



MOCK TEST BY ONLINE ACADEMY - NET

NET – MATHEMATICS SECTION

1. Which one of the following is the real part of the complex number: $6(2-3i)$?

(NET)

- A. 2
- B. 12
- C. 3
- D. 6

2. Sum the series $0.2 + 0.02 + 0.002 + \dots$ up to infinite terms is?

(NET 1 2015)

- A. $\frac{1}{3}$
- B. $\frac{1}{6}$
- C. $\frac{2}{9}$
- D. $\frac{3}{12}$

3. If a dice is rolled thrice, then the probability that sum of dots is 5 is?

(NET 2014)

- A. $\frac{4}{36}$
- B. $\frac{16}{216}$
- C. $\frac{6}{216}$
- D. $\frac{8}{64}$

4. If $e > 1$ the conic is called

(NET 1 - 2016)

- A. Circle
- B. Parabola
- C. Ellipse
- D. Hyperbola

5. z is real if:

(NET 2014)

- A. $\overline{(\bar{z})} = \bar{z}$
- B. $\overline{(\bar{z})} = z$
- C. $(\bar{z})^2 = z^2$
- D. None of these

6. The roots of the equation $v^2 - 3v - 5 = 0$ are:

(NET 2014)

- A. Real, irrational & equal
- B. Imaginary, unequal
- C. Rational unequal
- A. None of these

7. A groupoid is denoted by

(NET-1 2016)

- A. S
- B. G
- C. $(S, *)$
- D. $(G, *)$

8. For any square matrix if $A = A^t$ then the matrix is called:

(NET-3 2015)

- A. Scalar
- B. Skew symmetric
- C. Symmetric
- D. Hermitian

9. $2, 2, 2, 2, 2, 2$ is an arithmetic sequence with common difference?

(NET-2013)

- A. 0
- B. 2
- C. 4
- D. It is not Arithmetic Progression

10. Sum the series $0.2 + 0.02 + 0.002 + \dots$ up to infinite terms is?

(NET-2 2015)

- A. $1/3$
- B. $1/6$
- C. $2/9$
- D. $3/12$

11. Which may not be “r” for Geometric series?

(NET)

- A. 1
- B. 2
- C. $1/2$
- D. 0.2

12. $1, 1/3, 1/5, 1/7, \dots$ is ?

(NET-3 2015)

- A. Geometric
- B. Arithmetic
- C. Harmonic
- D. None of these

13. $1, 1/3, 1/5, 1/7, \dots$ is a/an _____ sequence.

(NET - 1 2014)

- A. Fibonnaci
- B. Harmonic (Correct)
- C. Geometric
- D. Arithmetic

14. A circle with area 60cm^2 has an arc 8cm long, the angle subtended at the centre is

NET-2(26-JUNE-2013)

- A. $1.83r$
- B. $2.1r$
- C. $1.05r$
- D. $1.25r$

15. What is the angle of elevation of sun at 12:00 pm

NET-1(4-JAN-2015)

- A. 90
- B. 0
- C. undefined/ infinity
- D. none

16. Eccentricity of Earth..??
NET-3 (1-JUL-2014) or (NET -1 2016)
A. $e > 0$
B. $e = 0$
C. $e < 0$
D. None
17. A dice is rolled, what is the probability of getting 1 and 6?
(NET-2015)
A. $1/6$
B. $2/36$
C. $1/36$
D. $3/6$
18. The probability of picking rotten apples in a box is $1/100$. If there are 6 boxes containing 1200 apples, then how many rotten apples would be picked?
(NET- 1 2015)
A. 12
B. 45
C. 60
D. 72
19. Two dices are thrown, what is the probability that sum of dots shown on the dice is 5?
(NET-3)
A. $2/36$
B. $3/36$
C. $4/36$
D. $5/36$
20. If a dice is rolled thrice, then the probability that sum of dots is 5 is?
(NET 2014)
A. $4/36$
B. $16/216$
C. $6/216$
D. $8/64$
21. What is the formula for $\tan \theta$?
(NET 2013)
A. $\sin \theta / \cos \theta$
B. $1 / \cot \theta$
C. $\tan(180 + \theta)$

