B.Sc- 2016-17- Paper Series-A

'Benediction' means
(a) Which is evil/harmful
(b) Blessing given by a priest
(c) Contemptuous talk about sacred things
(d) Ill-mannered

He complains_____ headache.
(a) of (b) off (c) from (d) about

. I do not know _____ he will come or not.
(a) that (b) whether
(c) weather (d) as

4. He is canvassing for his candidate. 'Canvassing' means
(a) coarse cloth (b) occupying by force
(c) working in opposition (d) propagate

5. Make hay_____ the sun shines.
(a) Whence (b) When (c) Where (d) While

6. A pair of scissors_____ necessary for craftwork.
(a) was (b) is (c) are (d) have

7. She has been living here_____ the death of her mother.
(a) until (b) unless (c) for (d) since

8. I hope you will not turn_____ my request.
(a) off (b) up (c) aside (d) down

9. identify the error:I saw the blind man crossed the busy road without any help
(a) saw the blind man (b) crossed the busy road
(c) without any help (d) I saw the

10. 'At one's wit's end' means:
(a) Perplexed (b) Clear up
(c) Explain (d) Enlighten

11. I'm studying medicine. I want to_____ in genetics.
(a) specialization (b) special (c) specialize (d) speciality

12. Antonym for word – ally is-
(a) west (b) enemy (c) bottom (d) wane

13. Choose the correct form of passive among the given options:
We_____ by a loud noise during the night.
(a) woke up (b) are woken up
(c) were woken up (d) were waking up

14. Choose the correct adjective from the given options
I have lost _____ of my wealth.
(a) A bit (b) Some (c) All (d) Much

15. Choose the correct article from the given options.
Himalayas are on _____ North of India.
(a) a (b) an (c) the (d) None

16. I was angry _____ my brother.
(a) to (b) at (c) with (d) from

17. Jamshed will _____ Kamal in the line because he is taller.
(a) proceed (b) forward (c) put (d) precede

18. Have you heard of the book _____?
(a) Who is afraid of Virginia woolf?
(b) Who IS Afraid of Virginia Woolf?
(c) Who is Afraid of Virginia Woolf?
(d) Who is Afraid of Virginia Woolf?

19. I've lost one of my gloves. I _____ is somewhere.
(a) must drop (b) must have dropped
(c) must be dropping
(d) must have been dropping

20. She works six days _____ week.
(a) in (b) for (c) a (d) the

21. I prefer tea _____ coffee.
(a) to (b) than (c) against (d) over

22. I count _____ your advice and cooperation.
(a) upon (b) to (c) for (d) at

23. One who hates mankind is called _____
(a) Egoist (b) Egotist
(c) Introvert (d) Misanthrope

24. Choose the correct verb
It's lovely to wake up in the morning and _____ birds singing.
(a) hear (b) hears
(c) heard (d) hearing

25. She sat _____ me.
(a) besides in (b) beside
(c) one side of (d) at side of

26. The dimension $ML^{-1}T^{-2}$ corresponds to
(a) moment of a force (b) surface tension
(c) modulus of elasticity
(d) coefficient of viscosity

27. The distances travelled by a body falling from rest in the first, second and third seconds are in the ratio
(a) 1 : 2 : 3 (b) 1 : 3 : 5 (c) 1 : 4 : 9 (d) 1 : 3 : 9

28. The velocity of a particle moving along positive x direction is expressed as $v = p\sqrt{x}$, where p is a positive constant. If the particle was at $x = 0$ at time $t=0$, the mean velocity of the particle averaged over the time taken to cover a distance of s m is
(a) $p\sqrt{s/2}$ (b) $\frac{p\sqrt{s}}{2}$ (c) $2p\sqrt{s}$ (d) $\frac{ps}{2}$

29. The linear momentum of a body is increased by 10% What will be the percentage increase in its kinetic energy?
(a) 10% (b) 20%(c) 21%(d) 30%

30. Water falls from a height at 60 m at the rate of 15 kg/s to operate a turbine. The losses due to frictional forces are 10% of energy.How much power is generated by the turbine? ($g = 10\ m/s^2$)
(a) 8.1 kw (b) 10.2 kw (c) 12.3 kw (d) 9.0 kw

