

Elements of Remote Sensing

51 Pick up the correct definition from the following with response to GIS.

- (A) Common boundary between two areas of a locality is known as adjacency
- (B) The area features which are wholly contained within another area feature, is known so containment
- (C) The geometric property which describes the linkage between line features is defined as connectivity
- (D) All of these

Answer: Option D

Question No. 52 The various stages occurring in GPS system are described below:

1. Generation of an output to the user
2. Detection of the GPS signals
3. Processing the data in the built-in-computer
4. Decoding the GPS signal.

The correct sequence of the stages is:

- (A) 1, 2, 3, 4
- (B) 2, 3, 4, 1
- (C) 2, 4, 3, 1
- (D) 3, 1, 2, 4

Answer: Option C

Question No. 53 The normal altitude of GPS satellite is about

- (A) 16,200 km
- (B) 20,200 km
- (C) 24,400 km
- (D) 36,100 km

Answer: Option B

Question No. 54 Geodimeter is based on:

- (A) Propagation of modulated light waves
- (B) Propagation of infrared radiation
- (C) The visible light as carrier with frequency of the order of 5×10^{14} Hz
- (D) High frequency radio waves

Answer: Option A

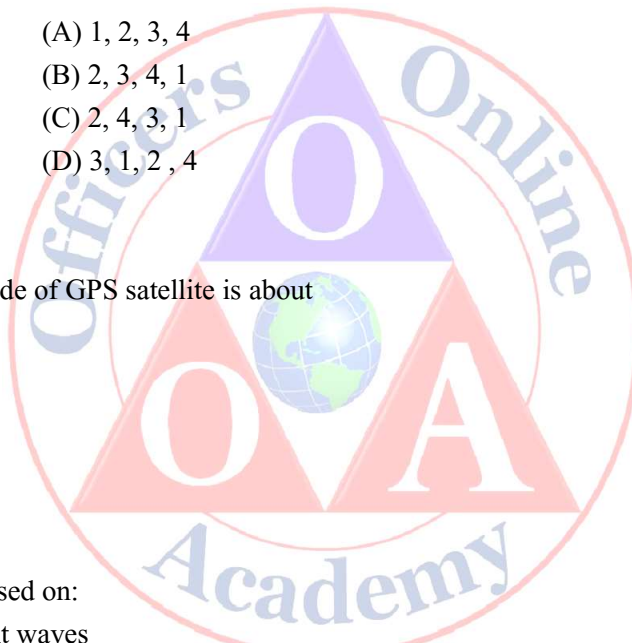
Question No. 55 The code based GPS receivers are generally used for:

- (A) Vehicle tracking
- (B) Land navigation
- (C) Trans movement
- (D) All of these

Answer: Option D

Question No. 56 Pick up the correct statement from the following:

- (A) The refractive index of a medium varies according to the wavelength of the radiation,



- (B) The variation of the refractive index with wave length, is called dispersion,
(C) The splitting of colours of white light by passing through a prism is caused due to dispersion
(D) All of these

Answer: Option D

Question No. 57 While propagating through homogeneous, isotropic media,

- (A) Directions of both the fields are orthogonal
(B) Both the fields are at right angles to the direction of propagation
(C) Both (a) and (b)
(D) Neither (a) nor (b)

Answer: Option C

Question No. 58 The arrangement of terrain features which provides attributes: the shape, size and texture of objects, is called:

- (A) Spectral variation
(B) Spatial variation
(C) Temporal variation
(D) None of these

Answer: Option B

Question No. 59 Which one of the following errors is produced by platform characteristics of the sensor?

