## Question Collection (Objective)

1. The ratio of volume and curved surface area of cylinder is 3:2 then find the radius of the cylinder ?
   a) $3/4$
   b) 3
   c) $3/2$
   d) 6

2. If $\vec{a} . \vec{b} = \vec{a} \quad \vec{b}$, then vectors $\vec{a}$ and $\vec{b}$ are
   a) Perpendicular
   b) Parallel
   c) Coincident
   d) Null vector

3. If the circle touches x and y axis and whose radius is 5 unit, then center of circle is
   a) (5, 0)
   b) (0, 5)
   c) (5, 5)
   d) (0, 0)

4. The second derivative of $y = 5x^3 - 3x^2 + 1$ is
   a) $30x - 6$
   b) $15x^2 - 6x$
   c) $20x$
   d) 0

5. $\frac{d\sec x}{dx}$ is equal to
   a) Tan^2x
   b) $-tan^2x$
   c) secxtanx
   d) $-$secxtanx

6. The sum of square of direction cosine is equal to
   a) 1
   b) 0
   c) 3
   d) $3\sqrt{3}$

7. पति-पत्नीको संयुक्त नाममा पारित हुने लिखित रजिष्ट्रेशन दस्तुरमा छुट कति हुन्छ ?
   a) छुट हुँदैन
   b) महिला सरह
   c) ५०%
   d) कुनै पनि होइन

8. जग्गा धनि प्रमाणपुर्जा पाएको कति दिन भित्र उजुर गर्न सकिन्छ ?
   a) ३० दिन
   b) ६० दिन
   c) ९० दिन
   d) १२० दिन

9. The algebraic sum of deviation of set of values from their mean is
   a) Maximum
   b) Minimum
   c) Zero
   d) Can't be determined

10. बराबर परिधि भएका Triangle, Square र Circle मा कुन Figure को Area सबै भन्दा कम हुन्छ ?
    a) Circle
    b) Triangle
    c) Square
    d) Rectangle

11. What is the sum of exterior angles of any triangle ?
    a) 1000^0
    b) 1000^g
    c) 1200^0
    d) 1200^g

12. कुनै अर्धवृत्तको केन्द्रमा कति डिग्रीको कोण बन्दछ ?
    a) 90^0
    b) 180^0
    c) 270^0
    d) 360^0

13. When light passes from one medium to another medium, which of the following properties remains constant ?
    a) Velocity
    b) Frequency
    c) Wavelength
    d) All of the above

14. जग्गा नापजाँच नियमावली २०५८ को नियम कतिमा नापी कार्यालयको काम कर्तव्यको बारेमा उल्लेख छ ।
    a) नियम १८
    b) नियम १९
    c) नियम २०
    d) नियम २१

15. नेपालको सबभन्दा उत्तरी विन्दु कुन जिल्लामा पर्दछ ?
   a) हुम्ला   b) मुगु   c) ताप्लेजुङ्ग   d) डोल्पा

16. In polar coordinate system, r is equal to
   a) $\sqrt{x^2 - y^2}$ b) $\left(\frac{y}{x}\right)$ c) $\left(\frac{x}{xy}\right)$ d) $\sqrt{x^2 + y^2}$

17. Evaluating $\lim_{\to 0} \frac{Sinx}{x}$
   a) Cosx   b) 0   c) ½   d) 1
   b)

18. If a = (4, 3,9), b= (2,8,5) and c = (0,7,1) calculate the magnitude of 2a-5b+3c
   a) $\sqrt{141}$ b) $\sqrt{21}$ c) $\sqrt{106}$ d) $\sqrt{93}$

19. ५०० को ७% संग १४० को कति % बराबर हुन्छ ?
   a) २० %   b) २५ %   c) १७ %   d) ६.८ %

20. The sum of ages of a father and his son is 55 years. After 16 years, the father will be twice as
   old as his son. The present age of the son is
   a) 42   b) 17   c) 23   d) 13

21. A bag contains 4 while marbles and 8 red marbles. If a marble is drawn, what is the
   probability of drawing a white marble ?
   a) $^1/_2$ b) $^1/_3$ c) $^2/_3$ d) $^2/_9$

22. The rectangular coordinate of (4, $^x/_2$) is
   a) (- 4, 0)   b) (0, - 4)   c) (4, 0)   d) (0, 4)

23. The length of portion intercepted between the axes by the line 3x+4y = 12 is
   a) 5   b) 6   c) $^3/_2$ d) 7

24. The Figure, NOT in SCALE show triangle of height 4cn cut from a shaded square of sides
   5cm. What is the area in cm^2 of remaining shaded region of square ?

   5cm
   a) 5   b) 10   c) 15   d) 20

   4cm
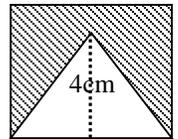
25. Expansion of 2p2 – 15p + 25 gives
   a) (p – 5) (2p – 5)   b) (p – 5) (2p + 5)
   c) (P + 5) (2p – 5)   d) (2p – 15) (p + 5)

26. Which one is considered as the best method for measuring dispersion ?
   a) Range   b) Quartile   c) Mean deviation   d) Standard deviation

27. In the slope intercept form of straight line, if line passes through the origin then intercept is
   a) y = 0   b) y = m   c) c = 0   d) c = x

28. A diagonal matrix having all the diagonal elements are equal, is called
   a) Scalar matrix   b) Identity matrix   c) Symmetric matrix   d) Diagonal matrix

29. If the line be parallel to the x – axis, then slope is equal to
   a) 1   b) $1/\sqrt{3}$ c) 0   d) $\sqrt{3}$

30. If $3^x \times 4^x = z^x$, then the value of z is
   a) 3   b) 4   c) 6   d) 12

31. If $x + \frac{1}{x} = 7$, find the value of $x2 + \frac{1}{x^2}$
   a) 43   b) 45   c) 47   d) 49

32. If A = $\begin{bmatrix} 1 & x+3 \\ 2x+1 & x-1 \end{bmatrix}$ is a symmetric then value of x is
   a) 5   b) 3   c) 2   d) 7

33. In a triangle ABC, a = 5, b = c and c = 30^0, then area of the triangle is :
   a) 7.5 sq.units   b) 15 sq.units   c) 30 sq.units   d) 60 sq.units

34. सरकारी रुपमा कसैको नाममा दर्ता नभएको खेतीयोग्य जग्गालाई के भनीन्छ ?
   a) सार्वजनिक   b) सरकारी   c) ऐलानी   d) विर्ता

35. २०५८ सालमा लागु भएको जग्गाको हकवन्दी अनुसार काठमाण्डौं उपत्यकामा आवासको लागी हदबन्दी कति तोकिएको छ ?
   a) १० रोपनी   b) ५ रोपनी   c) २० रोपनी   d) २५ रोपनी

36. For a quadratic equation $ax^2 + bx + c = 0$, if $b^2 - 4ac = 0$, then the nature of roots are :
   a) real and unequal b) real and equal   c) Imaginary & unequal   d) Non

37. Evaluating $\lim\limits_{x \to 0} \frac{5x^2 + 3x}{x}$, we get
   a) 3   b) - 3   c) 0   d) ∞

38. A spherical ball of lead is melted and made into smaller balls of half radius of the original radius, how many numbers of such balls can be made ?
   a) 4   b) 6   c) 8   d) 10

38. The area of a quadrilateral ABCED whose co-ordinates are A(4, 10), B(9, 7), C(11, 2) and D(2, 2) is
   a) 45.5   b) – 45.5   c) - 91   d) 91

39. The cross product of the same vector to itself is
   a) 0   b) 1   c) ∞ d) 100

40. नदीको नामल नेपालका कतिवटा अंचलको नामाकरण गरिएको छ ।
   a) ८   b) ९   c) १०   d) ११

41. नेपालको सबभन्दा लामो हिमनदी कुन हो ?
   a) कर्णाली   b) लिखु   c) तमोर   d) खुम्बु

42. A card is drawn at random form an ordinary pack of 52 playing cards, the probability either card drawn is heart or jack is
   a) 16/52   b) 17/52   c) 13/52   d) 4/52

43. $1+\frac{x^2}{2!} + \frac{x^2}{4!} + \frac{x^6}{6!} + \ldots \ldots \infty$ is the expansion of.
   a) e^x b) e^{-x} c) $2(e^x + e^{-x})$ d) $\frac{e^x+e^{-x}}{2}$

44. The square of standard deviation is known as
   a) Quartile   b) Variance   c) Deviation   d) Dispersion

45. The angle of elevation of sun when the length of the shadow of a tree is $\sqrt{3}$ times the height of the tree is :
   a) 30   b) 45^0 c) 60^0 d) 75^0

46. संसारमा चर्चित Search Engine Google को कार्यालय कहाँ छ ?
   a) अमेरीकाको Boulder   b) क्यानडाको Ottawa
   c) अमेरीकाको Virginia   d) क्यानडाको Vancouver

47. विश्व सर्भेक्षण संस्था (FIG) को हालै २५ औं कंग्रेस बैठक कहाँ भएको थियो ?
   a) सिंगापुर   b) मलेसिया   c) जापान   d) हङकङ

48. नापी विभागबाट प्रकाशित माननाप १ः१०,००,००० को नेपालको नक्सामा समोच्च रेखाको अन्तर कति मिटर छ ?
   a) ५००   b) ७५०   c) १०००   d) २०००