31. Two discs of moments of inertia I_1 and I_2 about their respective axes, rotating with angular frequencies ω_1 and ω_2 respectively, are brought into contact face to face with their axes of rotation convergent. The angular frequency of the composite disc will be
(a) $\frac{I_1\omega_1 + I_2\omega_2}{I_1 + I_2}$ (b) $\frac{I_1\omega_2 + I_2\omega_1}{I_1 + I_2}$
(c) $\frac{I_1\omega_1 + I_2\omega_2}{I_1 - I_2}$ (d) $\frac{I_1\omega_2 + I_2\omega_1}{I_1 - I_2}$

32. A satellite of mass m revolves around the earth of radius R at a height x from its surface. If g is the acceleration due to gravity on the surface of the earth, the orbital velocity of the satellite is
(a) gx (b) $\frac{gR}{R-x}$
(c) $\frac{gR^2}{R+x}$ (d) $\left[\frac{gR^2}{R+x}\right]^{1/2}$

33. n identical spherical drops of a liquid of surface tension T, each of radius r coalesces to form a single drop. The surface energy
(a) decreases by $4\pi r^2 (n - n^{1/3})T$
(b) increases by $4\pi r^2 (n - n^{1/3})T$
(c) decreases by $4\pi r^2 (n - n^{2/3})T$
(d) increases by $4\pi r^2 (n - n^{2/3})T$

34. Two metal rods of different materials but of the same length have their ends kept at the same temperature T_1 and T_2 with $T_2 > T_1$. If A_1 and A_2 are their cross-sectional areas and K_1 and K_2 their thermal conductivities the rate of flow of heat in the two rods will be the same it
(a) $\frac{A_1}{A_2} = \frac{K_1 T_1}{K_2 T_2}$ (b) $\frac{A_1}{A_2} = \frac{K_2 T_2}{K_1 T_1}$ (c) $\frac{A_1}{A_2} = \frac{K_1 T_2}{K_2 T_1}$ (d) $\frac{A_1}{A_2} = \frac{K_2}{K_1}$

35. A carnot's engine is working as a refrigerator between 260 k and 200 k. It receives 500 cal. heat from lower heat reservoir. Work done per cycle to operate the refrigerator will be
(a) 322 J (b) 422 J (c) 522 J (d) 622 J

36. During an experiment. An ideal gas is found to obey an additional law VP^2 = constant. The gas is initially at temperature T and volume V, when it expands to volume 2V, the resulting temperature is
(a) $\frac{T}{2}$ (b) 2T (c) $\sqrt{2}T$ (d) $\frac{T}{\sqrt{2}}$

37. If the oxygen (O_2) has rms velocity of C m/s, then the rms velocity of the hydrogen (H_2) will be
(a) $4\sqrt{2}$C m/s (b) 16C m/s (c) 4C m/s (d) 8C m/s

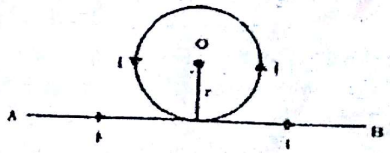
38. Two metallic spheres of radii 1cm and 2 cm are given charge of 2×10^{-4} C and 4×10^{-4}C,respectively. If these are connected by a conducting wire, the final charge on the bigger sphere is:
(a) 4×10^{-4}C (b) 5×10^{-4}C (c) 3×10^{-4}C (d) 6×10^{-4}C

39. A resistance of 2Ω is connected across one gap of a meter-bridge (the length of the wire is 100 cm) and an unknown resistance, greater than 2 Ω is connected across the other gap. When these resistances are interchanged, the balance point shifts by 20 cm. Neglecting any correction, the unknown resistance is:
(a) 3 Ω (b) 4 Ω (c) 5 Ω (d) 6 Ω

40. The potential difference applied to an x-ray tube is 5K V and the current through it is 3.2 mA.The number of electrons striking the target per second is (Electronic charge = 1.6×10^{-19}C)
(a) 2×10^{16} (b) 5×10^{16} (c) 2×10^{19} (d) 1×10^{17}

