Exam

Name_____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) The relationship between the map distance and the corresponding distance on the ground is known as the _____. 1) _____
A) loxodrome
B) map quotient
C) vector
D) scale
E) azimuth

Answer: D
Explanation: A)
B)
C)
D)
E)

2) The first airborne platform for aerial photography was a _____. 2) _____
A) airplane B) lighthouse C) balloon D) satellite E) kite

Answer: C
Explanation: A)
B)
C)
D)
E)

3) The property of equivalence portrays accurate size although it _____. 3) _____
A) stretches the circle of tangency
B) distorts shapes
C) bends parallels
D) renders the Poles as lines
E) all of the above

Answer: B
Explanation: A)
B)
C)
D)
E)

4) For the geographer, the new mapping tools like remote sensing, GPS, and GIS are best viewed as 4) _____
A) adjuncts to field study.
B) aids to the study of small areas.
C) replacements for traditional geographic description.
D) too difficult for geographers to use.
E) in the test mode and too expensive for most geographers to use.

Answer: A
Explanation: A)
B)
C)
D)
E)

5) The smallest scale of the following is 5) _____
A) 1:200,000. B) 1:100,000. C) 1:900,000. D) 1:500,000. E) 1:750,000.

Answer: C
Explanation: A)
B)
C)
D)
E)

6) All map projections have this in common 6) _____
A) conformality.
B) equivalence.
C) some distortion.
D) small scale.
E) perfect portrayal of the globe.

Answer: C
Explanation: A)
B)
C)
D)
E)

7) A Mercator map is constructed by projecting the grid of the globe onto a(n) _____. 7) _____
A) circle
B) interrupted surface
C) cone
D) cylinder
E) flat surface

Answer: D
Explanation: A)
B)
C)
D)
E)

8) The most important Earth resources satellite series was started in the 1970s and is known as 8) _____
A) Seasat B) GOES C) TIROS D) Landsat E) Sputnik

Answer: D
Explanation: A)
B)
C)
D)
E)

9) Which mapmaking method would be used to minimize distortion of continents on a world map? 9) _____
A) a perfectly equivalent projection
B) a large scale
C) an interrupted projection
D) a conic projection
E) a Mercator projection

Answer: C
Explanation: A)
B)
C)
D)
E)

10) The original purpose of the Mercator projection was 10) _____
A) for ocean navigation.
B) to make the first map of the world.
C) to befuddle introductory physical geography students.
D) for the guidance of intercontinental missiles.
E) to produce an accurate, equal area map.

Answer: A
Explanation: A)
B)
C)
D)
E)

11) A laxodrome is another term for _____. 11) _____
A) gnomon
B) x-ray
C) rhumb line
D) thermal scanner
E) none of the above

Answer: C
Explanation: A)
B)
C)
D)
E)

12) _____ is the science of taking reliable measurements from aerial photographs. 12) _____

A) Photogrammetry
B) Map projection
C) Multispectral scanning
D) Cartography
E) Symap

Answer: A
Explanation: A)
B)
C)
D)
E)

13) On small scale maps, it is difficult to achieve _____. 13) _____

A) conformality
B) proper scale
C) pole-centered perspective
D) a circle of tangency
E) equivalency

Answer: E
Explanation: A)
B)
C)
D)
E)

14) Three dimensional effects are best obtained with _____. 14) _____

A) thermal scanners
B) color infrared photography
C) ultraviolet photographs
D) vertical aerial photographs
E) none of the above

Answer: D
Explanation: A)
B)
C)
D)
E)

15) Aerial photography of the Earth's surface taken from an angle other than straight down is termed _____. 15) _____

A) vertical
B) isogonic
C) oblique
D) useless
E) photogrammetric

Answer: C
Explanation: A)
B)
C)
D)
E)

16) Which of the following would be a type of application in which a geographic information system could be used? 16) _____

A) integrating topographic information with vegetation information
B) environmental monitoring
C) environment site assessment
D) resource management
E) all of the above

Answer: E
Explanation: A)
B)
C)
D)
E)

17) Which of the following is essential for GPS to function? 17) _____

A) locations on land instead of ocean
B) a GIS unit in a receiver
C) highly accurate clocks
D) a nearby base station on Earth's surface
E) a small radar unit

Answer: C
Explanation: A)
B)
C)
D)
E)

18) Which of the following forms of remote sensing is based on sound? 18) _____

A) microwave sensing
B) sonar
C) thermal infrared imaging
D) radar
E) color infrared photography

Answer: B
Explanation: A)
B)
C)
D)
E)