D. All of these

22. Evaluate: $\cos x * \sin x * \tan x * \cot x * \csc x$
(NET 2013)

- A. $\cos x$
- B. $1 / \sec x$
- C. $\sin x$
- D. both a and b

23. What is the domain of the inverse cosecant function?
(NET 2013)

- A. $[-1,1]$
- B. \mathbb{R}
- C. $\mathbb{R} - (-1,1)$
- D. $(-1,1)$

24. Period of \cot is?
(NET 2013)

- A. π
- B. 2π
- C. $\pi/2$
- D. none of these

25. Which is the same as $\sin(-a)$?
(NET 2013)

- A. $-\sin(a)$
- B. $\sin(a)$
- C. $-\tan(a)/\sec(a)$
- D. Both a and c

26. Which one of the following pairs has the same period?
(NET 2013)

- A. Tangent function and cotangent function
- B. Sine function and tangent function
- C. Cosine function and cotangent function
- D. Cosecant function and tangent function

27. How many radians are there in a degree?
(NET - 3 2015)

- A. 0.07145
- B. 0.06250
- C. 0.06145

D. 0.07135

28. How many 4 digit numbers less than 4000 can be formed from the digits 1, 2, 3, 4, 5. Repetition is not allowed.

(NET)

- A. 120
- B. 96
- C. 72
- D. 48

29. $nP_4 / nC_3 = 30$, then $n = ?$

(NET-1)

- A. 1
- B. 3
- C. 4
- D. 8

30. If $\sin(x) = 1/2$ where x is in 1st quadrant, find the values of $\tan(2x)$

(NET 2012)

- A. 1
- B. -1
- C. 1.732
- D. 0.577

31. Magnitude of vector is

(NET- 3 2015)

- A. 1
- B. -1
- C. 0
- D. All of them

32. What is the formula of $\cos 3\alpha$?

(NET 2013)

- A. $\cos 2\alpha \cdot \cos \alpha$
- B. $4[\cos^3(\alpha)] - 3\cos \alpha$
- C. $(1 + \cos \alpha) / \sin \alpha$
- D. Both a and b

33. Quadrilateral having opposite angles congruent is

NET-3(6-JULY-2014)

- A. square
- B. triangle
- C. parallelogram
- D. rectangle

34. If sequence is 2 6 10..... then 30th term is

(NET-1 2014)

- A. 118
- B. 32
- C. 122
- D. 128

35. The distance of (3,0) from $3x-4y+6=0$ is

NET-3 (6-July -2014)

- A. 1
- B. 2
- C. 3
- D. 4

36. Function and it's inverse reflect at?

NET-1(22-DEC-2013)

- A. $X=y$
- B. $y=X$
- C. X axis
- D. y axis

37. Common ratio in GP cant be

NET(18-JUNE-2011)

- A. 1
- B. -1
- C. 0
- D. all of these

38. $\tan(180+A)\cos(90-A)+\cos(180-A)$

NET-1(4-JAN-2015)

- A. $1/\sec A$
- B. $1/\cos A$
- C. $\tan A$
- D. $\sin A - \cos$

39. Find the sum: $1+3+5+\dots+(2n+1)$

(NET-2015)

- A. n^2 (Correct)
- B. $\ln e^2$
- C. 2^n
- D. n^e

40. If $A=\{a,b,c\}$ then the number of possible subsets is:

(NET-2014)

- A. 3
- B. 8 (Correct)
- C. 6
- D. None of these

41. Calculate exact value of repeating decimal 0.4545.

(NET)

- A. $5/11$
- B. $50/11$
- C. $0.5/11$
- D. None of these

42. If $nP_3 = 720$ then what is the value of n ?

(NET)

- A. 9
- B. 10
- C. 11
- D. 12

43. What is the cosine inverse of $\cos(0.5)$?

(NET 2013)

- A. $1/6$
- B. $1/2$
- C. $1/4$
- D. $1/3$

44. Value of $\sin^{-1}(-1)$ is.?

(NET-1 2015)

- A. 0 degree
- B. 90 degree
- C. -90 degree

D. -1 is not in the domain of sin inverse

45. If U, V, W are three vectors, Then $(U \times V) \cdot W$ represents area of

(NET-2015)

- A. Triangle
- B. Cube
- C. Cylinder
- D. Parallelepiped

46. Two dice are rolled, the probability that the sum of dots is an odd number is?

(NET-1 2016)

- A. $\frac{1}{2}$
- B. $\frac{1}{3}$
- C. greater than 1 or less than 0
- D. None

47. Product of two imaginary numbers is

(NET-2)

- A. Complex Number
- B. Real number
- C. Imaginary number
- D. None of these

48. For an A.P if $S_n = q$, $a_n = p$ and total number of terms in series is n , then a_1 equals?

(NET-2)

- A. $a_1 = 2q/n - p$
- B. $a_1 = 2q/n$
- C. $a_1 = q/n + p$
- D. $a_1 = 2qn - 2p$