49. विश्वको दोश्रो सर्वोच्च शिखर Mount K2 कुन देशमा पर्दछ ?
   a) अफगानिस्तान   b) स्वीजरल्याण्ड   c) ग्रीनल्याण्ड   d) पाकिस्तान

50. The wave length of light in air is 6000 A^0 and in a medium is 4000 A^0. Then refractive index of the medium is
   a) 1.2   b) 2.4   c) 1.5   d) 0.67

51. The light which deviates minimum is
   a) Voilet   b) Red   c) Green   d) Yellow

52. नेपाल कुन देशान्तरमा पर्दछ ?
   a) पूर्वी देशान्तर   b) पश्चिमी देशान्तर   c) उत्तरी देशान्तर   d) दक्षिणी देशान्तर

53. दोश्रो संविधान सभा निर्वाचन २०७० कहिले भएको थियो ?

a) मार्ग २, २०७०   b) मार्ग ३, २०७०   c) मार्ग ४, २०७०   d) मार्ग ५, २०७०

54. A body radiates some form of electromagnetic radiation if its temperature is grater than
 a) 0^0K   b) 273^0K   c) 373^0K   d) 100^0K

55. In election, candidate A got 54% vote and got majority of 48 votes, then total vote counted is
 a) 480   b) 600   c) 1200   d) 960

56. If two angle of a triangle are 300 and 600, then the corresponding ratio of the sides is
 a) $1: \sqrt{3} : \sqrt{2}$ b) $1 : 3 : 2$ c) $1 : 3 : \sqrt{2}$ d) $1 : \sqrt{3} : 2$

57. Focal length of a plane mirror is
 a) Zero   b) Infinite   c) Negative   d) Positive

58. Blue color of the sky is due to
 a) Scattering of light   b) Dispersion of light
 c) Interference   d) Sun emits the blue light predominantly

59. The angle of prism is 30^0. The rays incident at 60^0 at one refracting surface suffer a deviation of 30^0. Then the angle of emergence is
 a) 0^0 b) 30^0 c) 60^0 d) 90^0

60. Which of the following is true for the wavelength of radiation ?
 a) Violet<Blue<Green<Red   b) Violet>Blue>Green>Red
 c) Violet<Green<Blue<Red   d) Vilot>Green>Blue>Red

61. Multiplicative constant 100 र additive constant 2 भएको कुनै tachometer ले 0.25m staff intercept काट्छ भने tachometer र staff बिचको दुरी कती हुन्छ ?
 a) 25 m   b) 24 m   c) 26 m   d) 27 m

62. A conic section having eccentricity unity is called......
 a) ellipse   b) parabola   c) hyperbola   d) Circle

63. If the lines 6x+8y+9=0 and 3x+ky+3=0 are parallel then find k
 a) k = -4   b) k = 8   c) k = -8   d) k = 4

64. निजामती कर्मचारीको कति रकम स्वास्थ्य बीमा गरिने उदेघोष आ.व. २०७०।७१ को वजेटले गरेको छ ?
 a) ३ लाख सम्म   b) ४ लाख सम्म   c) ५ लाख सम्म   d) ६ लाख सम्म

65. से-पोक्सुण्डो ताल कुन आकारको छ ?
 a) Y आकारको   b) X आकारको   c) V आकारको   d) Z आकारको

66. सिमा स्तम्भ सर्भेक्षण गर्न कुन तरीका अपनाईन्छ ?
 a) Triangulation   b) Traverse   c) Tacheometry   d) Trilateration

67. Mirages are observed in deserts due to the phenomenon of

a) Interference   b) Total internal reflection   c) Scattering   d) None of the above

68. मुक्त कमैया घोषणा भएको मिति कुन हो ?
  a) २०५६।४।१२   b) २०५८।४।१२   c) २०५७।४।१२   d) २०५५।४।१२

69. नेपाललाई नाप नक्शा प्रयोजनका लागी विभाजन गरेको एक Zone मा कतिवटा ग्रीडसीटहरु छन् ?
  a) ६०   b) ४०   c) १८०   d) १२०

70. Land Capability map series of Nepal was prepared with the support of
  a) FINLAND   b) RUSSIA   c) INDIA   d) CANADA

71. नेपालको स्थलरुप नक्शाहरुमा सधैंभरी हिउँ जम्ने ठाउँका समोच्च रेखाहरु कस्तो रंगबाट देखाइएको छ ?
  a) खैरो   b) कालो   c) निलो   d) सेतो

72. जग्गा नापजाँच गर्दा जग्गाको नक्शा कसले तोकको ढाँचामा तयार गरिन्छ ?
  a) नापी विभागका महानिर्देशक   b) कित्तानापी महाशाखा प्रमुख
  c) खगोल तथा भूमापन महाशाखा प्रमुख   d) भूमिसुधार तथा व्यवस्था मन्त्रालयको सचिव

73. भूमि सम्बन्धी ऐन को कुन दफाले जग्गाको हदवन्दी सम्बन्धी व्यवस्था गरेको छ ?
  a) दफा ६   b) दफा ७   c) दफा ८   d) दफा ९

74. नेपालको मुलुकी ऐनले कुन महलमा जग्गा आवद गर्ने सम्बन्धी व्यवस्था गरेको छ ?
  a) महल ६   b) महल ७   c) महल ८   d) महल ९

75. सि.ट नं. १५७-००१७-४ को दाहिने पट्टी कुन सिट पर्दछ ?
  a) १५७-००१७-३   b) १५७-००१८-३   c) १५८-००१८-२   d) १५७-००१७-२

76. एक हेक्टरमा कती रोपनी हुन्छ ?
  a) १८.६५ रोपनी   b) १९.६५ रोपनी   c) २०.६५ रोपनी   d) २१.६५ रोपनी

77. जग्गा धनी तेरीज बर्णानुक्रममा मिलाउँदा सबैभन्दा पहिलो कुन अक्षर आउँछ ?
  a) श्री   b) क   c) अ   d) ॐ

78. अन्तराष्ट्रिय GIS day कुन दिन मनाइन्छ ?
  a) Nov 19   b) July 4   c) Oct 24   d) Feb 7

79. In geodetic surveying level surface is
        a. A plane surface   b. A curve surface
        c. A curve surface never   d. Sometimes a plane and sometimes a curve surface

80. Complete datum transformation requires
        a. 7 parameters   b.9 parameters   c. 6 parameters   d.8 parameters

81. Gravity anomaly at any latitude is defined as the difference between the
        a. Gravity at earth surface and gravity at geoidal surface

b. Gravity at ellipsoidal surface & gravity at earth surface and
c. Gravity at two points of a geoidal surface
d. Gravity at geoidal and ellipsoidal surface

82. Which of the followings give the most accurate GPS coordinate ?
    a. Static GPS receiving technique   b. DGPS technique
    c. RTK technique   d. WASS technique

83. The angle between the perigee and current location of satellite is called
    a. Eccentricity (e)   b. Inclination (I)
    c. Argument of Perigee (ω)   d. True anomaly (v)

84. Which of the followings is true when the star is at horizon ?
    a. The altitude will be zero   b. The zenith distance will be 90^0
    c. Either a or b   d.Both a and b

85. The orbital plane of Earth is tilted to the ecliptic plane at an angle of :
    a. 5.2^0 b. 27.5   c. 23.5^0 d. 29.5^0

86. Solar day is …………….. than sidereal day
    a. 4 second longer   b. 4 second shorter
    c. 4 minute shorter   d. 4 minute longer

87. Full moon occurs in
    a. Opposition   b. Conjuction   c. Elongation   d. Differentiation

88. In celestial latitude and longitude system, primary plane is
    a. Ecliptic   b. Equator   c. Horizon   d. None

89. Refraction correction is taken as …. times of curvature correction
    a. 7   b. 0.785   c. 0.328   d. 0.143

90. Prime Vertical is perpendicular to
    a. Observer's Meridian   b. Horizon
    c. Ecliptic   d. Equator

91. First point of Aries is also known as
    a. Summer solistice   b. Vernal Equinox
    c. Autumnal Equinox   d. Winter Solistice

92. The ellipsoid obtained by rotation of earth about its minor axis is
    a. Prolate spheroid   b. Oblate spheroid
    c. Duplate spheroid   d. None of he above

93. The best fitting is one such that
    a. The sum the squares of the several deflection of vertical is minimum
    b. The sum the square root of the several deflection of vertical is minimum

c. The sum of the squares of several gravity anomaly is minimum

d. The sum of the square root of several gravity anomaly is minimum

94. The convergence of the meridian is the

    a. Difference between the astronomical azimuth and the computed bearing

    b. Difference between the astronomical latitude and the terrestrial latitude

    c. Difference between astronomical longitude and the terrestrial latitude

    d. None of the above

95. The resultant force due to the Gravitational force of the earth and the centrifugal force is

    a. Gravity Vector   b. Gravitational Potential

    c. Equipotential Surface   d. Gravity

96. Which one of the following satellite orbit must be (not can be) a circular orbit

    a. Polar orbit   b. Geostationary orbit

    c. Low earth orbit   d. Medium earth orbit

97. The use of Choke ring antenna improves the error due to

    a. Multipath   b. Ionospheric delay

    c. Antispoofing   d. Selective Availability

98. The astronomical triangle is formed by the lines joining arc of

    a. Declination, latitude and altitude

    b. Co-declination, Co-latitude and Co-altitude

    c. Declination, hour circle, Observer's meridian

    d. Declination Hour angle and azimuth

99. The line passing through the centre of camera lens and perpendicular to the negative and photograph place is called.

    a. Optical axis   b. Camera axis   c. Nadir Line   d. Flight Line

    100. The origin point of the Tilted photograph is.

    a. Principal point   b. Nodal point   c. Isocentre   d. Nadir point

100. In the aerial photograph which type of projection happens?

    a. Perspective projection   b. Parallel projection

    c. Orthogonal projection   d. Conformant projection

101. Which statement is true?

    a. In vertical photograph image plane focal plane and object plane are tangential to each other

    b. In vertical photograph image place focal place and object plane line & single line

    c. In vertical photograph image plane focal plane and object plane are parallel to each other

    d. In tilted photograph image plane focal plane and object plane are tangential to each other