19) A _____ scale remains correct even if the map is enlarged or reduced when reproduced. 19) _____

A) large
B) graphic
C) isogonic
D) representative fraction
E) color

Answer: B
Explanation: A)
B)
C)
D)
E)

20) Radar is an "active" remote sensing system and _____ is a "passive" system using the same wavelengths. 20) _____

A) thermal infrared sensing
B) photography
C) microwave sensing
D) ultraviolet sensing
E) the use of a thermometer

Answer: C
Explanation: A)
B)
C)
D)
E)

21) In the Mercator projection, which piece of the Earth is portrayed ridiculously large in comparison to its actual size? 21) _____

A) Greenland
B) the continental U.S.
C) Brazil
D) low-latitude locations
E) the continent of Africa

Answer: A
Explanation: A)
B)
C)
D)
E)

22) Which of the following refers to an "active" remote sensing system? 22) _____

A) microwave
B) thermal infrared imagery
C) radar
D) color infrared photography
E) a black and white photography

Answer: C
Explanation: A)
B)
C)
D)
E)

23) Geographic information system technology is a direct result of advances in 23) _____
A) spatial statistics.
B) computer cartography.
C) surveying.
D) remote sensing.
E) all of the above

Answer: E
Explanation: A)
B)
C)
D)
E)

24) The scale of 1:63,360 is the same as one inch equals _____. 24) _____
A) one mile
B) one meter
C) one furlong
D) one yard
E) one foot

Answer: A
Explanation: A)
B)
C)
D)
E)

25) Microwave imagery is ideally suited for sensing _____. 25) _____
A) emitted heat
B) moisture
C) reflected light
D) military targets
E) fluctuations in Earth's orbit

Answer: B
Explanation: A)
B)
C)
D)
E)

26) Which of the following would be used for overlay map analysis where two or more map layers are superimposed or integrated? 26) _____
A) color infrared
B) Landsat
C) GIS
D) EOS
E) GPS

Answer: C
Explanation: A)
B)
C)
D)
E)

27) Satellite data are analyzed in individual pieces representing several to many meters on the Earth's surface. These pieces are known as 27) _____

A) false color images.
B) RBV's.
C) scan lines.
D) computer maps.
E) pixels.

Answer: E
Explanation: A)
B)
C)
D)
E)

28) The _____ projection is probably the most famous and well-used projection for world maps. 28) _____

A) small scale
B) global
C) U.S.G.S. topographic quadrangle
D) large scale
E) Mercator

Answer: E
Explanation: A)
B)
C)
D)
E)

29) Which of the following should contain a brief summary of the map's content or purpose? 29) _____

A) the legend
B) the scale
C) the title
D) the area within the map boundaries
E) the data source

Answer: C
Explanation: A)
B)
C)
D)
E)

30) On an orthophoto map, one might expect to find 30) _____

A) many problems with map distortion.
B) cultural but not physical features.
C) distortion-free photographs.
D) symbols that are difficult to read.
E) sketches rather than true projections.

Answer: C
Explanation: A)
B)
C)
D)
E)

31) The scale of "an inch on the map represents two miles on the surface of the Earth" would be CLOSEST to which representative fraction? 31) _____

A) 1:120,000
B) 1:60,000
C) 1:200,000
D) 1:1,000,000
E) 1:12

Answer: A
Explanation: A)
B)
C)
D)
E)

32) The first cartographer to use isolines on a published map was _____. 32) _____

A) Mercator B) Lambert C) Aristotle D) Robinson E) Halley

Answer: E
Explanation: A)
B)
C)
D)
E)

33) In terms of remote sensing, geographers 33) _____

A) have shown very little interest.
B) should not stop using maps and field study.
C) should never use remote sensing.
D) have never used remote sensing.
E) will someday identify one remote sensing type best for all purposes.

Answer: B
Explanation: A)
B)
C)
D)
E)

34) A mountain appears in overlapping vertical aerial photographs. Which of the following measurements could be made by use of the photographs? 34) _____

A) Exact altitudes
B) Steepness of its slopes
C) Area
D) Contour lines
E) all of the above

Answer: A
Explanation: A)
B)
C)
D)
E)

35) A(n) _____ is a line joining points of equal magnetic declination. 35) _____

A) contour line
B) isomag
C) isotherm
D) isohyet
E) isogonic line

Answer: E
Explanation: A)
B)
C)
D)
E)

36) Which of the following is the most recent type of Earth resource satellites? 36) _____

A) NEXRAD B) Landsat C) GOES D) EOS E) GPS

Answer: D
Explanation: A)
B)
C)
D)
E)