49. A GP has a common ratio of 0.45, and its sum to infinity is 100. What is the first term of the series?

(NET-2015)

- A. 55
- B. 110
- C. 450
- D. 24

50. Probability of a diamond card in a 52 deck cards is?

(NET-2014-2015)

- A. $1/13$
- B. $4/13$
- C. $13/52$
- D. $4/52$

51. The product of first n natural numbers is ?

(NET-2015)

- A. $n!$
- B. $(n+1)!$
- C. $(n-1)!$
- D. None of these

52. The value of $\sin 13 \cos 77 + \cos 13 \sin 77 = ?$

(NET 2012)

- A. 0
- B. 1
- C. $\cos 26$
- D. $\sin 26$

53. If two lines are anti-parallel then

(NET-2014)

- A. Slopes are equal
- B. Slopes are opposite
- C. Product of slopes are -1
- D. Both A & B

54. Product of Cube root unity is

(NET)

- A. 1
- B. 0
- C. -1
- D. 2

55. If one cut is parallel we get which conic section

(NET – 2013)

- A. Circle

- B. Parabola
- C. Hyperbola
- D. Ellipse

56. $\frac{d}{dx} \sin 2x$

(NET -2 2013)

- A. $-\cos 2x$
- B. $\cos 2x$
- C. $2\sin 2x$
- D. $2\cos 2x$

57. The sides of a square equilateral triangle is 5 What is the ratio of the area of the square to the area of triangle

(NET - 2)

- A. $\frac{8}{\sqrt{3}}$
- B. $\frac{8\sqrt{3}}{5}$
- C. $4\sqrt{3}$
- D. $\frac{\sqrt{3}}{8}$

58. What kind of discontinuity is removable in graph of non-linear functions involving second order derivative

(NET-3 2015)

- A. Jump
- B. Asymptotic
- C. Point
- D. Multipoint

59. 2,2,2,2,2 is an arithmetic sequence with common difference

(NET - 2013)

- A. 0
- B. 2
- C. 4
- D. Not an arithmetic sequence

60. $\cos^{-1}(-1/2)$

(NET)

- A. 120 degree
- B. 180 degree

- C. 90 degree
- D. 0 degree

61. Calculate exact value repeating decimal 0.4545...

(NET - 2 3014)

- A. $\frac{5}{11}$
- B. $\frac{50}{11}$
- C. $\frac{0.5}{11}$
- D. None

62. 1 Degree is equal to

(NET- 3 2015 or NET- 2014)

- A. 0.7145
- B. 0.0625
- C. 0.0345
- D. 0.7154

63. If dice is rolled two times then what is the probability of the numbers whose sum is 8

(NET-2)

- A. $\frac{2}{36}$
- B. $\frac{2}{4}$
- C. $\frac{4}{36}$
- D. $\frac{5}{36}$

64. domain of $\cos x$ inverse (x)

(NET-2 2014)

- A. 2
- B. 1
- C. X
- D. None

65. If two coordinates of rectangle are present in first quadrant than which coordinate are not possible

(NET-1 2016)

- A. +2 , +8
- B. +2 , -8
- C. +8 , -2
- D. -2 , -8

66. $3-x = x-3$ then x is equal to

(NET-1)

- A. x is greater than 3
- B. x is less than 3
- C. x is greater than or equal to 3
- D. x is less than or equal to 3

67. The derivative of $f(x)$ w.r.t x is

(NET 2015)

- A. Rate change of $f(x)$ w.r.t x
- B. Relevance rate of increase in $f(x)$ w.r.t x
- C. Relevance rate decrease on $f(x)$ w.r.t x
- D. None

68. If we have $f(x,y) = c$ then we solve by

(NET 2014)

- A. Implicit differentiation
- B. Product rule
- C. Chain rule
- D. Cannot be solved

69. A hyperbola has

(NET-2013)

- A. One focus two directrices
- B. Two foci two directrices
- C. Two focus one directrices
- D. None

70. $\sin^{-1} \frac{3}{5}$

(NET)

- A. $\cos^{-1} \frac{4}{5}$
- B. $\sec^{-1} \frac{4}{5}$
- C. $\operatorname{cosec}^{-1} \frac{5}{3}$
- D. All

71. Differentiate $\ln(e)$ with respect to ' x '.

(NET-2014)

- A. $1/e$
- B. 0
- C. $1/x$
- D. e

72 Evaluate: $\cos x * \sin x * \tan x * \cot x * \csc x$

(NET-2015)