41. A 1 KW electric heater and a 100 W filament bulb, both are connected with 230 V main supply.Which one of the following statements is correct?
(a) electric heater has more resistance than bulb
(b) electric heater has less resistance than bulb
(c) both have equal resistances
(d) resistances depend on the number of terms of heater coil and filament bulb coil respectively

42. A part of a long wire carrying current I is bent into a circle of radius r as shown in figure.



The net magnetic field at the centre O of circular loops is
(a) $\frac{\mu_0 I}{4r}$ (b) $\frac{\mu_0 I}{2r}$
(c) $\frac{\mu_0 I}{2\pi r}(\pi + 1)$ (d) $\frac{\mu_0 I}{2\pi r}(\pi - 1)$

43. In series L-C-R resonance circuit, if f_1 and f_2 are half power point frequencies, then their separation is equal to:
(a) $2\pi\frac{L}{R}$ (b) $\frac{R}{2\pi L}$ (c) $2\pi\frac{R}{L}$ (d) $\frac{L}{2\pi R}$

44. An electromagenetic wave of frequency v = 3.0 MHz passes from vacuum to dielectric medium with relative permittivity 4.0. Then, which of the following statements is true:
(a) wavelength and frequency both become half
(b) wavelength is doubled and frequency remains unchanged
(c) wavelength and frequency both remain unchanged
(d) wavelength is halved and frequency remains unchanged

45. The ratio of Rayleigh scattering intensities at wavelengths 400 nm and 700 nm for equal intensity of the incident light is
(a) 0.1 (b) 3.8 (c) 9.4 (d) 18.8

46. When an object is placed 9 cm infront of a convex lens its image is three times far away from the lens as if the object were at infinity. The focal length of the lens is
(a) 4 cm (b) 6 cm (c) 9 cm (d) 12 cm

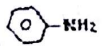
47. In a certain experiment on photoelectric effect, the stopping potential is observed to be 1.19 Volt. The maximum kinetic energy of photoelectrons ejected is
(a) 1.19 eV (b) 2.38 eV
(c) 1.9×10^{-13}J (d) 1.9×10^{-16}J

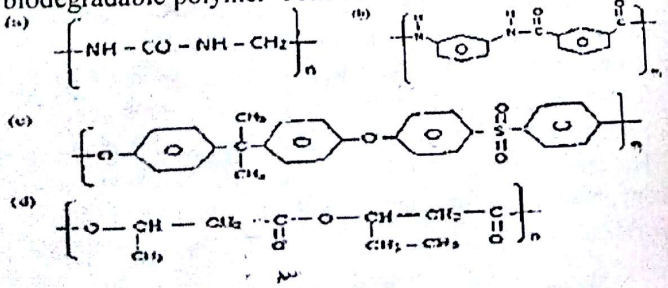
48. The half life of a radioactive substance is x times its mean life. The value of x is
(a) 1.443 (b) 0.693 (c) 1.386 (d) 0.301

49. For a 12.0 V zener diode, a 10 mA change in zener current produces a 0.1 V change in zener voltage.The zener resistance for this current is:
(a) 100 Ω (b) 10 Ω (c) 1 Ω (d) 0.1 Ω

50. A TV tower has a height of 100 m. How much population is covered by the TV broadcast if the average population density around the tower is 1000 km^{-2}? (Radius of the earth= 6.37×10^6 m)
(a) 4 lakh (b) 4 billion (c) 40,000 (d) 40 lakh

51. The reaction $2R'-\underset{\underset{O}{\|}}{C}-Cl + R_2Cd \rightarrow$ Would give
(a) a ketone (b) an alkane (c) an alcohol (d) an alkyl halide

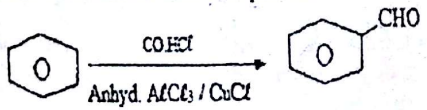
52. which of the following does not react with benzene sulphonyl chloride ($C_6H_5SO_2Cl$)
(a) $C_2H_5NH_2$ (b) $(C_2H_5)_2NH_2$ (c) $(C_2H_5)_3N$(d) 