37) The largest scale among the following representative fractions is _____. 37) _____

A) 1:100,000
B) 1:50,000
C) 1:1,000,000
D) 1:10,000
E) 1:24,000

Answer: D
Explanation: A)
B)
C)
D)
E)

38) The first aerial photographs were taken _____. 38) _____

A) in the middle 1600s
B) during the Vietnam War
C) in the middle 1800s
D) during the Korean War
E) during World War II

Answer: C
Explanation: A)
B)
C)
D)
E)

39) MODIS is associated with which satellite series? 39) _____

A) GOES
B) Space Shuttle
C) EOS
D) Landsat
E) NIMBUS

Answer: C
Explanation: A)
B)
C)
D)
E)

40) Isolines have all the properties EXCEPT the following: 40) _____

A) They may cross each other.
B) Close isolines indicate a steep gradient.
C) They were first used on a map about 300 years ago.
D) They are always closed loops.
E) The numerical difference between isolines are intervals.

Answer: A
Explanation: A)
B)
C)
D)
E)

41) Which of the following is NOT part of a Geographic Information System? 41) _____

A) human drawing of isolines on maps
B) data storage and retrieval
C) collection, input, and correction of data
D) output and reporting
E) manipulation and analysis of data layers

Answer: A
Explanation: A)
B)
C)
D)
E)

42) A loxodrome is 42) _____

A) line of constant compass bearing.
B) a tracing of the exact great circle route.
C) a curved line on a Mercator projection.
D) the opposite of a rhumb line.
E) part of a sundial.

Answer: A
Explanation: A)
B)
C)
D)
E)

43) _____ are multicolored, distortion-free photographic image maps. Displacements caused by camera tilt or differences in terrain elevations have been removed. 43) _____

A) Mercator projections
B) GIS maps
C) Orthophoto maps
D) Vertical aerial photographs
E) Aerial photographs

Answer: C
Explanation: A)
B)
C)
D)
E)

44) A(n) _____ map contains lines joining points of equal elevation. 44) _____

A) contour B) isotherm C) isohyet D) isogonic E) isobar

Answer: A
Explanation: A)
B)
C)
D)
E)

45) On which type of aerial imagery would a football field of artificial grass be discernible from natural grass? 45) _____

A) color infrared photography
B) color photography
C) black and white photography
D) radar imagery
E) microwave imagery

Answer: A
Explanation: A)
B)
C)
D)
E)

46) Radar senses energy in wavelengths longer than 1 _____. 46) _____

A) kilometer
B) angstrom
C) meter
D) micrometer
E) millimeter

Answer: E
Explanation: A)
B)
C)
D)
E)

47) A(n) _____ is the generic term for any map line which joins points of equal value. 47) _____

A) isoline
B) legend
C) rhumb line
D) meridian
E) projection

Answer: A
Explanation: A)
B)
C)
D)
E)

48) Which of the below wavelengths have been most useful in expanding measure biomass? 48) _____

A) radio wavelengths
B) near infrared
C) ultraviolet
D) x-rays
E) gamma wavelengths

Answer: B
Explanation: A)
B)
C)
D)
E)

49) To use _____, aerial photographs must be carefully overlapped. 49) _____

A) a stereoscope
B) Landsat
C) a GIS
D) digital image processing
E) sonar

Answer: A
Explanation: A)
B)
C)
D)
E)

50) Which of the following is a form of remote sensing? 50) _____

A) thermal infrared imaging
B) aerial photography
C) color infrared photography
D) radar
E) all of the above

Answer: E
Explanation: A)
B)
C)
D)
E)

51) Which of the following portions of the electromagnetic spectrum is sensed on FILM? 51) _____

A) Thermal infrared
B) Color infrared
C) Radar
D) Microwave
E) Multispectral

Answer: B
Explanation: A)
B)
C)
D)
E)

52) You wish to navigate your yacht from Europe to the United States. Which type of map projection would be most useful? 52) _____

A) Mercator
B) Cylindrical
C) Equivalent
D) Conic
E) Interrupted

Answer: A
Explanation: A)
B)
C)
D)
E)

53) Which of the below, because of the wavelengths it uses, tends to have the low spatial resolution of Earth surface features? 53) _____

A) Landsat
B) black and white aerial photography
C) thermal infrared imagery
D) color infrared photography
E) microwave remote sensing

Answer: E
Explanation: A)
B)
C)
D)
E)

54) If one wished to produce a map which focused on the continents and showed little of the world's oceans, then she/he should use a(n) _____ projection. 54) _____

A) equal area
B) azimuthal
C) interrupted
D) large scale
E) conical

Answer: C
Explanation: A)
B)
C)
D)
E)

55) Geopositioning technology 55) _____

A) has never been commercially successful.
B) has accuracies better than the best base maps.
C) typically uses receivers larger than filing cabinets.
D) is another term for the drawing of isolines.
E) began in the 1920s.