102. Which statement is not true?

    a. Flying height is inversely proportional to contour interval

    b. Flying height is directly proportional to c-factor

    c. Flying height is directly proportional to contour interval

d. The product of contour interval and c-factor gives flying height

103. In photogrammetry, which transformation is mostly suited for orientation of aerial photographs to represent the actual terrain?
a. Affine transformation
b. Similarity transformation
c. Projective transformation
d. Similarity & projective transformation

104. When did the first aerial photograph capture?
a. 1901 A.D
b. 1958 A.D
c. 1859 A.D.
d. 1909 A.D.

105. For the stereo-viewing of the aerial photograph the longitudinal overlap between two photographs is
a. At least 50%
b. 70%
c. 30%
d. 45%

106. Which type of camera is used to capture aerial photograph for topographical map preparation?
a. Narrow angle
b. Normal angle
c. Wide angle
d. Super wide angle

107. In processing the aerial photograph in dark room which color light is used?
a. Ultravoilet
b. Green
c. Blue
d. Orange

108. If $\tan^{-1} x + \tan^{-1} y + \tan^{-1} z = \dfrac{\pi}{2}$ then.

(a) $x + y + z = xyz$

(b) $xy + yz + zx = 1$

(c) $x^2 + y^2 + 2xy = 1$

(d) $x^2 + y^2 + z^2 + 2xyz = 1$

109. The value of $\tan 105^0$ is

(a) $-2-\sqrt{3}$

(b) $2+\sqrt{3}$

(c) $-2+\sqrt{3}$

(d) $2-\sqrt{3}$

110. The popular equation $r^2 = 32 \operatorname{cosec} \theta$ represents :

(a) Circle
(b) Parabola
(c) hyperbola
(d) straight line

111. The value of $\dfrac{d}{dx}\left[\sin^{-1} x + \cos^{-1} x\right]$ is :

(a) $\sin^{-1}x$

(b) $\dfrac{2}{\sqrt{1-x^2}}$

(c) $\dfrac{\pi}{2}$

(d) 0

112. What is the lowest term of the following equation:- $\dfrac{6x^2 - x - 15}{4x^2 + 4x - 3}$?

(a) $\dfrac{2x-1}{3x-5}$

(b) $\dfrac{3x-5}{2x-1}$

(c) $\dfrac{2x+1}{3x-5}$

(d) $\dfrac{3x+5}{2x-1}$

113. 39. $2x^{-1}\sqrt{\dfrac{1-x}{2}} =$

(a) $\sin^{-1} x$

(b) $\cos^{-1} x$

(c) $\tan^{-1} x$

(d) $\cot^{-1} x$

114. The focal distance of a point P on the parabola $y^2 = 12x$ in which the ordinate of P is 6 is :
    (a) 12   (b) 4   (c) 3   (d) 6

115.   Process camera बाट transparent sheet लाइ negative बनाउँदा light source कहाँ राखिन्छ ?
        a. Copy board को अगाडि   b. Copy board पछाडि

        c. Copy board अगाडि पछाडि जहाँ राखे पनि हुन्छ   d. कनै पनि होइन

116. Linear feature मा नाम कुन अनुसार राखिन्छ ?

        a. Arbitrarily   b. Randomly   c. Parallely   d. Transversally

117.   In contact photography which original is use?
        a. Opaque   b. Transparent c. Semi-Transparent   d. Both

118. Printing plate is made up of

        a. Copper   b. Aluminium   c. Chromium   d. Antimony

119. नेपालको प्रयोगमा ल्याइएको offset press कति वटा cylinder unit छ ?

        a. 1   b. 2   c. 4   d. 6

120. What is the size of Heidelberg Printing machine which is at Topographical Survey Branch?

        a. 32 "x 40 "   b. 30 " x 42 "   c. 28 " x 40 "   d. 30" x 30 "

121. Which originals are used to make plate in CTP technology?

    a. positive   b. negative   c. both a and b d. digital data

122. Clear uncoated myler sheets are used for lettering stick-ups, the clear sheet is
        a. Negative   b. Positive   c. Both of them   d. None of them

123. If a scale of 1:25,000 is to be reduced, the reduction percentage is 50 %, then the output or desired scale will be:
        a. 1:12,500   b. 1:25,000   c. 1:50,000   d. 1:1,00,000

124. The scale factor at the central meridian in case of UTM projection is
        a. 0.9999   b. 0.9998   c. 0.9996   d. 0.9994

125. Orthophoto is an example of:
        a. DCM   b. DLM   c. DIM   d. None of the above

126. Serifs/sans serif, classic/ modern and roman/Italic belong to which element of typographic design?

    a. Type Form   b. Type Style   c. Type Size   d. Type Colour

127. Thematic map type used to represent location, distribution and nature of nominal phenomena extending over areas is called

    a. Chorochromatic   b. Dot density   c. Flowline   d. Choropleth

128. Following picture shows the source map, generalized map (at source scale) and the generalized map on the final scale, what basic rule is applied?
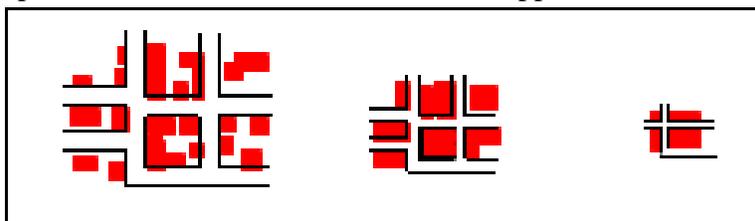
    a. Exaggeration   b. Emphasis   c. Classification   d. Aggregation

129. According to the additive principle of colour, the result of the combination of the primary colours Red and Blue is:

    a. Yellow   b. Magenta   c. Cyan   d. White

130. What is the scale of topographical base map of sheet number 2785 12?

    a. 1:100000   b. 1: 250000   c. 1:50000   d. 1:25000

131. The scale distortion on a map at the point of tangent between map point and earth surface is

    a. maximum   b. minimum   c. unity   d. zero

132. Pantograph is used as a ……….. method for reduction and enlargement of maps.

    a. graphical   b. mechanical   c. digital.   d. optical

133. Normally dynamic map offers the facility of ……………

    a. Panning and zooming   b. animation   c. Sound and videos   d. None of above

134. Which visual variable is used in chorochromatic maps?

    a. colour   b. value   c. texture   d. size

135. If angular measurement of a traverse are more accurate than the linear measurements, balancing of the traverse is generally done by

    a. Bowditch's rule   b. Transit rule   c. Arbitrary method   d. Axis method

136. If the R.L. of the point A is 102.5 m, B.S. reading and F.S. reading are 1.25 m and 1.75 m, then the R.L. of point B is
      a. 103.5 m   b. 101.5 m   c. 103 m   d. 102 m

137. Which is the largest scale?
      a. 1:500   b. 1cm=10 m   c. 1cm=4 km   d. 1''=100'

138. In telescopic alidade V-scale ranges from
      a. ± 1 to 40   b. 1 to 20   c. 1 to 40   d. ±1 to 20

139. What is the back bearing of the line BA, if fore bearing of the line AB is 30^0
      a. 210^0 b. 30^0 c. 150^0 d. 120^0

140. Assuming that a draftman can plot a distance as small as 0.25 mm, and the scale of plotting is 1 in 1,00,000, the distances in the field can be measured to the nearest
      a.   0.25 m   b. 2.5 m   c. 25.0 m   d.250.0 m

141. The map which depict the natural features as well as nature of terrain of a country are known as
      a.   Cadastral Map   b. Topographical Map   c. Political Map   d. Demographic Map

142. Which of the following sight is known as positive sight in levelling?
      a.   Back Sight   b. Intermediate Sight   c. Fore Sight   d. Turning sight

143. If the number of sides of the loop traverse is 8, then the sum of measured exterior angles should be equal to
      a.   1080°   b. 1200°   c. 1800°   d. 2000°

144. What is the value of One Nautical miles?
      a.   1609.3 m   b. 1852 km   c. 1609.3 km   d. 1852 m

145. Map which shows the potential use of unit of land is
      a.   Land use map   b. Land capability map   c. Land zoning map   d. Cadastral map

146. By arithmetic check, we ensure the accuracy of
    a. Field work   c. Calculation
    c. Both field work and calculation   d. None of the above

147. Which is mathematical Surface of earth?
      a.   Ellipsoid
      b.   Geoid
      c.   Level Surface
      d.   Topography of earth