- A. $\cos x$
- B. $1/\sec x$
- C. Both A and B
- D. $\sin x$

73 Evaluate: $w^{-23} + w^{-28}$

(NET-2012)

- A. -1
- B. 1
- C. w
- D. w^2

74 The derivate of $f(x)$ with respect to 'x' is defined as:

(NET-2015)

- A. The rate of change in $f(x)$ with respect to 'x'
- B. The increase in the relevance rate of $f(x)$ with respect to 'x'
- C. The decrease in the relevance rate of $f(x)$ with respect to 'x'
- D. None of these

75 Which one of the following is the additive inverse for $2 + \sqrt{3}$?

(NET-2013)

- A. $\sqrt{3}$
- B. $-2 + \sqrt{3}$
- C. $-2 - \sqrt{3}$
- D. $2 + \sqrt{3}$

76 What are the angles of an equilateral triangle?

(NET-2013)

- A. 45 degrees, 45 degrees and 90 degrees
- B. 45 degrees, 90 degrees and 45 degrees
- C. 120 degrees, 30 degrees and 30 degrees

D. 60 degrees, 60 degrees and 60 degrees

77 If a square has a side of 2 units, then what is the length of its diagonal?

(NET-2013)

- A. $2\sqrt{2}$
- B. 8
- C. 4
- D. 16

78 In an ellipse, what is the name for the line through the focus and perpendicular to the major axis ending at the ellipse?

(NET-2014)

- A. Focal chord
- B. Minor axis
- C. Latus rectum
- D. Vertical asymptote

79 The length of all the sides of a square and an equilateral triangle is 5 units. What is the ratio of the area of the square to the area of the triangle?

(NET-2012)

- A. $8/\sqrt{3}$
- B. $[8\sqrt{3}]/5$
- C. $4/\sqrt{3}$
- D. $\sqrt{3}/8$

80 Two figures having the same shape but different sizes are called:

(NET)

- A. Congruent figures
- B. Similar figures
- C. Equal figures
- D. All of these

NET – PHYSICS SECTION

81. If three resistances R_1 , R_2 and R_3 are connected in series such that $R_1 > R_2 > R_3$ then their equivalent resistance will be:
(NET 2013)
- A. Lesser than R_1
 - B. More than R_1
 - C. Lesser than R_3
 - D. Between R_1 and R_3
82. If the distance between two charges is halved, the Coulombs force between the charges will be?
(NET 2013)
- A. $1/4$ times
 - B. 4 times
 - C. Half
 - D. Twice
83. Formula of capacitance is?
(NET 2013)
- A. C/V
 - B. CV
 - C. Q/V
 - D. QV
84. If capacitor is connected with battery and is fully charged then _____ ?
(NET 2013)
- A. Current will flow
 - B. Current will not flow
 - C. Depends on the dielectric
 - D. May or may not flow
85. If the angle b/w electric field and vector area A is $\pi/3$ then electric flux will be?
(NET 2013)
- A. $0.866 EA$
 - B. $0.5 EA$
 - C. $0.707 EA$
 - D. $EA/3$

86. When two suspended objects are seen to attract each other electrically:
(NET 2013)
- A. they are both uncharged
 - B. they are both charged
 - C. either (a) or (b) is true
 - D. neither (a) nor (b) is true
87. Q^2/C has the units of?
(NET 2013)
- A. Charge
 - B. Capacitance
 - C. Voltage
 - D. Energy
88. $0.37q$ charge is stored on the capacitor, what will be the current at this point?
(NET 2012)
- A. 63%
 - B. 37%
 - C. 83%
 - D. None of these
89. Unit of electric intensity is?
(NET 2013)
- A. V/m
 - B. N/m
 - C. V/C
 - D. None of these
90. Q^2/C has the units of?
(NET 2013)
- A. Charge
 - B. Capacitance
 - C. Voltage
 - D. Energy
91. Will current pass through a capacitor attached to a DC source?
(NET 2013)
- A. Yes
 - B. No
 - C. First passes then stops
 - D. None of these
92. In which medium the force of repulsion between two charges would be minimum?
(NET 2013)

- A. Oil
- B. Air
- C. Vacuum
- D. Distilled water

93. If the distance between two charges is halved, the Coulombs force between the charges will be?
(NET 2013)

- A. 1/4 times
- B. 4 times
- C. Half
- D. Twice

94. Formula of capacitance is?
(NET 2013)

- A. C/V
- B. CV
- C. Q/V
- D. QV

95. If capacitor is connected with battery and is fully charged then _____ ?
(NET 2013)

- A. Current will flow
- B. Current will not flow
- C. Depends on the dielectric
- D. May or may not flow