53. Which of the following chemical structure depiets biodegradable polymer- PHBV?


54. Which forms of glucose and fructose form sucrose:
(a) α-glucose and β-fructose
(b) α-glucose and α-fructose
(c) β-glucose and α-fructose
(d) β-glucose and β-fructose

55. Which of the following alkyl halide is hydrolysed by SN^2 mechanism?
(a) $C_6H_5CH_2Br$ (b) CH_3Br
(c) $CH_2=CHCH_2Br$ (d) $(CH_3)_2CBr$

56. Hydrolysis of protein yield
(a) α-Amino acid (b) β-Amino acid
(c) γ-Amino acid (d) δ- Amino acid

57. The given reaction is an example of:


(a) Gattermann reaction (b) Gabriel synthesis
(c) Gattermann-Koch synthesis (d) Etard reaction

58. The base unit which is not present in DNA is
(a) adenine (b) guanine
(c) uracil (d) cytosine

59. Nucleotides are joined together by_____between 5 and 3' carbon atoms of pentose sugar.
(a) Glycosidic linkage (b) Peptide linkage
(c) Ether linkage (d) Phosphodiester linkage

60. Which of the following has the prevoskite structure
(a) $FeTiO_3$ (b) $CaTiO_3$ (c) $ZnTiO_3$ (d) $MgAl_2O_4$

61. Oxygen is more ionic in its compounds than other members of group VI because it is:
(a) More ionic due to high electronegativity and forms dinegative ion
(b) Oxygen is a gas and others are solid
(c) Oxygen dissolves in water
(d) Oxygen cannot expand beyond octet

62. Which of the following molecules will have zero dipole moment
(a) NO_2 (b) SO_2 (c) ClO_2 (d) CO_2

63. Which of the following molecular orbital will be stable if Na and Nb represent number of electrons in antibonding and bonding orbitals respectively
(a) Nb > Na (b) Nb < Na
(c) Nb = Na (d) Nb = $\frac{1}{2}$ (Na – Nb)

64. Which of the following has pπ – dπ bonding?
(a) NO_3^- (b) SO_3^{2-} (c) BO_3^{2-} (d) CO_3^{2-}

65. Which of the following statement is true?
(a) The NO_2 molecule is angular with a bond angle of 134° and bond length of 120 pm
(b) The NO_2 molecule is linear with N-O bond length of 120 pm
(c) The NO_2 molecule is diamagnetic with N-O bond length of 120 pm
(d) The NO_2 molecule does not have any unpaired electron

66. Which of the following is an acidic oxide
(a) BaO (b) SnO_2 (c) CrO_3 (d) CO

67. Which of the following inter halogen compound forms dimer
(a) ICl_3 (b) IF_5 (c) ClF (d) IBr

68. Slaked line reacts with Cl_2 to form
(a) Ca $(OCl)_2$ (b) Ca (OCl)Cl (c) Ca $(ClO_3)_2$ (d) $CaCl_2$

69. The standard reduction potential of Cu^{2+}/Cu and Cu^{2+}/Cu^+ are 0.337 V and 0.153 V, respectively. The standard electrode potential of Cu^{2+}/Cu half cells is:
(a) 0.184 V (b) 0.827 V (c) 0.521 V (d) 0.490 V

70. What will be the depression in the freezing point of water for 0.32 molal aqueous solution of $CH_3CH_2CHClCOOH$? The degree of dissociation is 0.065. ($K_a = 1.4\times10^{-3}$, $K_f = 1.86$ K kg mol^{-1})
(a) 0.63 (b) 0.65 (c) 0.67 (d) 0.69

71. A metal crystallize into two cubic phases, FCC and BCC with unit cell length equal to 3.5 Å and 3.0 Å, respectively. The ratio of densities of FCC and BCC is about
(a) 1.15 (b) 1.26 (c) 1.40 (d) 1.51

72. A certain quantity of electricity is passed through the aqueous solution of $AgNO_3$ and $CuSO_4$ solution in series. If mass of Ag deposited is 1.08g, the mass of copper deposited will be
(a) 0.635 g (b) 6.35 g (c) 0.3175 g (d) 1.270 g