148. Which is full form of GPS?
      a.   Geodetic positioning system
      b.   Global positioning Survey
      c.   Geodetic positioning survey
      d.   Global positioning System

149. Which error in not eliminated when level instrument is set up at middle between two staves.

a. Collimation error
b. Curvature error
c. Zero error
d. Refraction error

150. Which does not lie in TOR?
    a. Purpose of work
    b. Methods to be adopted
    c. Accuracy to be achieved
    d. Precision of instrument

151. A tie line is run
    a. To check the accuracy of the field work
    b. To locate details which are away from the chain line
    c. Between main survey lines
    d. Parallel to survey lines

152. If the magnetic declination of the sun at noon is 185°, then the magnetic declination is
    a. 5W   b. 5E   c. 185W   d. 185E

153. The coordinate system of Nepal is based on
    a. Magnetic Meridian   c. Grid Meridian
    b. True Meridian   d. Arbitrary Meridian

154. If distance is measured with EDM and angle is measured with compass in preparation of topographic mapping, which of the following rule does it violate ?
    a. Consistency of work   c. Independent check
    b. Economy of work   d. Whole to the part

155. When Remote Sensing is not used?
    a. For Synoptic view   b. For inaccessible area
    c. For real time measurement   d. For Small area

156. Objects in Remote sensing are detected by measuring,
    a.Coordinates   b. Reflected Energy
    c.Distance   d.Incedent Energy

157. Unique reflecting property of objects depends on,
    a.Structral property   b.Chemical property
    c.Physical property   d.All of the above

158. Sky appears blue during day time due to,
    a. Mie Scattering   b.Non Selective Scattering
    c. Ray leigh Scattering   d.Selective Scattering

159. Digital Camera in day time is an example of
    a.Active Remote Sensing   b.Passive Remote Sensing
    c.Radar Remote Sensing   c.All of the above

160. Which resolution is related with the detection of small difference in reflected energy?
  a.Spatial resolution   b.Spectral resolution
  c.Radiometric resolution   d.Temporal resolution

170. Distortion related with individual pixel is,
  a. Noise   b.Dropped line error
  c. Stripping error   d.Sun angle error

171. The principal point on an aerial photographs can be located by
  a. Joining a line between same side of two fiducial marks
  b. Joining a line between opposite side of two fiducial marks
  c. Joining a line between two nearer fiducial marks
  d. All of the above

172. Which of the following method stretches DN value range to full range(0-255) of 8 bit image in linear manner?
  a.Filtering   b.Linear Stretch
  c.Histogram Equalization   d.Destripping

173. Which of the following statements is true?
  a.A greater area can be covered in oblique rather than vertical photograph.
  b.An equal area is covered by both vertical and oblique aerial photograph.
  c.A greater area can be covered in vertical rather than oblique aerial photograph.
  d.None of the above

174.Angle between flight line and the edge of the photograph in the direction of the flight is called
  a.Drift   b.Tilt
  c.crab   d.Swing

175.Relief displacement in a vertical photograph is measured from
  a. Nadir point   c. principal point
  b. Fiducial centre   d. perspective centre

176. Perspective centre relates to
  a. parallel projection   c. Perspective projection
  b. orthogonal projection   d. None of the above

177. Relating an image coordinate system to the camera system is called
  a. Interior orientation   c. Relative orientation
  b. Exterior orientation   d. Absolute orientation

178. Which band isn't used in photogrammetry?

a. Red   b. Green   c. Infrared   d. Blue

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     a. Red   b. Green   c. Infrared   d. Blue

184.Which of the following countries follows folio principle?

     a. Malaysia   b. Australia   c. Denmark   d. Switzerland

185.Which of the followings is not the principle of land governance?

     a. Accountability   b. Privatization
     c. Security   d. Rule of Law

186.Birta abolishment act was released in :

     a.2020 BS   b.2034 BS
     c.2016 BS   d.2021 BS

187.Which of followings is not the characteristics or element of deed registration system ?

     a. Logging of time of entry   b.Indexing of instrument
     c. Archiving of document   d.Guaranteed ownership

188.The provision of tenure of tentant (*Mohiyani Haque*) is stated in ………………

     a.Land Survey and measurement act 2019   b.Land Related Act, 2021
     c.Local Governance Act 2055   c.Land Acquisition Act 2034

189.Which of the following is not untrue about Nepalese Land Administration System?

a.Multipurpose System	b.Statutory land tenure
System	
c.Title Guarantee	d.Integrated Land
Information System	

190. The restoration of land rights to rightful owner is:
    a. tenurial reform   b.land restitution
    c. land redistribution   d.land consolidation

191. Which of the followings is the root cause of land conflict?
    a.Position   b. Need   c. Interest   d.
    Desire

192. The unified approach is proposed to bring land revenue office and survey office under same roof. This is according to justification of Cadatre Vision 2014
    a. Statement 1   b. Statement 2
    c. Statement 3   d. Statement 4

193. According to the FIG definition, cadastre is a
    a.Legal   b. Object
    c. Systematically arranged public inventory   d. Properties

A-2

194. The land law that is written and well codified is:
    a.Statuory law   b.Common law
    c.Customary Law   d.None

195. Which of the following statement is not true ?
    a.Land Registration is a process of recording of rights in land through deeds or as title on properties
    b.Land registration gives an answer to the question "Where" and "how much"
    c.Cadastre is an information system consisting of two parts – a series of maps or plans and text records
    d.Land registration and cadaster compliments each other

196. Land Administration deals with
    a. Land Ownership   b. Land Value
    c. Land Use   d. All of the above

197. The state has financial guarantee in terms of liability for the registration process. It is the provision of
    a. Mirror Principle   b. Curtain Principle
    c. Insurance Principle   d. None

198. According to National Land Use Policy 2069, open area falls under which of the following categories?

a. Agriculture   b. Public Service   c. Residential   d. None of the above

199. Land ceiling for residential purpose in Kathmandu valley is :
    a.5 ropani   b.20 ropani
    c.25 ropani   d.70 ropani

200. The System of providing land to the government employees and soldiers instead of cash salary is
    a.Jagir   b.Birta
    c.Rakam   d.Raikar

201. Which of the followings is non-formal land tenure?
    a.Raikar   b.State
    c.Guthi   d.Slum

202. of the followings is not a type of land reform
    a.Agrarian Collectivisation   b.Land Pluralization
    c.Land Nationalization   d.Land Consolidation

203. The method of land reform in which all landowners within an area surrender their land are allocated new parcels of comparable value but in pattern that encourages the more efficient and productive use of the land is …..
    a. Land acquisition   b. Land readjustment
    c. Land consolidation   d. Land development

204. Project life cycle is
    a. Planning, Execution, Termination
    b. Conceptual, Planning, Execution, Termination
    c. Planning, Conceptual, Execution, Termination
    d. Termination, Planning, Conceptual

205. Which is not a source of error
    a. Personal   b. Instrumental   c. Environmental   d. Random

206. Tachometer measures distance using
    a. Wavelength measurement   b.Direct measurement
    c. Time duration measurement   d.Optical measurement

207. Land use map, soil map, hydrological map are examples of
    a. Thematic map   b. Base map
    c. Reference map   d. Accessibility map

208. Which device is used to find the perpendicularity of a line ?
    a. Alidade   b. Optical square   c. Clinometer   d. Planimeter

209. Barometer is used to measure

a. Temperature   b. Height   c. Pressure   d. Gravity

210. Location data can be represented as
     a. Address   b. Grid reference   c. Coordinates   d. All

211. If distance is measured with EDM and angle is measured with compass in preparation of topographic mapping, which of the following rule does it violate?
     a. Consistency of work
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212. If the R.L of the point A is 102.5m, B.S. reading is 1.25m and F.S. reading is 1.75m, then the R.L. of point B is
     a. 103.5m   b. 101.5m   c. 103m   d. 102m

213. The whole circle bearing of a line whose quadrantal bearing is $N53^0 30'W$ is
     a. $53^0 30'$ b. $233^0 30'$ c. $306^0 30'$ d. $232^0 30'$

214. The methods of geodetic surveying can be used when the extent of area is greater than
     a. 500 sq km   b. 5000 sq km   c. 2500 sq km   d. 250 sq km

215. Which of the following data types as per measurement scale has absolute zero value ?
     a. Nominal   b. Interval   c. Ordinal   d. Ratio

216. 1 Ropani is equal to ………… Square feet.
     a. 5476   b. 508.74   c. 63360   d. 456

217. Which of the following is the smallest scale ?
     a. 1 : 500   b. 1 cm = 10 m   c. 1 cm = 4 km   d. 1" = 100'

218. Grid convergence is the angle between:
     a. True meridian and magnetic meridian
     b. Grid meridian and magnetic meridian
     c. True meridian and grid meridian
     d. Grid meridian and arbitrary meridian

219. Angle made towards north or south, by the ellipsoidal normal passing through that point, with equatorial plane is called:
     a. Latitude   b. Longitude   c. Declination   d. Azimuth

220. Which of the following is not true in Theodolite ?
     a. The horizontal axis should be normal to vertical axis
     b. Line of sight should be normal to horizontal axis
     c. Line of sight shouldnot be normal to vertical axis
     d. Line of sight should be normal to vertical axis