96. If the angle b/w electric field and vector area A is $\pi/3$ then electric flux will be?
(NET 2013)

- A. $0.866 EA$
- B. $0.5 EA$
- C. $0.707 EA$
- D. $EA/3$

97. When two suspended objects are seem to attract each other electrically:
(NET 2013)

- A. they are both uncharged
- B. they are both charged
- C. either (a) or (b) is true
- D. neither (a) nor (b) is true

98. An electron is placed between two charged plates the upper plate is positively charged and the lower plate is negative charged. The electron will?
(NET 2012)

- A. deflect downwards
- B. deflect upwards
- C. go straight
- D. none of these

99. Two objects X and Y have similar charges q , they exert a force F on each other, if Z with charge $-2q$ touches X and then removed then what is the force between X and Y?

(NET 2013)

- A. F
- B. $2F$
- C. $F/2$
- D. 0

100. Which of the following can't be used as a dielectric in a capacitor?

(NET 2011)

- A. Air
- B. Wax
- C. Iron
- D. all of the above

101. If 60 capacitors each of Capacitance C are connected in series and then in parallel what is the ratio of C_s/C_p ?

(NET 2012) 1/60

- A. 3600
- B. $1/3600$
- C. 250
- D. $1/60$

102. Unit of capacitance is?

(NET 2013)

- A. C/V
- B. V/C
- C. J/C
- D. None of these

103. Two conducting objects X and Y having a charge Q on them exert force F on each other. Now third conductor Z having charge $-Q$ touches with X and is removed, the new force between X and Y is?

(NET 2012)

- A. F
- B. $F/2$
- C. $2F$
- D. None of these

104. Ohms law states that I is directly proportional to?

(NET 2012)

- A. Resistance of conductor
- B. Potential difference across conductor
- C. Power of conductor
- D. Conductance of Conductor

105. Which will offer more resistance when connected across same battery, 500 watt or 40 watt?
(NET 2012)

- A. 500 w
- B. 40 w
- C. Both will offer same resistance
- D. None of these

106. How much heat a 100 watt bulb will generate in 1 hour?
(NET 2012)

- A. 60 J
- B. 3600 J
- C. 360000 J
- D. 0J

107. If three resistances R_1 , R_2 and R_3 are connected in series such that $R_1 > R_2 > R_3$ then their equivalent resistance will be:
(NET 2013)

- A. Lesser than R_1
- B. More than R_1
- C. Lesser than R_3
- D. Between R_1 and R_3

108. If y component of a force acting in y direction is 6N the x component will be?
(NET 2012)

- A. $6\sqrt{2}$
- B. 12N
- C. 0N
- D. None of these

109. If a particle of mass m has momentum p , then its KE will be

NET-2(18 JUNE-2013)

- A. $2p$
- B. $2m/p^2$
- C. p^2/m
- D. $2/2m$

110. If a body A is charged with charge q , and then touched with body B, after which it is touched with body C. What is the charge on C?

NET-1(28-dec-2014)

- A. q
- B. $q/2$
- C. $q/3$
- D. $q/4$

111. A coil is placed near a MAGNET... Emf will be induced in it when

NET-1 (21-DEC-2014)

- A. Area of coil is changed.
- B. Coil is rotated
- C. Magnet which was placed at a distance is moved closer to it .
- D. None

112. Newton derived formula speed of light on the basis of

NET-1(29-JUNE-2014)

- A. Isothermal Process
- B. Adiabatic Process
- C. Isobaric Process
- D. Isochoric Process

113. If 2 bodies of different masses, initially at rest acted upon by same force for same time, then bodies will acquire same.

NET(14-JULY-2012)

- A. Vel
- B. Acceleration
- C. Momentum
- D. KE

114. If m means mass of gases ejected per sec from a rocket and v show the change in velocity then mv is named as?

NET1(DEC-2013)

- A. work
- B. impulse
- C. energy
- D. force

115. Name the scientist who won noble prize for quantum physics and black body radiation ?

(NET 2012)

- A. Newton
- B. Plank
- C. Maxwell
- D. Einstein

116. If rate of change of momentum is 50Ns. What is impulse?

(NET 2012)

- A. 100
- B. 50
- C. Both
- D. None

117. what is absolute uncertainty in length of 10m measured by scale of precision of 0.1 m

(NET 2013)

- A. 0.1
- B. 10
- C. 100
- D. 1.5

118. What would be Compton Wave shift if X-rays are scattered at an angle of 90 degree?

(NET 2013)