Answer: B
Explanation: A)
B)
C)
D)
E)

56) Which of the following bands are NOT used by the Earth-sensing satellites mentioned in the text? 56) _____

A) x-rays
B) thermal infrared
C) visible red
D) ultraviolet
E) microwaves

Answer: A
Explanation: A)
B)
C)
D)
E)

57) A disadvantage of globes compared to maps is that globes are not 57) _____

A) accurate.
B) conformal.
C) suitable for use in class.
D) equivalent.
E) as portable.

Answer: E
Explanation: A)
B)
C)
D)
E)

58) To represent elevation on maps, cartographers use _____, which are a form of isoline. 58) _____

A) contour lines
B) rhumb lines
C) meters
D) isotherms
E) isoamplitudes

Answer: A
Explanation: A)
B)
C)
D)
E)

59) Maps can be made by projecting Earth's spherical grid onto 59) _____

A) a cylinder.
B) a plane.
C) a cone.
D) a piece of paper.
E) all of the above

Answer: E
Explanation: A)
B)
C)
D)
E)

60) The global positioning system (GPS) is based on 60) _____

A) infrared light sources.
B) aerial photography.
C) large, expensive receivers.
D) data from satellites.
E) gravity waves from the Sun and moon.

Answer: D
Explanation: A)
B)
C)
D)
E)

61) "Scale" relates _____ to _____ . 61) _____

A) map distance, map distance
B) Earth distance, map distortion
C) map distance, Earth distance
D) Earth distance, Earth distance
E) map distortion, map distance

Answer: C
Explanation: A)
B)
C)
D)
E)

62) By far, the greatest use of IR scanning systems has been 62) _____
A) to penetrate clouds.
B) onboard meteorological satellites.
C) in surface weather thermometer shelters.
D) to sense underwater features.
E) in making orthophoto quadrangles.

Answer: B
Explanation: A)
B)
C)
D)
E)

63) In _____ film photography, the photographic film is sensitive to wavelengths longer than visible light. 63) _____
A) passive microwave
B) Landsat
C) panchromatic
D) true color
E) color infrared

Answer: E
Explanation: A)
B)
C)
D)
E)

64) The characteristic of projections which portray accurate sizes but distort the shapes of land masses is called _____. 64) _____
A) equivalence
B) polyconic
C) conformality
D) sinusoidal
E) azimuthality

Answer: A
Explanation: A)
B)
C)
D)
E)

65) A GIS is a library of information based on 65) _____
A) satellites.
B) maps
C) many land survey records stored on microfilm.
D) stereoscopic image viewing.
E) manual cartography.

Answer: B
Explanation: A)
B)
C)
D)
E)

66) The main purpose of the interruption of projections is _____. 66) _____
A) to show the continents in an equal area rendition
B) to save ink during printing
C) to make maps compatible with air photos
D) to provide a stereoscopic view
E) to improve portrayal of the oceans

Answer: A
Explanation: A)
B)
C)
D)
E)

67) Which of the following is NOT associated with Landsat images? 67) _____
A) the ultraviolet portion of the spectrum
B) thematic mapper
C) millions of pieces of data (pixels) per image
D) multispectral scanning system
E) several satellites over many years

Answer: A
Explanation: A)
B)
C)
D)
E)

68) Most of the maps in the text are drawn on _____ projections for an optimal portrayal of worldwide distributions. 68) _____
A) conformal B) azimuthal C) conic D) gnomonic E) equivalent

Answer: E
Explanation: A)
B)
C)
D)
E)

69) To construct an isoline on a map it is necessary to 69) _____
A) first draw the line on a globe.
B) note the magnetic declination.
C) make the map both equivalent and conformal.
D) interpolate between points of known value.
E) color it purple.