221. DEM, used to represent terrain is the ……………………….. form of representation.
    a. Vector   b. Raster   c. Hybrid   d. Tabular

222. Surveyor should accurately measure, record and interpret all data and offer impartial advice. Which ethical principle does the statement state ?
    a. Honesty and Integrity   b. Independence
    c. Care and Competence   d. Duty

223. Bowditch rule for adjustment is used when:
    a. Angle and distance are measured with same precision
    b. Angle measurement is more precise than distance measurement
    c. Distance measurement is more precise than angle measurement
    d. None of above

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    c. Land consolidation   d. Land development

244. Which of the following systems software does the job of merging the records from two files into one ?

    a. Security software   b. Utility program

    c. Networking software   d. Documentation system

245. Using find command in MS-Word, we can search:

    a. Characters   b. Formats   c. Symbols   d. All of the above

246. Which topology requires a multipoint connection ?

    a. Mesh   b. Star   c. Bus   d. Ring

247. Full form of HTML is

    a. Hyper Transmission Method Line   b. Huge Text Markup Language

    c. Hyper Text Markup Language   d. Hyper Text Markdown Language

248. Data Type of True/False variable is

    a. Integer   b. Float   c. Boolen   d. String

249. The technology of Fourth Generation Computers are based on :

    a. Transistor   b. ICs   c. Vacuum Tubes   d. Microprocessors

250. DROP TABLE table_name. This SQL statement can be used for :

    a. adding a new column   b. deleting a column

    c. changing the column data type   d. deleting a table

251. Strong password should be

    a. More than 8 characters long   b. Contain numbers, symbols and uppercase

    c. Not a dictionary word   d. All of the above

252. The directions that controls the input, output and processes are provided by :
   a. Hardware   b. Software   c. RAM   d. None of the above

253. What is the class of IP address 192.168.1.1 ?
   a. A   b. B   c. C   d. D

254. Transactions manager in DBMS is responsible for :
   a. All-or-nothing semantics   b. Consistency of transaction
   c. Durability of Transaction   d. All of above

255. Copy con lmtc.doc : What does this command does ?
   a. copy a file   b. Create file   c. Move file   d. Cut a file

256. ALTER TABLE table_name
   This SQL statement can be used for :
   a.Adding a new column   b. Deleting column
   c. Changing the column data type   d. All of above

257.The format painter   in word and excel software allows us to :

   a. Makes the similar font type   b. Format the size of font
   c. Format the appearance of font   d. All of above

258. The symbol in the figure in flow chart represents
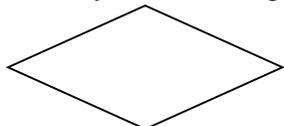
   a.Input   b. Output   c. Decision   d. Termination

259. What gets printed with the following command in Python programming ?
   Print type (1/2)
   a.<type 'int'>   b. <type 'number'>   c. <type 'float'>   d. <type 'double'>

260. A row in a relation, in a relational database, is called
   a.Objects   b. Records   c. Tuples   d. All of them

261. A byte can be characterized by :
   a.A series of 8 bits   b. 2^8 compbination
   c. Both   d. None of above

262. The python code for defining a function is :
   a. print "Hello World"
   b. def HelloWorld ():
        print "Hello World"
   c. def HelloWorld()

```
    print "Hello World"
d. def HelloWorld()
    print Hello World
```

263. Which one of the following is not a secondary storage ?
    a. Magnetic disks   b. Magnetic tapes   c. RAM   d. None of the above

264.The orbit used by meteorological satellites is
        a. Sun-synchronous orbit   b. Geostationary orbit
        c. Polar orbit   d. Non-polar orbit

265.Histogram represents
        a. Spatial average of each pixels   b.Geometric distortions of objects
        c. Number of pixels at each DN value   d.Spatial average of each pixels

266.Electromagnetic energy can be modeled
        a. As photons   b. As waves
        c. Both as photons and waves   d. As vibrating fields

267.The instruments which provide electromagnetic radiation of specified wavelength or a band
    of wave lengths to illuminate the earth surface are called:
        a. Sensors   b. Passive sensors   c. Active sensors   d.
        None

268.Why is ocean blue ?
        a. Because it reflects blue bands/light
        b. Because it absorbs blue band/light
        c. Because it reflects red and green bands/lights
        d. All of the above

269.Which procedure removes systematically bad scan line in an image ?
        a. Destriping   b. Band ratioing   c. Stretch   d.Haze
correction

270.Which of the following uses their own source of microwave radiation to illuminate the target
    ?
        a. LIDAR   b. RADAR   c. LADAR   d.
Laser

271.Which of the following is not true regarding unsupervised approach ?
        a. Consider only spectral distance measures
        b. Maximum user interaction
        c. requires interpretation after classification
        d. Based on spectral groupings

272.Which of the following is not sensor parameter ?

a. Wavelength   b. Incidence angle   c. Polarization   d. Terrain slope

273. The wavelength of visible light ranges from
    a. 0.4-0.7μm b. 0.4-0.7nm   c. 0.4-0.7mm   d. 0.4-0.7m

274. Panchromatic image has
    a. Higher spectral resolution   b. Lower spectral resolution
    c. Higher spatial resolution   d. (b) and (c) both

275. The ability to define fine wavelength intervals is
    a. Spatial Resolution   b. Spectral Resolution
    c. Radiometric Resolution   d. Temporal Resolution

276. The disadvantages of image classification are
    a. Analyze theoretic characteristics of object based on brightness values
    b. Create more than one feature class for one land cover/use class
    c. Translate continuous variability of image data into map patterns
    d. Find anomalous patterns in image data set

277. Sets of pixels that represent what is recognized as a potential class is known as
    a. Feature space   b. Feature class
    c. Cluster   d. Training sample

278. Atmospheric transmission of EMR is known as atmospheric……….
    a. Window   b. Troposphere   c. Door   d. Mesosphere

279. Cloud appears white to our eyes due to
    a. Rayleigh Scattering   b. Mie Scattering
    c. Non Selective Scattering   d. Diffusion

280. Object in remote Sensing are detected by measuring
    a. Coordinates   b. Reflected energy
    c. Distance   d. Incident energy

281. Pushbroom scanner scan the image data
    a. Across the track, one pixel at a time   b. Along the track, one pixel at a time
    c. Across the track, one line at a time   d. Along the track, one line at a time

282. For a 8 bit image, the range of DN value will be
    a. 0-63   b. 0-255   c. 0-511   d. 0-1023

283. The ratio of correctly classified data to the column total is defined by
    a. User accuracy   b. Commission error

c. Producer accuracy   d. Omission error

284. Project life cycle is
    a. Planning, Execution, Termination
    b. Conceptual, Planning, Execution, Termination
    c. Planning, Conceptual, Execution, Termination
    d. Termination, Planning, Conceptual

285. Which is not a source of error
    a. Personal   b. Instrumental   c. Environmental   d. Random

286. Tacheometer measures distance using
    a. Wavelength measurement   b. Direct measurement
    c. Time duration measurement   d. Optical measurement

287. Land use map, soil map, hydrological map are examples of
    a. Thematic map   b. Base map
    c. Reference map   d. Accessibility map

288. Which device is used to find the perpendicularity of a line ?
    a. Alidade   b. Optical square   c. Clinometer   d. Planimeter

289. Barometer is used to measure
    a. Temperature   b. Height   c. Pressure   d. Gravity

290. Location data can be represented as
    a. Address   b. Grid reference   c. Coordinates   d. All

291. If distance is measured with EDM and angle is measured with compass in preparation of
    topographic mapping, which of the following rule does it violate?
    a. Consistency of work
    b. Economy of work
    c. Independent check
    d. Whole to the part.

292. If the R.L of the point A is 102.5m, B.S. reading is 1.25m and F.S. reading is 1.75m, then
    the R.L. of point B is
    a. 103.5m   b. 101.5m   c. 103m   d. 102m

293. The whole circle bearing of a line whose quadrantal bearing is $N53^030'W$ is
    a. $53^030'$ b. $233^030'$ c. $306^030'$ d. $232^030'$

294. The methods of geodetic surveying can be used when the extent of area is grater than
    a. 500 sq km   b. 5000 sq km   c. 2500 sq km   d. 250 sq km

295. Which of the following data types as per measurement scale has absolute zero value ?
   a. Nominal   b. Interval   c. Ordinal   d. Ration

296. 1 Ropani is equal to ………… Square feet.
    a. 5476   b. 508.74   c. 63360   d. 456

297. Which of the following is the smallest scale ?
    a. 1 : 500   b. 1 cm = 10 m   c. 1 cm = 4 km   d. 1" = 100'

298. Grid convergence is the angle between:
    a. True meridian and magnetic meridian
    b. Grid meridian and magnetic meridian
    c. True meridian and grid meridian
    d. Grid meridian and arbitrary meridian

299. Angle made towards north or south, by the ellipsoidal normal passing through that point, with equatorial plane is called:
    a. Latitude   b. Longitude   c. Declination   d. Azimuth

300. Which of the following is not true in Theodolite ?
    a. The horizontal axis should be normal to vertical axis
    b. Line of sight should be normal to horizontal axis
    c. Line of sight shouldnot be normal to vertical axis
    d. Line of sight should be normal to vertical axis

301. DEM, used to represent terrain is the ……………………….. form of representation.
    a. Vector   b. Raster   c. Hybrid   d. Tabular

