

PART III

16 - GEO-INFORMATICS ENGINEERING

(Answer ALL questions)

56. When corrections are applied to the observed length of a line measured between fixed points with a tape that is too long, the correction is
- added
 - subtracted
 - multiplied
 - divided
57. The line parallel to a central true meridian is called as
- Magnetic meridian
 - Astronomic meridian
 - Grid meridian
 - Parallel meridian
58. Plotting of the plan and field observation can be done simultaneously in
- Trigonometric surveying
 - Plane table surveying
 - Plani meter surveying
 - Route surveying
59. Mean sea level is derived by averaging the hourly tide heights over a long period of
- 1 year
 - 10 years
 - 19 years
 - 27 years
60. The line passing through the intersection of cross hairs of diaphragms and optical centre of the objective in theodolite is called as
- Line of collimation
 - Trunnion axis
 - Optical axis
 - Horizontal axis
61. If anallactic lens is used in tacheometer, then value of tacheometric constants are
- 75 and 0.3
 - 75 and 0
 - 100 and 0.3
 - 100 and 0
62. A curve formed by a downgrade followed by a steeper downgrade is
- Summit curve
 - Valley curve
 - Vertical curve
 - Down curve
63. Establishing theodolite position by Weibach triangle method is practiced for
- River surveying
 - Tunnel surveying
 - Astronomical surveying
 - Marine surveying
64. The error caused in Total Station when the line of sight is not perpendicular to tilting axis is
- Vertical axis error
 - Tilting axis error
 - Vertical index error
 - Line of sight error
65. The upper most point on celestial sphere where the plumb line from the observer's station intersects the celestial sphere is called as
- Zenith
 - Nadir
 - Azimuth
 - Celestial pole

66. Which of the following spectral response combination is useful to observe the chlorophyll fluorescence ?
- absorption at $0.4 - 0.5 \mu\text{m}$
 - reflection at $0.5 - 0.6 \mu\text{m}$
 - re-emission at $0.6 - 0.7 \mu\text{m}$
 - backscatter at $1 \text{ mm} - 1 \text{ m}$
67. The coherence between two electromagnetic waves is accomplished
- when the phase difference between them is constant in time and frequency
 - when the phase difference between them is constant in time and space
 - when both the electromagnetic waves travel in the orthogonal planes.
 - when both the electromagnetic waves are non-monochromatic
68. Which of the following statement is correct regarding the particle theory?
- EM radiation moves in space as magnetic field
 - EM radiation moves in space as discrete energy packets
 - EM radiation moves in space as discrete wave packets
 - EM radiation moves in space as electric field
69. Reflection and Transmission characteristics of a leaf is influenced by _____ in the _____ Spectral regions.
- leaf pigments, 0.4 and $0.7 \mu\text{m}$
 - internal mesophyll structure, 0.7 and $1.4 \mu\text{m}$
 - leaf pigments, 0.7 and $1.9 \mu\text{m}$
 - water content, 1.4 and $1.9 \mu\text{m}$
70. Pick up the correct statement from the following.
- Presence of iron oxide in the soil inversely influences the green reflectance
 - Presence of iron oxide in the soil directly influence the green reflectance
 - Presence of iron oxide in the soil produces strong absorption in the NIR reflectance
 - Presence of iron oxide in the soil produces strong reflectance in the SWIR
71. Atmospheric temperature retrieval is possible with _____ channel from AMSU data.
- 54.4 Ghz
 - 34.3 Ghz
 - 50.3 Ghz
 - 31.4 Ghz
72. The altimetry technique used in Sentinell-3 is _____ in the _____ direction.
- Beam and Band limited, across track
 - Pulse-limited altimetry, along track
 - Band-limited altimetry, across track
 - Beam-limited altimetry, along track
73. Hyperspectral sensors work at
- Narrow and subset of wavelengths 400 to 1100 nm range
 - Narrow and subset of wavelengths 8000 nm to 14000 nm range
 - Contiguous wavelengths in 400 to 1100 nm range
 - Contiguous wavelengths in 800 to 1400 nm range
74. Bathymetric LIDAR system make use of the wavelength near
- 600 nm
 - 534 nm
 - 1000 nm
 - 1064 nm
75. The discrete-return LIDAR sensors capture the
- entire signal trace from discrete objects in the path
 - heights of major peaks from the objects in the path
 - time varying intensity of the returned energy from each laser pulse
 - location of the returned signal in two dimensions
76. Which one is the probabilistic method of image classification?
- Minimum distance to mean classifier
 - Parallelepiped Classifier
 - Maximum Likelihood classifier
 - All the above