73. $H_2(g) + \frac{1}{2}O_2(g) \rightarrow H_2O(\ell)$ BE = Bond energy
BE (H- H) = x_1 ; BE (O = O) = x_2 ; BE (O – H) = x_3
Latent heat of vapourization of water liquid into water vapour = x_4 Then ΔH_f (heat of formation of liquid water) is:
(a) $x_1 + \frac{x_2}{2} - x_3 + x_4$ (b) $2x_3 - x_1 - \frac{x_2}{2} - x_4$
(c) $x_1 + \frac{x_2}{2} - 2x_3 - x_4$ (d) $x_1 - \frac{x_2}{2} - 2x_3 + x_4$

74. The formation of phosgene is represented at equilibrium as
$CO(g) + Cl_2(g) \rightleftharpoons COCl_2(g)$
For which the equilibrium constant is 22.5. If one starts the dissociation of n moles of phosgene at 1 atm pressure and 395°C, the equilibrium reaction is represented as
$COCl_2(g) \rightleftharpoons CO(g) + Cl_2(g)$
The extent of dissociation of phosgene into CO(g) and $Cl_2(g)$ is
(a) 22.5% (b) 20.6% (c) 11.6% (d) 4.44%

75. Which of the following will react fastest (produce most products in a given time) and which will react at the highest rate respectively.
(1) 1 mol of A and 1 mol of B in a 1L vessel
(2) 2 mol of A and 2 mol of B in a 2L vessel
(3) 0.2 mol of A and 0.2 mol of B in a 0.1-L vessel
(The order with respect to A and B is same in all cases)
(a) (2) and (3) (b) (1) and (2)
(c) (1) and (3) (d) cannot be calculated

76. If the sum of the coefficients in the expansion of $(1 - 3x + 10x^2)^n$ is a and if the sum of coefficients in the expansion of $(1 + x^2)^n$ is b, then
(a) a = 3b (b) $a = b^3$
(c) $b = a^3$ (d) a = 2b

77. If A and B have 4 common elements then the number of common elements in A×B and B×A is
(a) 4 (b) 16 (c) 2 (d) 64

78. Determine b such that the system of homogeneous equations 2x + y + 2z = 0, x + y + 3z = 0, 4x + 3y + bz = 0 has trivial solution:
(a) b=4 (b) b≠4 (c) b≠8 (d) b=8

79. The probability that an event A happens in one trial of an experiment is 0.4. Three independent trials of the experiment are formed. The probability that the event A happens at least once is
(a) 0.936 (b) 0.784 (c) 0.904 (d) 0.064

80. Solution of the differential equation $x\frac{dy}{dx}y + \sqrt{x^2 + y^2}$
(a) $x + \sqrt{x^2 + y^2} = cy^2$ (b) $y + \sqrt{x^2 + y^2} = cy^2$
(c) $x + \sqrt{x^2 + y^2} = cx^2$ (d) $y + \sqrt{x^2 + y^2} = cx^2$

81. For all $n \in \aleph$, $7^n - 3^n$ is divisible by
(a) 10 (b) 6 (c) 4 (d) 5

82. Let $g(x) = 1 + x - [x]$ and $f(x) = \begin{cases} -1, & x < 0 \\ 0, & x = 0 \\ 1, & x > 0 \end{cases}$ where [x] denotes the greatest integer less than or equal to x. Then for all x, f(g(x)) is equal to
(a) x (b) 1 (c) f(x) (d) g(x)

83. If $x_1, x_2, \ldots\ldots x_n$ are in A.P. whose common difference is α, then the value of six α ($\sec x_1 \sec x_2 \sec x_3 + \ldots\ldots \sec x_{n-1} \sec x_n$) is
(a) $\frac{\sin(n-1)\alpha}{\cos x_1 \cos x_n}$ (b) $\frac{\sin \alpha}{\cos x_1 \cos x_n}$
(c) $\sin(n-1)\alpha \cos x_1 \cos x_n$ (d) $\sin n\alpha \cos x_1 \cos x_n$

84. If $|z| = 2$ and $\arg z = \frac{\pi}{4}$, then z is equal to
(a) $\sqrt{2}(1 - i)$ (b) $\sqrt{2}(1 + i)$ (c) $\sqrt{2}(-1 - i)$ (d) None of these