Answer: D
Explanation: A)
B)
C)
D)
E)

70) The type of remote sensing which penetrates clouds at night for accurate terrain representation is _____. 70) _____
A) thermal infrared
B) Landsat
C) passive microwave
D) sonar
E) radar

Answer: E
Explanation: A)
B)
C)
D)
E)

71) Which of the following is considered a "perfect" map projection in terms of the amount of distortion associated with it? 71) _____
A) cylindrical
B) Mercator
C) conic
D) equivalent
E) none of the above

Answer: E
Explanation: A)
B)
C)
D)
E)

72) The "false color" imagery of some aerial photographs is also termed _____. 72) _____

A) radar
B) microwave
C) sonar
D) color IR
E) Landsat

Answer: D
Explanation: A)
B)
C)
D)
E)

73) On large scale maps, equivalence and conformity can be 73) _____

A) simultaneously approximated for small areas.
B) considered to be the same map property.
C) simultaneously present.
D) disregarded if the map is of high latitudes.
E) any of the above

Answer: A
Explanation: A)
B)
C)
D)
E)

74) Which of the following is an advantage of radar over all other remote sensing techniques? 74) _____

A) It can operate at wavelengths shorter than 1 micrometer.
B) It can operate in clear weather.
C) It can operate at night.
D) It can operate without using an electrical source.
E) It can operate at high altitude.

Answer: C
Explanation: A)
B)
C)
D)
E)

75) Which of the following is TRUE concerning GPS technology? 75) _____

A) It appears useful but receivers are very expensive.
B) The technology is freely available to the public.
C) The GPS satellites are owned by a private corporation.
D) The GPS technology allows "perfect" maps to be drawn.
E) It usually cannot pinpoint locations with an accuracy greater than 1 km.

Answer: B
Explanation: A)
B)
C)
D)
E)

76) On color infrared photography, living green vegetation would appear 76) _____
A) violet. B) orange. C) green. D) red. E) blue.

Answer: D
Explanation: A)
B)
C)
D)
E)

77) The most famous and, undoubtedly, most widely used of all the map projections is the _____ projection. 77) _____
A) Mollweide
B) gnomonic
C) Mercator
D) sinusoidal
E) polyconic

Answer: C
Explanation: A)
B)
C)
D)
E)

78) The U.S. version of GPS is dependent on triangulation using a network of _____ satellites 78) _____
A) 108 B) 2 C) 24 D) 3 E) 5

Answer: C
Explanation: A)
B)
C)
D)
E)

79) Aside from normal photographic film, _____ film has proven very valuable for interpretation of Earth resources from airborne cameras. 79) _____
A) X-ray
B) ultraviolet
C) gamma ray
D) thermal infrared
E) color infrared

Answer: E
Explanation: A)
B)
C)
D)
E)

80) Of the following, which is NOT considered a map essential? 80) _____

A) scale B) legend C) title D) date E) color

Answer: E

Explanation: A)
B)
C)
D)
E)

81) Which remote sensing technology demonstrates universal applicability to most problems? 81) _____

A) Radar
B) Multispectral scanning
C) Landsat
D) SPOT
E) none of the above

Answer: E

Explanation: A)
B)
C)
D)
E)

82) The ERTS series of satellites, launched in the 1970s, is now known as 82) _____

A) Landsat B) GOES C) EOS D) AVHRR E) TIROS

Answer: A

Explanation: A)
B)
C)
D)
E)

83) The scale of one inch equals one mile is _____ in a representative fraction. 83) _____

A) 1:63,360
B) 1:1,000,000
C) 1:100,000
D) 1:10,000
E) 1:250,000

Answer: A

Explanation: A)
B)
C)
D)
E)

84) Which remote sensing systems sense the longest wavelengths? 84) _____
A) thermal infrared imaging
B) black and white photography
C) color photography
D) Landsat
E) microwave imaging

Answer: E
Explanation: A)
B)
C)
D)
E)

85) The explanations of symbols used on a map should be contained in 85) _____
A) the title.
B) the scale.
C) the space under the north arrow.
D) the legend.
E) the data source.

Answer: D
Explanation: A)
B)
C)
D)
E)

86) Central meridians are essential features on a _____ projection. 86) _____
A) small scale
B) large scale
C) interrupted
D) perfectly conformal
E) Mercator

Answer: C
Explanation: A)
B)
C)
D)
E)

87) Together, title, date, and legend on a map are known as 87) _____
A) cartographic license.
B) map essentials.
C) necessary information.
D) optional pieces.
E) marginal information.