77. Statistical filters update DN value with
- 4-neighbours
 - 8-neighbours
 - 7-neighbours
 - 2-neighbours
78. NDVI Indicates
- the healthiness of the vegetation
 - the water content in the Vegetation
 - photosynthesis in the vegetation
 - transpiration of the vegetation
79. The accuracy of classification actually evaluates
- The confidential interval in binomial distribution
 - The accuracy at training stage
 - The accuracy of kappa value
 - The accuracy of the classifier Algorithm
80. Histogram equalization increases the
- Color variations in the image
 - The brightness of the image
 - Color depth of the image
 - All the above
81. Fourier transform operates in which of the following domain
- Chromaticity Plot
 - Band spectral scatter Plot
 - Frequency spectrum
 - Spatial domain
82. Separability of an image class depends on
- Image statistics
 - The difference in spectral property of the image features at a particular band
 - Number of training sites
 - All the above
83. One of this can be done without operator's intervention
- Thresholding
 - Clustering
 - Density Slicing
 - Contrast Stretch
84. The number of grey values are integer powers of :
- 4
 - 2
 - 8
 - 1
85. Which gives a measure of the degree to which a pure colour is diluted by white light?
- Saturation
 - Hue
 - Intensity
 - Brightness
86. With a 4.72 in focal length camera the appropriate flying height for an urban project would be
- 1800 ft
 - 9500 ft
 - 12000 ft
 - 600 ft
87. Orthographic projection results in
- Nominal scale
 - True scale
 - Uniform scale
 - Vertical scale
88. Rotation of camera in x-axis causes scale variation in
- x-axis
 - y-axis
 - both x and y axes
 - scale variation
89. Altimetry control points for photogrammetric mapping are to be placed in
- Corner points
 - Clearances
 - Flat surfaces
 - Sloping planes

90. Breaklines in a map are the features that explain
- Steep slopes
 - Terrain ruggedness
 - Sloping grounds
 - Surface discontinuities
91. In aerial photograph, the scale at a point that has altitude above mean sea level is comparatively
- smaller
 - larger
 - same as nadir scale
 - same as average scale
92. One of the advantages of the Photogrammetric mapping is
- less error propagation
 - easy operation
 - control point extension
 - cost effective
93. Line and column drop outs in a aerial photo is due to
- Atmospheric issues
 - Scene related issues
 - Operator mistakes
 - Sensor relates issues
94. Feathering is an operation employed in
- Interior orientation
 - Orthorectification
 - Mosaicking
 - Radiometric correction
95. The stereoscopic acuity is a measure of
- Vertical accuracy
 - Planimetric accuracy
 - Control point accuracy
 - Contour accuracy
96. What does 1 mm on a map drawn at a scale of 1 : 50,000 represent on the ground?
- 50 meters
 - 5 cm
 - 500 cm
 - 5 meters
97. Which of the following is not a type of map projection?
- Conical
 - Cylindrical
 - Geographic
 - Zenithal
98. The line joining the points having the same elevation above the datum surface, is called a
- Contour Surface
 - Contour Line
 - Contour Interval
 - Contour Gradient
99. The Mercator projection is actually which type of projection?
- Conical
 - Gnomonic
 - Zenithal
 - Cylindrical
100. IRNSS orbital height is
- 36,000 km
 - 20,200 km
 - 18,000 km
 - 800 km
101. The aggregation in Generalization is
- which groups small features into a higher order class
 - which joins small features into a larger map element
 - which decomposes area features to point features
 - which discards smaller features from among a cluster of features
102. The reference lines on a globe which circle the earth parallel to the equator are lines of
- Longitude
 - Graticule
 - Latitude
 - None of the above

103. Maps incorporate many different kinds of symbols. What is the name for the part of a map that explains the meaning of these symbols?
- Title Blocks
 - Legend
 - Neatlines
 - Title text
104. The Character which describes the specific variation based on weight, width and angle is called
- family
 - face
 - font
 - none of the above
105. In Similarity Transformation
- a rotation through an angle
 - translation
 - change of scale factor
 - all the above
106. The two important parameters obtained from remote sensing for operational fisheries forecast are
- Upwelling and salinity
 - SST and amount of chlorophyll
 - Ocean currents and wind speed
 - Primary and secondary productivity
107. The scale of _____ is used for preparing national or state level land cover/land use maps
- 1 : 1-5 m
 - 1 : 250000
 - 1 : 50000
 - 1 : 25000
108. Which of the following sensor is widely used for study about the Himalayan snow cover?
- CARTOSAT
 - QUICKBIRD
 - KALPANA
 - MODIS
109. $\frac{\text{Green reflectance} - \text{SWIR reflectance}}{\text{Green reflectance} + \text{SWIR reflectance}} =$
- NDSI
 - NDVI
 - EVI
 - GARI
110. Identify the method which is not used earlier to compile forest information
- Panchromatic
 - B & W IR
 - CIR photographs
 - Visual spotting
111. Waterlogged comes under
- Inland natural wetlands
 - Inland manmade wetlands
 - Coastal natural wetlands
 - Coastal manmade wetlands
112. Indian coral reefs are not found in the coast of
- Kerala
 - Maharashtra
 - Lakshwadweep Islands
 - Andaman and Nicobar Islands
113. Ocean colour can be monitored using _____ sensor.
- LISS
 - CARTOSAT
 - AVHRR
 - SEAWiFs
114. Which one of the following OIR sensor is not used for estimating pre-harvesting production in India?
- LANDSAT
 - MSS/TM
 - IRS
 - CARTOSAT
115. Which one of the following crop shows improved crop separability in SWIR ?
- Gram
 - Banana
 - Sugarcane
 - Rice