302. Surveyor should accurately measure, record and interpret all data and offer impartial advice. Which ethical principle does the statement state ?
    a. Honesty and Integrity   b. Independence
    c. Care and Competence   d. Duty

303. Bowditch rule for adjustment is used when:
    a. Angle and distance are measured with same precision
    b. Angle measurement is more precise than distance measurement
    c. Distance measurement is more precise than angle measurement
    d. None of above
304. Select the correct statement
    a. In tangential system of techeometry, the staff is always normal to the line of sight
    b. In movable hair method of tacheometry, the parallactic angle is kept constant
    c. Anallactic lens can be fitted in internal focusing telescope only
    d. In distance measurement using subtense bar, the relative error in calculated distance is same as that in measured angle, with opposite sign

305. According to the agreement between India and Nepal, total no. of boundary pillars along Nepal-India border will be :
    a. 816   b.8553   c. 8775   d.4563

306. Route survey is required for the purpose of:
   a. Finding the most suitable combination of alignment
   b. Determining the suitable gradient
   c. Selecting the best route between two stations
   d. All of the above

307. The approximate formula for radial as well as perpendicular offset according to the tangent method of laying simple circular curve is:
   a. $\frac{x}{2R}$ b. $\frac{x^2}{2R}$ c. $\frac{x^2}{R}$ d. $\frac{x}{R}$

308. Which of the following relations is true regarding relation between relation between deviation angle and polar deflection angle, in lemniscates curve ?
   a. Deviation angle is equal to polar deflection angle
   b. Deviation angle is three times the polar deflection angle.
   c. Polar deflection angle is three times the deviation angle
   d. Deviation angle is twice the polar deflection angle

309. After prefeasibility study of hydropower project, the map of canal alignment is prepared at scale of ………. with contour interval of …………
   a. 1:1000, 1 meter   b. 1:10000, 5 to 10 meters
   c. 1:2000, 2 to 5 meters   d.1:5000, 5 meters

310. The maximum deflection angle, at angle points, in transmission line should not exceed:
   a. 17^0 b. 55^0 c. 87^0 d. 25^0

311. Zero level for building construction are referenced to:
   a. Plinth level   b. Existing ground level
   c. Sill level   d. Roof level

A-2

312. In construction survey, we
   a. Relocate ground point on the design   b. Relocate design point on the ground
   c. Construct pillor   d. All of the above

313. The method suitable for computing the area when the boundary line departs considerably from a straight line is
   a. Mid-ordinate rule   b. Trapezoidal rule
   c. Average ordinate rule   d. Simpson's Rule

314. Total station not operated by remote control at the prism end but is capable of searching the prism on its own is called:
   a. Manual Total station   b. Motorized Total station
   c. Robotic Total station   d. Remote Total station

315. The curve fulfilling the condition of ideal transition curve is
   a. Cubic Parabola   b. True spiral
   c. Simple circular   d. Euler spiral

316. If total change in gradient of vertical curve is negative, then it can be termed as
      a. Sag Curve   b. Summit Curve   c. Valley Curve   d. All of above

317. While performing a tacheometric surveying, the telescope of the tacheometer was inclined upwards. The staff intercepts were read but unfortunately, vertical angle could not be read due to some technical constraints. Which of the following between instrument station and staff station could still be attained ?
      a. Slope distance   b. Horizontal distance
      c. Vertical intercept   d. RL of staff position

318. On a topographic map, the closer the contour lines the
      a. Steeper the slope   b. Flatter the land surface
      c. Gentler the slope   d. Lower the elevation

319. The area of a quadrilateral ABCD whose co-ordinates are A (4, 10), B(9, 7) C(11, 2) and D(2, 2) is
      a. - 45.5   b. 45.5   c. - 91   d. 91

320. While establishing vertical control for topographic mapping, the accuracy in the elevation should not be degraded below
      a. Contour interval   b. Half of contour interval
      c. Twice contour interval   d. One fourth of contour interval

321. The surface survey is connected to the underground survey through
      a. A shaft   b. an adit   c. both (a) & (b)   d. Neither (a) nor (b)

322. In plane table survey, inaccessible points may be located by the
      a. Radiation method   b. Intersection method
      c. Resection method   d. None of above

323. The length of long chord and tangent of a circular curve of radius R will be equal if the angle of deflection is
      a. 30^0 b. 60^0 c. 90^0 d. 120^0

333. If $\tan^{-1} x + \tan^{-1} y + \tan^{-1} z = \dfrac{\pi}{2}$ then.
    (a) $x + y + z = xyz$ (b) $xy + yz + zx = 1$

    (c) $x^2 + y^2 + 2xy = 1$ (d) $x^2 + y^2 + z^2 + 2xyz = 1$

334.   The value of $\tan 105^0$ is
    (a) $-2-\sqrt{3}$ (b) $2+\sqrt{3}$ (c) $-2+\sqrt{3}$ (d) $2-\sqrt{3}$

335.   The popular equation $r^2 = 32 \operatorname{cosec} \theta$ represents :

(a) Circle   (b) Parabola   (c) hyperbola   (d) straight line

336. The value of $\frac{d}{dx}\left[\sin^{-1}x + \cos^{-1}x\right]$ is :

     (a) $\sin^{-1}x$ (b) $\frac{2}{\sqrt{1-x^2}}$ (c) $\frac{\pi}{2}$ (d) 0

337. What is the lowest term of the following equation:- $\frac{6x^2 - x - 15}{4x^2 + 4x - 3}$?

     (a) $\frac{2x-1}{3x-5}$ (b) $\frac{3x-5}{2x-1}$ (c) $\frac{2x+1}{3x-5}$ (d) $\frac{3x+5}{2x-1}$

338. 39. $2x^{-1}\sqrt{\frac{1-x}{2}} =$

     (a) $\sin^{-1}x$ (b) $\cos^{-1}x$ (c) $\tan^{-1}x$ (d) $\cot^{-1}x$

339. The focal distance of a point P on the parabola $y^2 = 12x$ in which the ordinate of P is 6 is :
     (a) 12   (b) 4   (c) 3   (d) 6

340. Which of the fractions represent higher percentage ?
     (a) $\frac{11}{13}$ (b) $\frac{13}{15}$ (c) $\frac{12}{17}$ (d) $\frac{15}{19}$

341. The sum of the roots of a quadratic equation. $Px^2 + qx + r = 0$ is given by
     (a) $\frac{q}{2p}$ (b) $\frac{q}{p}$ (c) $-\frac{q}{p}$ (d) $-\frac{p}{q}$

342. Latitudes are measured from:
(a) 0^0 to 180^0 east ward   (b) 0^0 to 90^0 north ward
(c) 0^0 to 180^0 east ward or west ward   (d) 0^0 to 90^0 north ward or south ward

343. आधारातमा सूर्य देखिने शहर कुन हो ?
(a) स्वीडेनको स्टकहोम   (b) डेनमार्कको कोपनहेगन   (c) नर्वेको हामरफास्ट   (d)   रसियाको मस्को

343. Find the sum of the series 1, 2, 3.................. up to 100.
(a) 5050   (b) 51000   (c) 5150   (d) 1000

344. Find the area of a triangle whose siders 3, 4 & 5 cm. repectively.
(a) 15 sq. cm   (b) 12 sq. cm   (c) 8 sq. cm   (d) 6 sq. cm

345. Breath of a house is 4m, its length is two times of its breath and height is there times of it's breath. Find the volume of the room.
(a) 384 m³   (b) 192 m³   (c) 384 m²   (d) 192 m²

346. In a college, 55% of girls learn arts and the remaining girls are 330 in number. Find the number of girls in the college.
(a) 225   (b) 1000   (c) 500   (d) Non of the above

347. How many triangle are there in the given figure ?
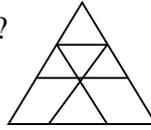
(a) 20   (b) 11   (c) 16   (d) 14

348. A man of the top of the tower 90m high observes a point on the which is $30\sqrt{3}$ m away from the base of the tower. Find the angle of depression ?
(a) 45^0 (b) 60^0 (c) 75^0 (d) 15^0

349. Variance is the square of
(a) Standard deviation (b) mean deviation   (c) mode   (d) median

350. MS-Word, MS=Excel आदी तलका मध्य कुन Software अन्तर्गत पर्छ ?
(a) System   (b) Application   (c) Operating System   (d) Platform

351. दोश्रो संविधान सभा चुनावमा सबै भन्दा बढी मतान्तरले विजयी हुने संसद को हुन् ?
(a) बाबुराम भट्टराई   (b) गगन थापा   (c) रामचन्द्र पौडेल   (d) शुवास नेम्बाङ्ग

352. Value of Tan 22.5 + Cot 22.5 is equal to.
(a) $2\sqrt{2}$ (b) $\sqrt{2}$ -1   (c) 4   (d) 1

353. ४ मी लम्बाई र ४ मी. चौडाई भएको १ मी गहिरो खाल्डो छ । उक्त खाल्डोलाई ४ मी गहिरो बनाउनु पर्दा कति ब.मी. माटो निस्कन्छ ?
(a) 64   (b) 48   (c) 27   (d) 21