Answer: B
Explanation: A)
B)
C)
D)
E)

88) _____ is what enables aerial photographs to be viewed in "stereo." 88) _____

A) Magnification
B) Digital image processing
C) Color
D) Overlap
E) Varying tones

Answer: D
Explanation: A)
B)
C)
D)
E)

89) Which of the following has been accomplished using the new geopositioning technology? 89) _____

A) ocean floor mapping
B) natural disaster damage assessment
C) volcano monitoring
D) earthquake prediction
E) all of the above

Answer: E
Explanation: A)
B)
C)
D)
E)

90) Which of the following is the acronym for the system of U.S. Department of Defense satellites which are used to establish exact locations on Earth? 90) _____

A) EOS
B) GPS
C) Landsat
D) Color infrared
E) GIS

Answer: B
Explanation: A)
B)
C)
D)
E)

91) A major disadvantage of oblique aerial photographs as compared to vertical air photographs is that _____. 91) _____

A) they are usually classified by the government
B) shadows make identification of Earth features impossible
C) the view is not familiar
D) they are more expensive
E) accurate measurement is more difficult

Answer: E
Explanation: A)
B)
C)
D)
E)

92) Misuse of the Mercator projection is a result of 92) _____

A) inaccurate projection of latitude and longitude.
B) latitudinal differences in scale.
C) the curved loxodromes.
D) the fact that it is so old.
E) the Cold War.

Answer: B
Explanation: A)
B)
C)
D)
E)

93) Which of the following choices represents a technology into which the other choices can be used as inputs? 93) _____

A) Field data
B) GIS
C) GPS
D) Aerial photography
E) Landsat imagery

Answer: B
Explanation: A)
B)
C)
D)
E)

94) A geometrically corrected map consisting of aerial photographs is known as a(n) _____ map. 94) _____
A) large-scale
B) projected
C) orthophoto
D) Mercator
E) color infrared

Answer: C
Explanation: A)
B)
C)
D)
E)

95) Which of the following is most closely identified with "multispectral remote sensing"? 95) _____
A) color infrared photography
B) Landsat
C) thermal infrared scanning
D) microwave imaging
E) radar imaging

Answer: B
Explanation: A)
B)
C)
D)
E)

96) Unlike aerial photography, Landsat imagery is interpreted through _____. 96) _____
A) film
B) remote sensing
C) digital image processing
D) stereoscopic
E) all of the above

Answer: C
Explanation: A)
B)
C)
D)
E)

97) Conformal maps greatly distort _____ of continents in higher latitudes. 97) _____
A) sizes
B) shapes
C) the longitude
D) the latitude
E) the number

Answer: A
Explanation: A)
B)
C)
D)
E)

98) _____ is the type of remote sensing imagery best suited to use at night. 98) _____

A) an orthophoto map
B) color infrared
C) thermal infrared
D) polaroid
E) visible

Answer: C
Explanation: A)
B)
C)
D)
E)

99) Every map projection consists of an orderly arrangement of 99) _____

A) the geographic grid.
B) scale.
C) legend.
D) interruptions.
E) title.

Answer: A
Explanation: A)
B)
C)
D)
E)

100) Map projections are mainly derived _____. 100) _____

A) from aerial reconnaissance
B) mathematically
C) by analogy
D) by osmosis
E) from interpolation

Answer: B
Explanation: A)
B)
C)
D)
E)

101) The basic imaging instrument in the Landsat series of satellites is known as the 101) _____

A) camera.
B) thematic mapper.
C) pixel.
D) radar screen.
E) Skylab data.

Answer: B
Explanation: A)
B)
C)
D)
E)

102) _____ is the science of obtaining reliable measurements from photographs. 102) _____

A) Remote sensing
B) Photogrammetry
C) Satellite imaging
D) Orthophotomapping
E) Sonar

Answer: B
Explanation: A)
B)
C)
D)
E)

103) A line connecting points with equal precipitation is known as an _____. 103) _____

A) isohyet
B) isotherm
C) isoneph
D) isobar
E) isogonic line

Answer: A
Explanation: A)
B)
C)
D)
E)

104) One difference between any two different map projections must always be 104) _____

A) the number of degrees from the Equator to the North Pole.
B) how accurately relative sizes are portrayed.
C) how accurately shapes are portrayed.
D) how the geographic grid is arranged.
E) scale.

Answer: D
Explanation: A)
B)
C)
D)
E)

105) _____ is the "major dilemma" of mapmaking explained by the text. 105) _____

A) Conformality versus scale
B) Scale versus equivalence
C) Conic versus azimuthal projections
D) Equivalence versus conformality
E) The inclusion of too much information on a map

Answer: D
Explanation: A)
B)
C)
D)
E)

106) How much area is shown in an entire Landsat image? 106) _____

A) a few square centimeters
B) approximately half of the Earth
C) a few square meters
D) a few thousand square kilometers
E) a few square kilometers

Answer: D
Explanation: A)
B)
C)
D)
E)

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

107) One is able to view overlapping vertical aerial photographs in "3 dimensions" using a device called a _____. 107) _____

