is of 17 marks and has 16 questions on Subject specific Skills.
 - a) Questions numbers 7 to 13 are one mark questions. Attempt any five questions.
 - b) Questions numbers 14 to 18 are two marks questions. Attempt any three questions.
5. Section C is of 08 marks and has 03 competency-based questions.
 - a) Questions numbers 19 to 21 are four marks questions. Attempt any two questions.
6. Do as per the instructions given in the respective sections.
7. Marks allotted are mentioned against each section/question.

SECTION A

(3 + 2 = 5 marks)

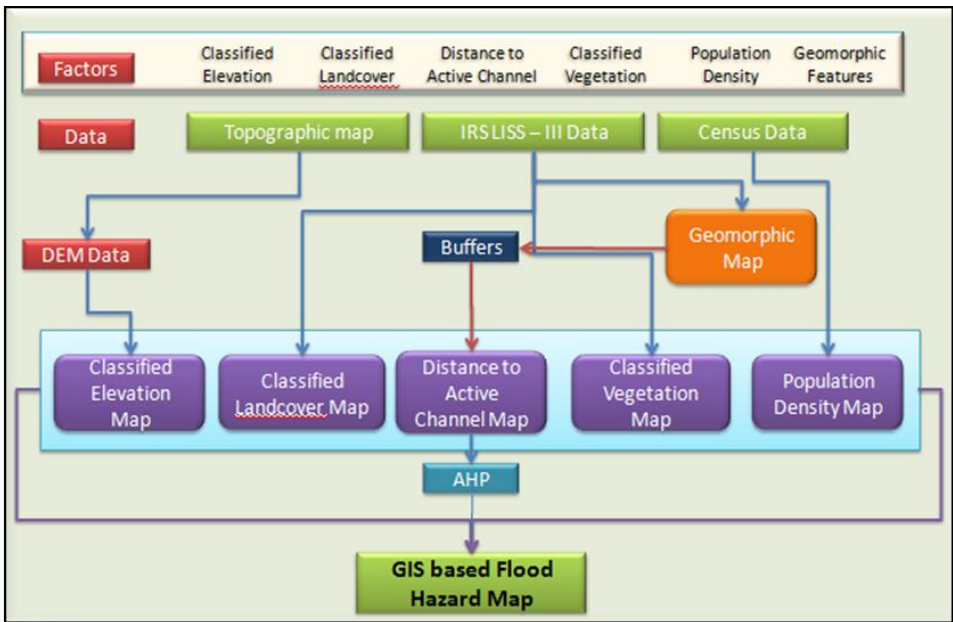
Answer any 03 questions out of the given 04 questions		1 x 3 = 3
Q.1	Entrepreneurship development refers to the process of enhancing entrepreneurial skills and knowledge through structured training and institution building programmes.	1
Q.2	1. Standard of excellence 2. Uniqueness 3. Focus on long term goals 4. Need to influence (Any two)	1/2x2=1
Q.3	UNEP- United Nations Environmental Program	1
Q.4	• increase the efficiency of energy and raw material. • reduce greenhouse gas emissions. • control waste and pollution. • protect and restore ecosystems. • support adaptation to the effects of climate change. (Any two)	1/2x2=1
Answer any 01 question out of the given 02 questions		1 x 2 = 2
Q.5	Time management is the process of planning and following a conscious control of time spent on specific activities. It is the ability to use one's time well. Time management includes the following. 1. Planning well 2. Setting goals 3. Setting deadlines 4. Giving important work responsibilities to other people in a team 5. Conducting the most important tasks first. Or any other relevant points to be marked correct.	2

Q.6	1. Reusing scrap material 2. Ensuring quality control 3. Waste exchange 4. Managing e-waste 5. Use of eco-friendly material Explain any two in detail. Or any other relevant point and explanation to be given.	1x2=2
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SECTION B

(5 + 6 + 6 = 17 marks)