354. If a + 1/a = -2, find the value of a − 1/a.
(a) 0   (b) 6   (c) 4   (d) 2

355. If $2^{x+1} = 2$, the find value of x.
(a) 1   (b) 0   (c) $1/2$ (d) -1

356. What is the derivative cosecx
(a) -cotx   (b) -cosecxcotx   (c) –cosec2x   (d) –cot2x

357. If a circle has perimeter of 24 cm, what angle does an arc of 6cm subtend at the center ?
(a) 45 grade   (b) 100 grade   (c) 90 grade   (d) 60 grade

358. If p^{th} term of an AP is q and q^{th} term is p then value of nth term is
(a) p-q+n   (b) p+q+n   (c) p+q-n   (d) Non of the above

359. In any triangle ABC, $\frac{CosA}{a} = \frac{CosB}{b} = \frac{CosC}{c}$ then Δ is :
(a) right angled Δ (b) equilateral Δ (c) isosceles Δ (d) scalene Δ

360. In an election there were two candidates. One of them received 62% of the votes and so secured a majority of 228 votes. How many voted ?
    (a) 380   (b) 620   (c) 950   (d) 475

361. Which of the following country has a flag with a pointed red maple leaf ?
    (a) Austria   (b) Canada   (c) Lebanon   (d) Netherland

362. Which of the following is not related to Survey ?
    (a) GIS   (b) GPS   (c) GDP   (d) GII

363. A dealer gains the selling price of two watches by selling ten watches. What is his percentage profit ?
    (a) 25%   (b) 20%   (c) 15%   (d) 10%

364. The cost of making a telephone a call to Japan is Rs.150 for the first minute and Rs.15 for each additional 6 seconds. If a telephone call costs Rs.975 fixed the duration of the call in minutes ?
    (a) 4.5   (b) 5.5   (c) 6.3   (d) 6.5

365. The area of one side of the coin is $3.1415 cm^2$. Find the length of its diameter in cm?
    (a) 1.1025   (b) 1.05   (c) 2.0   (d) 2.05

366. Find the value of x in $2^{x+3}.3^{x+4} = 18$
    (a) 1   (b) 2   (c) - 1   (d) -2

367. मुगु जिल्लाको सदरमुकामको नाम के हो ?
    (a) दुनै   (b) गमगढी   (c) धनगढी   (d) मार्तडी

368. ढोरपाटन सिकार आरक्ष कुन जिल्लामा रहेको छ ?
    (a) म्याग्दी   (b) बागलुङ्ग   (c) रुकुम   (d) माथीका सबै

368. The eccentricity of the hyperbola is $x^2 / 9 - y^2 / 16 = -1$ is:
    (a) 7/5   (b) 5/3   (c) 5/4   (d) Non of the above

369. If the line is parallel to x-axis, then slope is equal to
    (a) 1   (b) $\sqrt{3}$ (c) $1/\sqrt{3}$ (d) 0

370. Which of the following point does not lie on the line $2y + 5x - 4 = 0$?
    (a) (-0.8, 0)   (b) (-1, 0.5)   (c) (0, 2)   (d) (2, 3)

371. If the circle touches x and y axis and whose radius is 5 unit then center of circle is
    (a) (5, 0)   (b) (0, 5)   (c) (5, 5)   (d) (0, 0)

372. Under translation T(3, 2) the point (2, 5) becomes
    (a) (3, 2)   (b) (6, 10)   (c) (5, 7)   (d) (4, 8)

373. The rectangular coordinate of a point is given (0, -2), then its respective polar coordinate is

   (a) (2, 0)   (b) (2, π)   (c) (-2, $\pi/2$)   (d) (2, $\pi/2$)

374. In a Cartesian coordinate system axes x, y and z are at........................ to ecah other.
   (a) 45^0 (b) 90^0 (c) 120^0 (d) 180^0

375. Final the centroid of a triangle whose orthocentre is (-3, 5) and circumcentre is (6, 2).
   (a) (1, 2)   (b) (3, 3)   (c) (-2, 3)   (d) (1, -4)

376. In a triangle if A = 45^0, B = 60^0 then the ratio of a : c.
   (a) $2 : \sqrt{3} + 1$ (b) $2 : \sqrt{2} + 1$ (c) $1 : \sqrt{3} + 1$ (d) $1 : \sqrt{2} + 1$

377. In a triangle a right angle triangle perpendicular is 10cm and base is 5cm. What is its hypotenuse.
   (a) 125 cm   (b) $5\sqrt{5}$ cm   (c) 126 cm   (d) 125 cm

378. Find the acute angle between the lines. $x - 3y - 6 = 0$ and $y = 2x + 5$
   (a) 45^0 or 135^0 (b) 45^0 (c) 135^0 (d) 60^0

379. The sum of interior angle of a closed loop having n side is :
   (a) (2n +4) 180^0 (b) (2n − 4)180^0 (c) (2n +4) 90^0 (d) (2n − 4) 90^0

380. From a point P on a level ground, the angle of elevation of the top tower is 30^0. If the tower is 100m high, the distance of point P from the foot of the tower is :
   (a) 149 m   (b) 156 m   (c) 173 m   (d) 200 m

381. In a triangle ABC, AB=7 cm, BC= 16 cm and area of ABC is $28\sqrt{3}$ cm2 then value of angle $\angle ABC$ is:
   (a) 30^0 (b) 45^0 (c) 60^0 (d) 90^0

382. Which statement is incorrect ?
   (a) You can solve for the unknown side in any triangle, if you know the lengths of the other two sides, by using the Pythagorean theorem.
   (b) The hypotenuse is the longest side in a right triangle.
   (c) The hypotenuse is always opposite the 900 angle in a right triangle.
   (d) The Pythagorean theorem applies to all right triangles.

383. The total Surface area of solid hemisphere having radius of base of hemisphere is 14 cm.
   (a) 616   (b) 1232   (c) 1848   (d) 2464

384. The surface area of sphere whose volume is $\frac{9\pi}{2}$ cm^3 is
   (a) 18 cm   (b) 22   (c) 7π (d) 9π

385. ABCD is a parallelogram in which AB = 3cm BC = 8cm and angle ADC = 60^0. Then area of parallelogram ABCD is .

(a) 12   (b) $24\sqrt{2}$ (c) $12\sqrt{3}$ (d) 24 x^2

386. The sides of a triangle are 5, 6 and 10. Find the length of the longest side of a similar triangle whose shortest side is 15.
(a) 10   (b) 15   (c) 18   (d) 30

387. Which of the following lengths are the sides of a right angled triangle ?
(a) 2.4, 3.2, 4   (b) 4.3, 4.4, 4.5   (c) 3.1, 4.2, 4.8   (d) 0.06

388. If $\log_4 81 = 4$, then the value of a is :
(a) 2   (b) 3   (c) 1   (d) 6

389. The line $y = mx + c$ will be normal to the circle $x^2 + y^2 = a^2$, if
(a) $c = \pm\sqrt{1 + m^2}$ (b) $c = 0$ (c) $c = -m$ (d) $c\,\frac{a}{m}$

390. नेपालको सबै भन्दा लामो हिमनदी कुन हो ?
(a) लाङटाङ   (b)   (c) से-फोक्सुण्डो   (d) च्छ्रो रोल्पा

391. Internet भन्नाले के बुझिन्छ ?
(a) A Large network of networks   (b) An communication system for Business   (c) Net of System   (d) माथीका सबै

392. Java operating system कुन कम्पनीले शुरुवात गरेको थियो ?
(a) Oracle   (b) Microsoft   (c) Novell   (d) Sun

393. Whose trademark is the operating system UNIX ?
(a) Motorola   (b) Microsoft   (c) BELL Laboratories   (d) Ashton Tate

394. Web pages are written using
(a) FTP   (b) HTTP   (c) HTML   (d) URL

395. What is full form of FIG ?
(a) Federation of International Geographers.   (b) Federation of International Geophysics.   (c) Federation of International Surveyors.   (d) Federation of International Geodesists.

396. घोडाघोडी ताल कुन जिल्लामा पर्दछ ?
(a) कैलाली   (b) कन्चनपुर   (c) दाङ   (d) रुकुम

397. What is the surface area of cube having side 5 cm?
a. 25 sq cm
b. 125 sq cm
c. 150 sq cm

d. 625 sq cm

398. Which coordinate of a point in 3D, defined by directed distance form a fixed point?
    a. Polar coordinate
    b. Cylindrical coordinate
    c. Spherical coordinate
    d. Cartesian coordinate

399. The WCB of line is 300^0 , its quadrantal bearing is.....
    a. W 30^0 N
    b. N 30^0 W
    c. W 60^0 W
    d. N 60^0 W

400. The observation which occurs in middle in a sample is the
    a. Median
    b. Mean deviation
    c. standard deviation
    d. Mode

401. Set A and set B have n(A) and n(B) elements respectively. What can be the maximum number of element in (A U B) ?
    a. n(A) –n(B)
    b. n(A) + n(B)
    c. n(A ∩ B)
    d. n(A) + n(B) - n(A ∩ B)

402. What type of image is formed when an object is placed at a distance of 2.5 focal lengths from a convex mirror?
    a. erect and virtual
    b. inverted and virtual
    c. erect and real
    d. inverted and real

403. Of the following, _____ radiation has the longest wavelength.
    a. X-ray
    b. microwave
    c. ultraviolet
    d. infrared

404. Some yellow objects actually absorb yellow light but reflect red and green light. If we shine yellow light on such a yellow object, it will appear ...... to our eyes.
    a. yellow
    b. green
    c. red
    d. black