- A. Equal to Compton wavelength
- B. Zero
- C. Maximum
- D. Minimum

119. If temperature in Kelvin scale is reduced to half, what would be an effect on the energy of radiations?

(NET 2012) or (2014)

- A. Becomes Double
- B. Not Effected
- C. reduces to half
- D. reduces to 1/8

120. Time stops in which of following places?

(NET 2013) or (2014)

- A. Space
- B. Space shuttle
- C. Satellite
- D. Both b & c

121. If current is increased 100 times what would be the effect on energy stored in inductor?

(NET 2012) or (2014)

- A. Increases by 1000 times
- B. Decreases By 1000 times
- C. Not effected
- D. None

122. 1.an electron is placed in a box about a size of an atom that is about $1.0 \cdot 10^{-10}$ m. what is the velocity of the electron?

(NET 2012) or (2014)

- A. $1.15 \cdot 10^{10} \text{ m/s}$
- B. $7.29 \cdot 10^6 \text{ m/s}$
- C. $2.8 \cdot 10^8 \text{ m/s}$
- D. $8.9 \cdot 10^5 \text{ m/s}$

123. In pure capacitive circuit is current?

(NET 2012)

- A. leading the voltage
- B. lagging the voltage
- C. in phase with the voltage
- D. both a and b

124. Two parallel vectors of same magnitude are.

(NET 2013)

- A. not equal
- B. approximately equal
- C. equal
- D. both b & c

125. when the elevator moves downward with an acceleration 'a' the apparent value of 'g' inside the elevator changes

(NET 2013)

- A. $g+a$
- B. $g-a$
- C. $-2 \cdot a$
- D. None

126. Friction is a force

(NET 2014)

- A. Self-adjusting
- B. Pseudo
- C. Fake
- D. None

127. if a pendulum has time period t and length l than after doubling time period length become?

(NET 2013)

- A. Half
- B. Double
- C. 1.4
- D. Quadraped

128. two objects X and Y have similar charges q , they experience a force F on eachother , if X with charge $2q$ touches X and then removed then wat is the force between X and Y

(NET 2013)

- A. F
- B. $f/2$
- C. $2f$
- D. 0

129. X-RAYS emit photoelectrons from

(NET 2014)

- A. Stone
- B. Water
- C. Wood
- D. Glass

130. In which medium the force of repulsion between two charges would be minimum

(NET 2014)

- A. Oil
- B. Distilled Water
- C. Vacuum
- D. Air

131. Child Paradox is a consequence of what?

(NET 2014)

- A. Length Contraction
- B. Time Dialation
- C. Mass Variation
- D. Compton Effect

132. If a body A is charged with charge q , and then touched with body B, after which it is touched with body C. What is the charge on C?

(NET 2015)

- A. Q
- B. $q/2$
- C. $q/3$
- D. $q/4$

133. Which series is emitted when electron jumps from a higher orbit to fifth orbit?

(NET 2015)

- A. Lyman
- B. Balmer
- C. Pfund
- D. Brackett

134. Sky appears blue due to the?

(NET 2015)

- A. Light interference
- B. Light diffraction
- C. Light scattering
- D. Light polarization

135. Kinetic energy of photoelectrons depends on

(NET 2015)

- A. intensity of light
- B. frequency of light
- C. both
- D. none

136. in a parallel plate capacitor if 'd' is the separation between plates and 'A' is the area, what will be capacitance if separation is doubled and area is halved?

(NET 2015)

- A. $2C$
- B. $C/2$
- C. $C/4$
- D. $4C$

137. Is number of rulings(lines) are halved what will be effect on grating element of spectrometer?

(NET 2015)

- A. Half
- B. Doubled
- C. No effect
- D. None

138. What effect become on time period of simple pendulum when its length become doubled

(NET 2013)

- A. Reduced to half
- B. Increase two time
- C. 1.4 time reduced
- D. increases four time

139. What will be the force between two charges if the distance between them is halved?

(NET 2015)

- A. Half
- B. Increase by 2 times
- C. 4 times increase
- D. $1/4$

140. If $w=0.50$ m/s , diameter of circle is half a meter then projection on diameter has time period ?

(NET 2015)