Answer any 05 questions out of the given 07 questions		1 x 5 = 5
Q.7	Projection	1
Q.8	The process of calculating one's position, especially at sea, by estimating the direction and distance travelled rather than by using landmarks or astronomical observations.	1
Q.9	Recreational GPS	1
Q.10	Digital photogrammetry is a well-established technique for acquiring dense 3D geometric information for real-world objects from stereoscopic image overlap and has been shown to have extensive applications in a variety of fields.	1
Q.11	1. Location based services 2. GPS enabled cell phones 3. Vehicle navigation 4. Wide area augmentation system 5. Personal Navigation device 6. WiFi positioning system 7. GypSii Symbian (Any two)	$\frac{1}{2} + 1/2 = 1$
Q.12	Watershed management is an integration of technologies within the natural boundaries of a drainage area for optimal development of land, water and plant resources to meet the basic needs of people in sustainable manner	1
Q.13	Factorial discriminate analysis	1
Answer any 03 questions out of the given 05 questions		2 x 3 = 6
Q.14	A known and constant surface which can be used to describe the location of unknown points. On Earth, the normal reference datum is sea level. Indian datum is Everest.	1+1=2
Q.15	A vehicle tracking system combines the installation of an electric device in a vehicle, with designed computer software to enable to track vehicle's location. The GPS tracking device keep server updated about the location of a vehicle. The server maintains a record of these updates. Explain the process.	2
Q.16	1. Most accurate and most expensive 2. Used by professional surveyors for cadastral and infrastructural mapping and planning. Or any relevant point.	1x2=2
Q.17	Location based services, consists of five basic components- mobile device, positioning, communication network, service provider and content provider.	1+1=2
Q.18	1. 4-7 bands 2. broad bandwidth 3. easy display and classification 4. easy classification and availability (Any two)	1x2=2

Answer any 02 questions out of the given 04 questions		3 x 2 = 6
Q.19	<p>Compare both the coordinate systems and explain the advantages-</p> <ol style="list-style-type: none"> 1. Geographic system is globe based, Projected is map based. 2. Geographic is 3d uses positive and negative values of coordinates to mark places. Projected uses the values of X and Y on a 2D surface like a paper which is easier to use. 3. UTM is based on projected system only which is very flexible with local areas. (Explain in detail) 	1x3=3
Q.20	<p>Galileo. Accuracy till a meter. Better for high latitudes, SAR feature, Free for everyone. Explain.</p>	1+2=3
Q.21	<p>Create, edit and use maps in fields Creates an inventory Updates asset location Maintain digital records for legal code Documents the location and circumstances Perform GIS functions at filed only (Explain any three)</p>	1x3=3
Q.22	<p>Hazard maps indicate settlement areas that are at risk from floods, avalanches, landslides etc. The hazard maps also provide detailed information about the causes, course, spatial scope, intensity and probability of occurrence of natural hazard events. Explain</p> <p>E</p>  <pre> graph TD subgraph Factors CE[Classified Elevation] CL[Classified Landcover] DAC[Distance to Active Channel] CV[Classified Vegetation] PD[Population Density] GF[Geomorphic Features] end subgraph Data TM[Topographic map] IRSL[IRS LISS – III Data] CD[Census Data] end TM --> DEM[DEM Data] IRSL --> CL CD --> PD DEM --> CE CL --> CL IRSL --> DAC CD --> GF GF --> Buffers Buffers --> DAC CE --> CE_Map[Classified Elevation Map] CL --> CL_Map[Classified Landcover Map] DAC --> DAC_Map[Distance to Active Channel Map] CV --> CV_Map[Classified Vegetation Map] PD --> PD_Map[Population Density Map] CE_Map --> AHP[AHP] CL_Map --> AHP DAC_Map --> AHP CV_Map --> AHP PD_Map --> AHP AHP --> GFHM[GIS based Flood Hazard Map] </pre> <p>Explain the points given in the diagram.</p>	1+2=3

SECTION C **(2 x 4 = 8 marks)**
(COMPETENCY BASED QUESTIONS)

Answer any 02 questions out of the given 03 questions		
Q.23	GIS software can work with spatial and non-spatial data both and integrate data from different departments and organizations. Explain any four examples from real world. Weightage should be given to the well explained four points with examples. CH.2 GIS	1x4=4
Q.24	Web based GIS is the process of designing, implementing, generating and delivering maps on the world wide web. Explain the web based GIS architecture and Benefits and drawbacks. CH.4 Trends in Geospatial Technology	1+3=4
Q.25	Efficient, economic and meaningful municipal administration. Large scale maps of cities with ground trothing Easy data linking Tax administration automation Public utility thematic maps Explain all such relevant points with real life examples CH.5 Application of Geospatial Technology	1x4=4