Answer: stereoscope
Explanation:

108) _____ is the measurement or acquisition of information by a recording device which is not in physical contact with the object under study. 108) _____

Answer: Remote sensing
Explanation:

109) A(n) _____ scale is a type of map scale which makes use of a line marked off in graduated distances. 109) _____

Answer: graphic
Explanation:

110) The main problem with conformal projections is that _____. 110) _____

Answer: areas must be distorted to show proper shapes
Explanation:

111) _____ micrometers is a wavelength of visible light (ANY of the wavelengths will do). 111) _____

Answer: Any wavelength between .36 and .72 micrometers is acceptable.
Explanation:

112) _____ is the Landsat spectral band used for identification of wetlands, organic soils, and water bodies. 112) _____

Answer: The near infrared
Explanation:

113) Title, date, and legend are three of the five _____ (2 words). 113) _____

Answer: map essentials
Explanation:

114) The representative fraction equivalent to the statement "one inch equals one mile" is _____. 114) _____

Answer: 1:63,360
Explanation:

115) _____ is the property of map projections which causes areas to be portrayed at the same relative sizes they are on the globe. 115) _____

Answer: Equivalence
Explanation:

116) The _____ is the position from which an aerial photograph is taken. 116) _____

Answer: air station or camera station
Explanation:

117) A _____ (2 words) is another name for a loxodrome. 117) _____

Answer: rhumb line
Explanation:

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

118) A globe is a better model of Earth as a whole than any map. 118) _____

Answer: ✓ True False
Explanation:

119) On Mercator projection, Greenland's size relative to the United States is greatly exaggerated. 119) _____

Answer: ✓ True False
Explanation:

120) Microwave remote sensing is associated with wavelengths much shorter than those of visible light. 120) _____

Answer: True ✓ False
Explanation:

121) A globe maintains the properties of conformality and equivalence. 121) _____

Answer: ✓ True False
Explanation:

122) SYMAP was the first widely used automated cartography software. 122) _____

Answer: ✓ True False
Explanation:

123) There is no possible way to avoid distortion on a map projection. 123) _____

Answer: ✓ True False
Explanation:

124) "Equivalency" in map projections means having no scale changes over the entire map. 124) _____

Answer: True ✓ False
Explanation:

125) GPS was originally developed by the U.S. Department of Defense to guide missiles. 125) _____

Answer: ✓ True False
Explanation:

126) The scale of a map can never be constant all over the entire map. 126) _____

Answer: ✓ True False
Explanation:

127) Radar imagery is especially appropriate for terrain analysis. 127) _____

Answer: True False
Explanation:

128) Conformality and equivalence are, in general, mutually exclusive properties. 128) _____

Answer: True False
Explanation:

129) A Mercator map shows loxodromes as straight lines. 129) _____

Answer: True False
Explanation:

130) Satellites in the SPOT and Landsat series carry identical sensors. 130) _____

Answer: True False
Explanation:

131) All conformal projections have meridians and parallels crossing each other at right angles, just as they do on the globe. 131) _____

Answer: True False
Explanation:

132) Interrupted projections are neither conformal nor equidistant. 132) _____

Answer: True False
Explanation:

133) Landsat images are unavailable for public use owing to their "top secret" classification by the U.S. government. 133) _____

Answer: True False
Explanation:

134) The Mercator projection is very close to maintaining equivalence in low latitudes. 134) _____

Answer: True False
Explanation:

135) All map projections have the basic property of equivalence. 135) _____

Answer: True False
Explanation:

136) Because they are shaped like the real Earth, globes are usually the best way to convey Earth information. 136) _____

Answer: True False
Explanation:

137) The primary reason for use of a stereoscope is to magnify the photos under study. 137) _____

Answer: True False
Explanation:

138) A map which showed your classroom building as being 6 inches long on the map would be a large scale map. 138) _____

Answer: ✓ True False
Explanation:

139) On a Mercator projection, the North Pole would be represented by a line as long as the Equator. 139) _____

Answer: ✓ True False
Explanation:

140) The main useful trait of color infrared photography is its depiction of the states of vegetation. 140) _____

Answer: ✓ True False
Explanation:

141) The original purpose of the Mercator projection was for navigation. 141) _____

Answer: ✓ True False
Explanation:

142) Thermal infrared imagery is the most useful type of image for detecting different vegetation types. 142) _____

Answer: True ✓ False
Explanation:

143) Maps are inherently inaccurate because of their attempt to depict the curved Earth on a flat surface. 143) _____

Answer: ✓ True False
Explanation:

144) The earliest aerial photographs were taken from balloons. 144) _____

Answer: ✓ True False
Explanation:

145) The thematic mapper on the newer Landsat satellites is a great improvement because it increases the spectral range within each spectral band used. 145) _____

Answer: True ✓ False
Explanation:

146) A map is usually much smaller than the part of the Earth's surface it represents. 146) _____

Answer: ✓ True False
Explanation:

147) There are major discrepancies between the true shape of the Earth and that of a globe. 147) _____

Answer: True ✓ False
Explanation:

148) The Mercator projection should not be used to show tropical areas because they are greatly distorted in area on this projection. 148) _____

Answer: True ✓ False
Explanation:

149) The maps in your physical geography textbook are an example of automated cartography and were produced using desktop computers. 149) _____

Answer: True False
Explanation:

150) It is important that all maps have their meridians parallel to each other as they extend east to west. 150) _____

Answer: True False
Explanation:

151) Images from radar sensors can be acquired only during the daytime. 151) _____

Answer: True False
Explanation:

152) A map at large scale generally shows a large portion (continental size or larger) of Earth's surface. 152) _____

Answer: True False
Explanation:

153) An example of a large-scale map is a classroom wall map of the world. 153) _____

Answer: True False
Explanation:

154) The one inch to the mile scale map is a small scale map. 154) _____

Answer: True False
Explanation:

155) Choosing the appropriate equivalence projection will result in a map with no distortion in its depiction of Earth features or areas. 155) _____

Answer: True False
Explanation:

156) A major advantage in using oblique aerial photography is the easy measurement of Earth features. 156) _____

Answer: True False
Explanation:

157) At a scale of 1:10,000, the distance of an inch on a map would represent more than a mile on the ground. 157) _____

Answer: True False
Explanation:

ESSAY. Write your answer in the space provided or on a separate sheet of paper.

158) Explain how the properties of conformality and equivalence always pose a dilemma to the mapmaker.

Answer:

159) Explain how the Global positioning system operates to locate your position within a few meters.

Answer:

160) Suppose a geographer was hired to help assess the health/vigor of the winter wheat crop (to be harvested in the late spring) in an agricultural county of a Great Plains state; the object would be to predict the winter wheat yield two months in advance. What sort of remote sensing techniques might be used and why?

Answer:

161) Explain how the use of multispectral scanning is an advantage over the use of a single band when identifying Earth features via remote sensing.

Answer:

Answer Key
Testname: C2

1) D
2) C
3) B
4) A
5) C
6) C
7) D
8) D
9) C
10) A
11) C
12) A
13) E
14) D
15) C
16) E
17) C
18) B
19) B
20) C
21) A
22) C
23) E
24) A
25) B
26) C
27) E
28) E
29) C
30) C
31) A
32) E
33) B
34) A
35) E
36) D
37) D
38) C
39) C
40) A
41) A
42) A
43) C
44) A
45) A
46) E
47) A
48) B
49) A
50) E

51) B
52) A
53) E
54) C
55) B
56) A
57) E
58) A
59) E
60) D
61) C
62) B
63) E
64) A
65) B
66) A
67) A
68) E
69) D
70) E
71) E
72) D
73) A
74) C
75) B
76) D
77) C
78) C
79) E
80) E
81) E
82) A
83) A
84) E
85) D
86) C
87) B
88) D
89) E
90) B
91) E
92) B
93) B
94) C
95) B
96) C
97) A
98) C
99) A
100) B

101) B
102) B
103) A
104) D
105) D
106) D
107) stereoscope
108) Remote sensing
109) graphic
110) areas must be distorted to show proper shapes
111) Any wavelength between .36 and .72 micrometers is acceptable.
112) The near infrared
113) map essentials
114) 1:63,360
115) Equivalence
116) air station or camera station
117) rhumb line
118) TRUE
119) TRUE
120) FALSE
121) TRUE
122) TRUE
123) TRUE
124) FALSE
125) TRUE
126) TRUE
127) TRUE
128) TRUE
129) TRUE
130) FALSE
131) TRUE
132) FALSE
133) FALSE
134) TRUE
135) FALSE
136) FALSE
137) FALSE
138) TRUE
139) TRUE
140) TRUE
141) TRUE
142) FALSE
143) TRUE
144) TRUE
145) FALSE
146) TRUE
147) FALSE
148) FALSE
149) TRUE
150) FALSE

151) FALSE
152) FALSE
153) FALSE
154) FALSE
155) FALSE
156) FALSE
157) FALSE
158)
159)
160)
161)