- A. 1sec
- B. 2sec
- C. π sec
- D. None

NET – CHEMISTRY SECTION

141. What is mass spectrometer used for?
(NET 2013)
- A. to measure atomic masses
 - B. to measure atomic number
 - C. both
 - D. none of these
142. 1 amu is equal to?
(NET 2013)
- A. 1.66×10^{-27} kg
 - B. 1.602×10^{-27} kg
 - C. 1.66×10^{-31} kg
 - D. None of these
143. In mass spectrometry, ionization occurs on:
(NET 2013)
- A. solid form
 - B. liquid form
 - C. vapor form
 - D. no ionization
144. Chemical properties of an atom depend upon number of?
(NET 2013)
- A. electrons
 - B. neutrons
 - C. protons
 - D. nucleons
145. Physical and chemical properties of an element depend upon:
(NET 2013)
- A. only atomic mass
 - B. only atomic number
 - C. atomic mass and atomic number respectively
 - D. atomic number and atomic mass respectively

146. the velocity of electron in outer most shell

(NET 2015)

- A. maximum
- B. minimum
- C. intermediate
- D. none

147. which of the following has highest boiling point?

(NET 2015)

- A. He
- B. Ne
- C. Kr
- D. Ar

148. Which one of the following has the higher bond forces among its molecules?

(NET 2014)

- A. Water
- B. Nitrogen
- C. Neon

149. Hydrogen Fluoride Which of the following does not have an incomplete d orbital?

(NET 2014)

- A. Ag
- B. Cu
- C. Au
- D. Ti

150. Each carbon in benze is

(NET 2014)

- A. Sp^3 hybrdize
- B. Sp^2 hybirdize
- C. Sp hybridize
- D. None

151. The indicator is a coloured compound?

(NET 2014)

- A. Organic
- B. Inorganic
- C. Acidic
- D. Basic

152. The aromatic compound having the functional group "OH" attached to it is?

(NET 2014)

- A. Carbolic acid

- B. Phenol
- C. Alcohol
- D. None

153. colligative properties depend upon ?

(NET 2014)

- A. Solute
- B. Solvent
- C. Both
- D. None

154. WHICH ONE ARE GASES?

(NET 2012)

- A. Methane
- B. Ethane
- C. Propane
- D. All

155. Which group of elements shows greatest electrical conductivity?

(NET 2014)

- A. alkali metals
- B. alkaline earth metals
- C. halogens
- D. coinage metals

156. we have two half cells connected with a salt bridge (indicates that its a galvanic cell). equation (given). electrons flow from?

(NET 2013)

- A. anode to cathode through external circuit
- B. cathode to anode through external circuit
- C. anode to cathode through salt bridge
- D. cathode to anode through salt bridge

157. transmutation is the decay of:

(NET 2014)

- A. alpha
- B. beta
- C. gamma
- D. All

158. what is correct relation between K_w , K_a , K_b ?

(NET 2013)

- A. $K_w = K_a / K_b$
- B. $K_w = K_a - K_b$
- C. $K_w = K_b - K_a$
- D. $K_w = K_b / K_a$

159. Which of these is not an isotope of Phosphorus?

(NET 2014)

- A. Red Phosphorus
- B. Black Phosphorus
- C. White Phosphorus
- D. Grey Phosphorus

160. Grignard's Reagent on hydrolysis gives

(NET 2014)

- A. Lower hydrocarbon
- B. Higher hydrocarbon
- C. Alcohols
- D. Alkyl halide

161. Which of the following reacts readily with water?

(NET 2015)

- A. Al
- B. Na
- C. Ka
- D. Cu

162. Sulphur with HI acts as a

(NET 2013)

- A. strong oxidizing agent
- B. weak oxidizing agent
- C. strong reducing agent
- D. weak reducing agent

163. Which halogen used for bleaching?

(NET 2014)

- A. Chlorine
- B. Bromine
- C. Iodine
- D. Fluorine

164. Not true about $K_2Cr_2O_7$

(NET 2013)

- A. blue crystalline solid
- B. not soluble in water
- C. strong oxidizing agent
- D. used in formation of lead chromate

165. which one is NOT the type of boric acid?

(NET 2013)

- A. ortho boric acid
- B. nano boric acid
- C. meta boric acid
- D. pyro boric acid

166. What is the least no. of carbon atoms in amino acid?

(NET 2013)

- A. 1
- B. 2
- C. 3
- D. 4

167. there is double bond in oleic acid between carbon number?

(NET 2013)

- A. 7-8
- B. 8-9
- C. 10-11
- D. 9-10

168. In combustion analysis method CO₂ is absorbed by?

(NET 2013)

- A. Mg(OH)₂
- B. KOH
- C. Mg(ClO₄)₂
- D. None

169. ionization energy depend upon?

(NET 2013)

- A. nuclear charge
- B. shielding effect
- C. atomic radius
- D. All

170. which one of the organic compounds is most reactive ?