85. How many numbers lying between 10 and 1000 can be formed from the digits 1,2,3,4,5,6,7,8,9 (repetition is allowed)?
(a) 1024 (b) 2346 (c) 810 (d) 1023

86. Given the linear programming problem Minimize $f = -5x_1 + x_2$ subject to $x_1 \geq 0, x_2 \geq 0, -x_1 + x_2 \geq -1$ $x_1 + x_2 \leq 6$ $x_2 \leq 5$ the optimal solution is:
(a) 5 (b) 0 (c) -5 (d) -15

87. If f(x) is an odd differentiable function defined on $(-\infty, \infty)$ such that $f'(3) = -2$, then $f'(-3)$ equals
(a) 0 (b) 1 (c) -2 (d) 2

88. If $f(x) = x^2 - 1x - 21$, then $f'(2)$ is
(a) equal to 0 (b) equal to 3 (c) equal to 4 (d) Non-existent

89. $\lim_{x \to 1}\left(\frac{x^x - 1}{x \log x}\right)$ is equal to
(a) 0 (b) 1 (c) e (d) Non-existent

90. If $\vec{a}, \vec{b}, \vec{c}$, are three unit vectors such that $\vec{a} \times (\vec{b} \times \vec{c}) = \frac{1}{2}\vec{b}$ and $\vec{b}$ and $\vec{c}$ are non- parallel, then the angles α and β which $\vec{a}$ makes with $\vec{b}$ and $\vec{c}$ respectively are
(a) $\alpha = 60^\circ, \beta = 90^\circ$ (b) $\alpha = 90^\circ, \beta = 60^\circ$
(c) $\alpha = 45^\circ, \beta = 60^\circ$ (d) $\alpha = 60^\circ, \beta = 45^\circ$

91. The area of triangle having vertices at P (1, 3, 2), Q (2, -1, 1), R(-1,2, 3) is
(a) $107\sqrt{2}$ (b) $\sqrt{107}$
(c) $\frac{1}{2}\sqrt{107}$ (d) None of the above

92. The straight line $y = mx$ belongs to the pair of straight lines $ax^2 + 2hxy + by^2 = 0$, if
(a) $a + 2hm + bm^2 = 0$ (b) $am^2 + 2hm + b = 0$
(c) $(a + b)m^2 + hm = 0$ (d) $hm^2 + (a + b)m = 0$

93. The distance between two parallel lines $ax + by + c = 0$ and $ax + by + c' = 0$ is
(a) $\frac{|c + c'|}{\sqrt{a^2 + b^2}}$ (b) $\frac{|c - c'|}{\sqrt{a^2 - b^2}}$ (c) $\frac{|c' - c|}{\sqrt{a^2 + b^2}}$ (d) $\frac{|c' - c|}{\sqrt{a^2 - b^2}}$

94. If A and B are two events associated to some experiment E such that $P(A \cup B) = \frac{3}{4}$, $P(A \cap B) = \frac{1}{4}$, $P(A^C) = \frac{2}{3}$, then $P(A^C \cap B)$ is equal to
(a) $\frac{5}{12}$ (b) $\frac{5}{8}$ (c) $\frac{3}{8}$ (d) $\frac{1}{2}$

95. If a, b, c > 0 and x, y, z ∈ R, Then the determinant
$$\begin{vmatrix} (a^x + a^{-x})^2 & (a^x - a^{-x})^2 & 1 \\ (b^y + b^{-y})^2 & (b^y - b^{-y})^2 & 1 \\ (c^z + c^{-z})^2 & (c^z - c^{-z})^2 & 1 \end{vmatrix}$$ is equal to
(a) $a^x b^y c^z$ (b) $a^{-x} b^{-y} c^{-z}$
(c) $a^{2x} b^{2y} c^{2z}$ (d) None of these

96. For the matrix $A = \begin{bmatrix} 1 & 1 & 0 \\ 1 & 2 & 1 \\ 2 & 1 & 0 \end{bmatrix}$, which is correct?
(a) $A^3 + 3A^2 - I = 0$ (b) $A^3 - 3A^2 - I = 0$
(c) $A^3 + 2A^2 - I = 0$ (d) $A^3 - A^2 + I = 0$