- (A) Altitude variation
(B) Altitude
(C) Orbit drift
(D) All of these

Answer: Option D

Question No. 60 Pick up the correct statement from the following:

- (A) When the electric field oscillates in the direction of the electric vector, a plane polarised wave is formed
(B) When the electric vector is in the plane of incidence, vertical polarisation is formed
(C) When the electric vector is at right angles to the plane of incidence, horizontal polarization wave is formed
(D) All of these

Answer: Option D

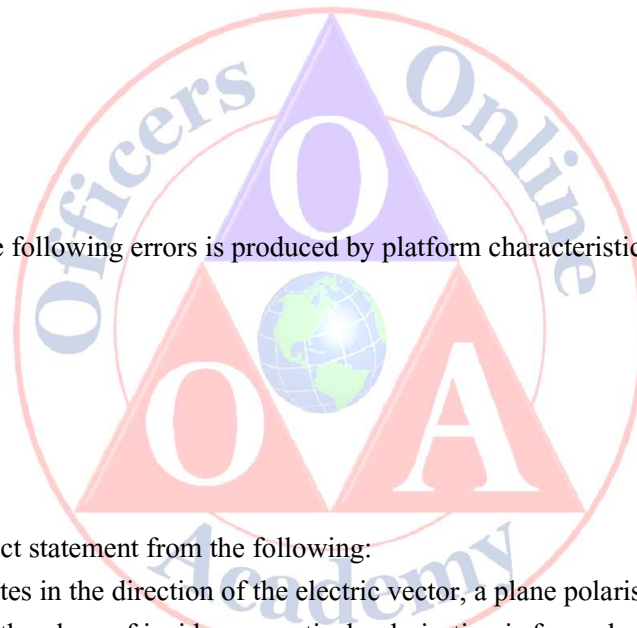
Question No. 61 Leaf reflectance depends primarily on:

- (A) The pigments
(B) Internal cell structure
(C) Equivalent water content
(D) All of these

Answer: Option D

Question No. 62 If flying height of a spacecraft is H, the length of air base is B and the parallax difference between two points is dp , then the difference in height

- (A) $h = dp/(B/H)$



(B) $h = (B/H) dp$

(C) $h = dp/(H/B)$

(D) $h = (H/B) dp$

Answer: Option A

Question No. 63 Critical angle of electromagnetic radiation takes place if

(A) Angle of incidence is equal to angle of refraction

(B) Angle of incidence is greater than the angle of refraction

(C) Angle of incidence is equal to 90°

(D) Angle of refraction is equal to 90°

Answer: Option D

Question No. 64 Earth observations from a satellite platform provide:

(A) Synoptic view of a large area

(B) Constant solar zenith angles and similar illumination conditions

(C) Repetitive observations of the same area with intervals of a few minutes to a few weeks

(D) All of these

Answer: Option D

Question No. 65 DGPS is based on the concept that bias errors in the position of locations in a given local area, are same if their distances are within

(A) 25 km

(B) 50 km

(C) 75 km

(D) 100 km

Answer: Option D

Question No. 66 Electromagnetic radiation:

(A) Produces a time varying magnetic field and vice versa

(B) Once generated, remains self-propagating

(C) Is capable to travel across space

(D) All of these

Answer: Option D

Question No. 67 Which one of the following residual biases involves the GPS accuracy?

(A) Satellite dependent biases due to uncertainty in the orbital parameters of the satellite

(B) Receiver-dependent biases due to clock stability with line

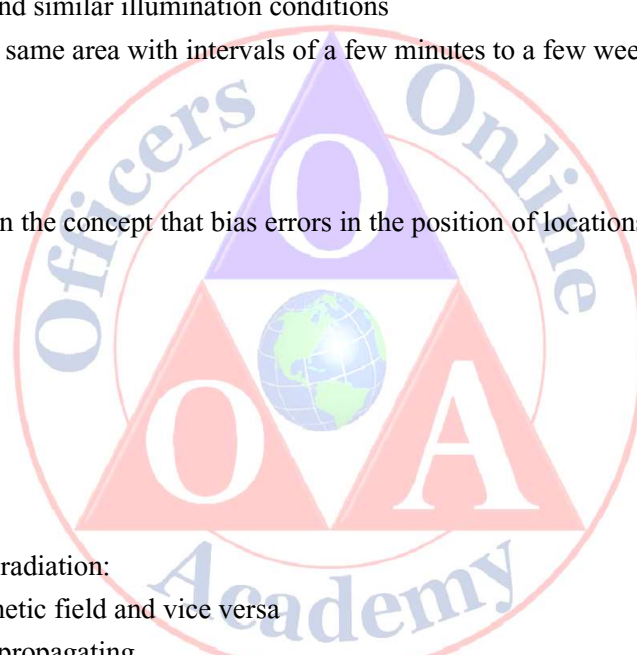
(C) Signal propagation biases due to the sphere and troposphere propagation