(NET 2013)

- A. Alkane
- B. Alkene
- C. Alkyne
- D. None

NET – ENGLISH SECTION

171. AUDACIOUS (*NET 2013*)

- A. Brunt
- B. Pressure
- C. trouble some
- D. lively spirited

172. ELLICIT (*NET 2013*)

- A. Impulsive
- B. Dashing
- C. Key
- D. evolve

173. FLEECE (*NET*)

- A. Excess
- B. Leveled
- C. Steal
- D. bought

174. Choose the correct spelling: (*NET*)

- A. presamble
- B. misible
- C. presible
- D. permissible

175. Choose the correct spelling: (*NET*)

- A. Prejudice
- B. Jeduce
- C. dejuice
- D. diceju

176. TELLER:BANK (*NET -2013*)

- A. artist:MUSEUM
- B. cashier:check
- C. waiter:restaurant
- D. mourner:funeral

177. INNING:BASEBALL (*NET -2014*)

- A. puck:hockey
- B. serve:tennis
- C. outing:hiking
- D. round:boxing

178. DEGREE:TEMPERATURE (*NET*)

- A. ounce:weight
- B. fathom:volume
- C. mass:energy
- D. time:length

179. EINSTEIN:PHYSICS (*NET*)

- A. harvey:biology
- B. bohr:periodic table
- C.)moseley:chemistry
- D. aristotle:greek

180. JACKET:LEATHER (*NET*)

- A. shoes:laces
- B. shirt:cotton
- C. pant:zip
- D. geometry:pen

181. Opposite word of pauper is? (*NET -2015*)

- A. Wealthy
- B. Rich
- C. Poor
- D. None of these

182. Synonym of passé (*NET-2013*)

- A. In
- B. Chic
- C. Function
- D. archaic

183. Choose the correct spellings: (*NET -3 2015*)

- A. Mathimatics
- B. Mathemaitics
- C. Mithamatics
- D. Mathematics

184. Synonym of actuate (**NET**)
- A. Triple
 - B. Motivate
 - C. Discourage
 - D. move
185. Trepidation means? (**NET**)
- A. Doubts
 - B. Quark
 - C. Worries
 - D. apprehension
186. Choose the correct spellings(**NET**)
- A. deciper
 - B. dehcipher
 - C. desipher
 - D. decipher
187. Choose the word closest in meaning to Amass (**NET - 2014**)
- A. Allot
 - B. Gather
 - C. Dispense
 - D. Deiver
188. INSCRUTABLE (**NET**)
- A. Immoral
 - B. Unethical
 - C. Enigmatic
 - D. Unaccountable
189. To the dismay of the student body, class president was ---- berated by the principal (**NET -2013**)
- A. privately
 - B. magnanimously
 - C. inconspicuously
 - D. ignominiousl
190. Which of the following is correct? (**NET -2013**)
- A. Send the letter at my new address
 - B. Send the letter to my new address
 - C. Send the letter from my new address
 - D. Send the letter of my new address

NET – IQ SECTION

191. Pick the odd one out:

(From NET 2013)

- A. March
- B. July
- C. September
- D. October

192. Pick the odd one:

(From NET 2013)

- A. Trunk
- B. Tree
- C. Leaf
- D. Flower

193. Pick out the odd one:

(NET 2013, NET 2014)

- A. Learn
- B. Read
- C. Knowledge
- D. Write

194. What will be the next term in the series?

4, 8, 16, 32, 64 ...

(NET 2013)

- A. 89
- B. 92
- C. 128
- D. 120

195. 6, 9, 18, 21, 63, 66, ...

Next number in the series will be?

(NET 2013)

- A. 132

- B. 264
- C. 112
- D. 198

196. 15 14 13
16 16 12
17 18 ?

(NET 2013)

- A. 11
- B. 17
- C. 19
- D. 23

197. Pick the odd one?

(NET 2013)

- A. Natural gas
- B. Gasoline
- C. Coal
- D. Biogas

198. Pick the odd one out:

(NET 2013, NET 2014)

- A. Brinjal
- B. Potato
- C. Tomato
- D. Cucumber

199. If SHELNXR stands for TEDIOUS, in the same way how would GLAMOUR be coded?

(NET)

- A. FODPNUQ
- B. FOBPNXS
- C. FOBPNXQ
- D. FODPNUS

200. If RTTHHX encodes for purify, then code for blanch will be:

(NET -2015)

- A. DKDSHG
- B. AOCGTY
- C. DKCMEG
- D. EMGCKD

GOOD LUCK FOR TEST

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