405. The sum of deviation of items from their means is always
    a. Zero
    b. Minimum
    c. Maximum
    d. depend on nature of items
406. One card is randomly selected from a standard 52 card deck. Find the probability that the card is an king and or a red card.
    a. 1/26
    b. 1/13
    c. 7/13
    d. 15/26

407. Napier's rule is used for solving
    a. spherical triangle
    b. Astronomical triangle
    c. Right angled spherical triangle
    d. Right ascension triangle
408. The unit of power of a lens is
    a. Angstrom
    b. Dioptre
    c. Meter
    d. Degree
409. If you are given a height and base of a triangle, which of the following formula is used to compute area of triangle?
    a. ½(base*height)
    b. $\sqrt{s(s-a)(s-b)(s-c)}$
    c. ½ bcsinA
    d. all of the above
410. Which of the statement is true ?
    a. The angle of incident should be greater than angle of reflection
    b. The angle of incident should be less than angle of reflection
    c. The angle of incident should be equal to angle of reflection
    d. The relation between angle of incident and angle of reflection is guided by refractive index
411. The sum of interior angles of a closed traverse of N sides is equal to
    a. (N-1)*180
    b. (N-2)*180
    c. (N+1)*180
    d. (N+2)*180
412. If sin A = 3/5 then, sin 2A is

a. 6/10　　　　　b. 16/25　　　c. 4/5　　　　d. 24/25

413. Volume of Triangular prism of height 10cm and triangular faces of side 3cm, 4cm and 5cm is

　　a. 100 cm^3　　b. 75 cm^3　　　c. 120 cm^3　　d. 60 cm^3

414. Full form of LASER is

　　a. Least Amplitude Signal Emitting Repeater
　　b. Light Amplified Signal Emitting Repeater
　　c. Light Auroma by Synthesized Emission of Radiation
　　d. Light Amplification by Stimulated Emission of Radiation

415. Except visible light which radiation can pass through atmospheric window?

　　a. Radio
　　b. Gamma
　　c. X – ray
　　d. None of Above

416. Laser is useful in

　　a. Surgery
　　b. Industry
　　c. Survey

d. All of Above

417. त्रुटी भन्नले केलाई बुझाउँछ ?

　　क) Measured Value+ True Value　　　　ख) Measured Value- True Value
　　ग) True Value- Measured Value　　　　घ) True Value+ Measured Value

418. 0₀ देशान्तर (longitude) लाई के भनिन्छ ?

　　क) equator　　　　ख) origin　　　　ग) Prime meridian　　　　घ) center of
earth

420. GIS, को पूरा रुप के हो ?

　　(क) General Information system　　　　(ख) Geodetic Information system
　　(ग) Geographic Information system　　(घ) Global Information system

421. Traverse plotting गर्ने best method कुन हो ?__

　　क) Independent coordinates　　　　ख) Angle & distance
　　ग) consecutive coordinates　　　　घ) None of above

422. स्वतन्त्र जाँच (Independent check) कसरी गरिन्छ ?

　　क) छुट्टै स्वतन्त्र नाप लिएर　　　　ख) Mathematical rule प्रयोग गरेर
　　ग) क र ख दुवै　　　　घ) None of above

423. तलका मध्ये कुनले सबै भन्दा कम क्षेत्रफल बुझाउँछ ?

　　क) रोपनी　　　　ख) आना　　　　ग) पैसैसैसा　　　　घ) धुर

424. कुन यन्त्रबाट angular measure गर्न सकिन्छ ?

　　क) Theodolite　　　　ख) Sextant　　　　ग) Abney's Level　　　घ) all of

425. above1:500 scale *को नक्शाम* 125 cm *भएको बाटो* 1:500 *मा* plot *गर्दा कति हुन्छ ?*
 क) 25 cm   *ख)* 5 cm   *ग)* 625 cm   *घ)* 3125cm

426. *नेपालमा डंगोल सर्भेको शुरुवात कहिले भएको थियो ?*
 a. 1930   b. 1965   c. 1980   d. 2000

427. *कुन दुई विन्दु वीचको छड्के दुरी* (slope distance) *l र* sloping angle θ *भए ति दुई विन्दुहरु वीचको* Horizontal Distance *कति होला ?*
 a. $l\,Sin\theta$ b. $l\,Cos\theta$ c. $l\,Tan\theta$ d. $l - l\,Sin\theta$

428. Curvature *र* refraction *को* Combine correction *कति हुन्छ ?*
 a. $0.0785D_2$ b. $0.06735\,D_2$ c. $0.0112\,D_2$ d. All of above

429. EDM *ले कस्तो दुरी मापन गर्छ ?*
 a. *Horizontal*   b. *Slope*   c. *Vertical*   d. *all of above*
_____
430. Bearing of line AB is 45o and Bearing of line BC is 120o then what will be the traverse angle *?*
 a) 165o   b) 75o   c) 255o   d) 315o

431. Telescopic Alidade *बाट दुरी नाप्ने शुत्र कुन हो ?*
 a) I*100-I*H   b) I*(100-H)   c) –I*H+I*100   d) All of above

432. *कुनै टेप तन्किएर लामो भएको रहेछ भने त्यसबाट नापीएको दुरी कस्तो हुन्छ ?*
 a) *लामो*   b) *छोटो*   c) *केही फरक पर्दैन*   d) *देव्वर हुन्छ*

433. *फिल्डमा कुनै सर्भेको कार्य गर्दा कसरी संचालन गर्ने भन्ने प्राविधिक विषय उल्लेख भएको विवरणलाई के भनिन्छ ?*
 a) SOP   b) TOR   c) Specification   d) *देव्वर हुन्छ*

434. *कुन विषय सर्भे संग सम्बन्धित छैन ?*
 a) Survey management   b) Project management Survey management
 c) Business Promote   d) *सर्भेक्षण*

435. Clinometer *बाट के पढिन्छ ?*
 a) Vertical angle   b) Tangent Value
 c) Cosine Value   d) Sine Value

436. Temperature *कस्तो डाटा हो ?*
 a) Nominal   b) Ordinal   c) Interval   d) Ratio

437. *कुन फरक छ ?*
 a) Digitization   b) Scanning   c) Resolution   d) Area calculation

438. Earth is considered as a Cartographic problem. Why?
 a.   Centre of earth is unknown   b.   True shape of earth is not geometrical

c. Map is distorted form of Earth surface

d. All of above

439. If map of 1:10000 is changed to 1:50000, what will happen?
   a. 5% enlargement
   b. 5% reduction
   c. 500% reduction
   d. 20% reduction

440. Open window mask is an example of:
   a. Negative for line features
   b. Positive for line features
   c. Negative for area features
   d. Positive for area features

441. In 1:25000 scaled map, Building is shown by:
   a. Line symbol
   b. Point Symbol
   c. Area Symbol
   d. Text Symbo

442. In topographic map, if name of some location contains "kā", it pronounced as:
   a. क
   b. का
   c. कि
   d. कः

443. In generalization process, which of the following methods is not used?
   a. Monumentation
   b. Selection
   c. Simplification of features
   d. Displacement of features

444. Conical projection is suitable for:
   a. Rectangular area with greater north-south length
   b. Triangular area
   c. Circular area near pole
   d. All of above

445. Which of the following map sheet lies to the right of the sheet no. 2785 13 C?
   a. 2785 12 D
   b. 2784 13 D
   c. 2784 16 D
   d. 2685 13 D

446. Which of the following process is suitable for printing the paper money?
   a. Letter press
   b. Lithography
   c. Intaglio
   d. None of above

447. The mechanical method of enlargement and reduction is:
   a. Process Photography
   b. Proportional Compass
   c. Using squares and grids
   d. Pantograph

448. What type of map product is obtained by scribing?
   a. MR positive
   b. MR Negative
   c. RR Negative
   d. RR Postive

449. While displacing, which of the following feature should be given the most priority?
   a. Hydrographic features
   b. International Boundary
   c. Trigonomeetric points
   d. Railways

450. Cadastral map is an example of:
   a. DIM
   b. DLM
   c. DCM
   d. DTM

451. The space outside the neatline, filled with grid or graticule values in map is called:
   a. Map face
   b. Border
   c. Margin
   d. Frame

452. The combination of yellow and magenta give rise to:
   a. Green
   b. Blue
   c. Red
   d. Cyan

453. The map sheet numbering system of topographical maps of JICA series is …………related.
   a. Graticule
   b. Grid
   c. Arbitrary
   d. Both a and b

454. In contact photography, which original is used?
   a. Opaque
   b. Transparent
   c. Semi-Transparent
   d. All of above

455. The scale factor at the central meridian of the MUTM projection is:
   a. 0.9999
   b. 0.9996
   c. 1
   d. 0.9994

456. While creating classified choropleth map of district wise population density map of Nepal, if equal number of observations are to be obtained in each class, which classification method has to be chosen?
   a. Natural break
   b. Equal Interval
   c. Standard Deviation
   d. Quantile

457. Showing the road line in terms of hierarchy is the use of :
   a. Interval Scale
   b. Ordinal Scale
   c. Ratio Scale
   d. Nominal Scale

458. Size(Visual variable) has which type of strong perception property?
   a. Associative
   b. Selective
   c. Ordered
   d. Quantitative