(D) All the above

Answer: Option D

Question No. 68 A and B are two towers of equal height diametrically opposite on either side of the nadir point, at 3 km and 5 km distances. Which one of the following statements is correct?

(A) Height displacement of A will be less than that of B



- (B) Height displacement of B will be less than that of A
(C) Height displacement of A and B is equal
(D) Height displacement of A and B will be towards each other

Answer: Option A

Question No. 69 The entire range of the electromagnetic spectrum spans a large spectrum of wave lengths varying from:

- (A) 10-10 to 106 m
(B) 10-8 to 106 m
(C) 10-10 to 1010 m
(D) 10-8 to 108 m

Answer: Option A

Question No. 70 Consider the following statements regarding the satellite imaging:

1. The satellite orbit is fixed in the inertial space
2. During successive across-track imaging, the earth rotates beneath the sensor
3. The satellite images a skewed area Which one of the following statements is/are correct?

- (A) 1, 2, 3
(B) 1, 3
(C) 2, 3
(D) 1, 2

Answer: Option A

Question No. 71 The GPS space segment consists of Navigation Satellite Timing and Ranging whose number is:

- (A) 8
(B) 12
(C) 16
(D) 24

Answer: Option D

Question No. 72 Pick up the important characteristic of a target which facilitates its identification from the following:

- (A) Spectral variation
(B) Spatial variation
(C) Temporal variation
(D) All of these

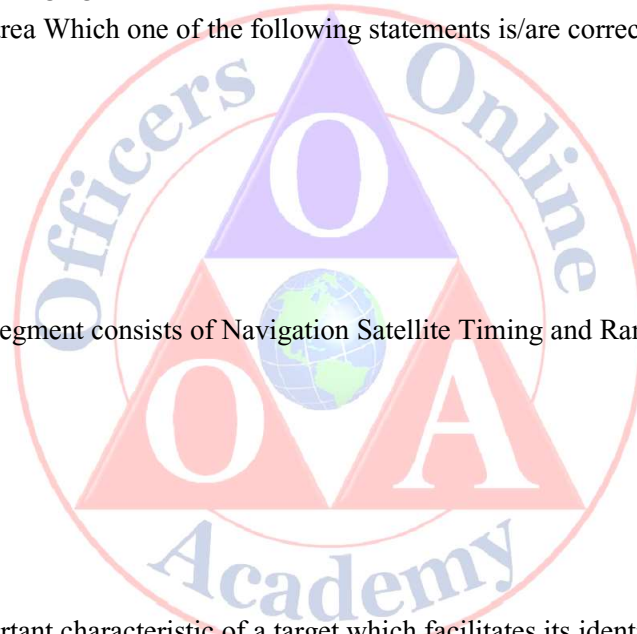
Answer: Option D

Question No. 73 Rayleigh's criterion for a rough surface is: (where letters carry their usual meanings).

- (A)
(B)
(C)
(D)

Answer: Option C

Question No. 74 The value of energy quantum for radiation of any frequency is proportional to:



- (A) The frequency
- (B) The reciprocal of the energy
- (C) The square of the frequency
- (D) The square root of the frequency

Answer: Option A

Question No. 75 Which one of the following statements is correct?

- (A) The function of an information system is to improve one's ability to make decisions
- (B) The information system is the chain of operations
- (C) A map is a collection of stored, analysed data, its stored information is suitably used in making decisions
- (D) All the above

Answer: Option D