97. If the inverse of implication $p \rightarrow q$ is defined as $\sim p \rightarrow \sim q$, then the inverse of the proposition $(p \wedge \sim q) \rightarrow r$ is
(a) $\sim r \rightarrow \sim p \vee q$ (b) $\sim p \vee q \rightarrow \sim r$
(c) $r \rightarrow p \wedge \sim q$ (d) $r \rightarrow p \vee \sim q$

98. The slope of the tangent to the curve $y = \sin x$ at $x = \frac{\pi}{6}$ is
(a) $\frac{1}{2}$ (b) $\frac{1}{\sqrt{3}}$ (c) $\frac{\sqrt{3}}{2}$ (d) $\sqrt{3}$

99. The value of the integral $\int_0^{\frac{\pi}{4}} \sqrt{1 + Sin\ 2x}\ dx$ is
(a)1 (b) 2 (c) $\sqrt{2}$ (d) -1

100. The value of the integral $\int_0^{\frac{\pi}{2}} \frac{Cos\ x}{Sin\ x + Cos\ x}\ dx$ is
(a) $\frac{\pi}{2}$ (b) $\frac{\pi}{3}$ (c) $\frac{\pi}{4}$ (d) $\frac{\pi}{6}$

101. Before blood transfusion, the agglutinins are used to test agglutinogens on which of the following cell types to avoid mismatching?
(a) Lymphocytes (b) RBCs
(c) Neutrophils (d) T-Lymphocytes

102. Cockroach is
(a) Ureotelic (b) Ammonotelic
(c) Uricotelic (d) Proteinotelic

103. Dinosaurs were fossil:
(a) Mammals (b) Birds
(c) Reptiles (d) Amphibians

104. Genes present on Xchromosome are
(a) Sex-influenced (b) Sex- linked
(c) Sex-limited (d) Sex-modified

105. In human the unpaired male reproductive structure is:
(a) Seminal vesicle (b) Prostate gland
(c) Bulbourethral gland (d) Testis

106. An example of ex-situ conservation is:
(a) National Park (b) Seed Bank
(c) Wildlife sanctuary (d) Sacred lake

107. Corpus luteum secretes:
(a) FSH (b) Estrogen (c) Progesterone (d) Testosterone

108. Pick one of the following pair whose meaning is the same.
(a) Leucocytes- Lymphocytes (b) SA node – Pace maker
(c) Malleus- Anvil (d) Haemophilia- Blood cancer

109. Biodiversity richness:
(a) Increases towards the equator
(b) Decreases towards the equator
(c) Remains unchanged throughout the earth
(d) Increases towards the poles

110. Which one of the following animals is found especially in Australia?
(a) Elephants (b) Kangaroos
(c) Lions (d) Monkeys

111. The following statement is not true for the codon 'AUG':
(a) It is a start codon of mRNA
(b) It codes for Methionine
(c) It initiates the translation of mRNA transcript for protein synthesis
(d) It also functions as stop codon

112. Choose the incorrect pair:
(a) Actin: Tropomyosin
(b) Patella: Sesamoid bone
(c) Pelvic girdle : Scapula
(d) Visceral muscle : Smooth muscle

113. The typical erythrocyte count of a healthy adult man is
(a) 5 to 6 million cells per microlitre of blood
(b) 5 to 6 million cells per100 mililitre of blood
(c) 5 to 6 million cells per mililitre of blood
(d) 5 to 6 thousand cells per microlitre of blood

114. Which of the following floral parts contribute in the formation of false fruit
(a) Ovary only (b) Thalmus only
(c) Ovary and thalamus (d) None of the above

115. Generally proteins are
(a) Monomer (b) Homopolymer (c) Heteropolymer (d) Non polymer

116. The most accepted theory for the movement of water in plants
(a) Adhesion theory (b) Root pressure theory
(c) Capillary pull theory (d) Cohesion theory

117. The fungus that causes white rust disease in mustard plant is:
(a) Albugo (b) Aspergillus
(c) Mucor (d) Rhizopus

118.Maximum threat to the world is from
(a) Global warming (b) Ozone hole
(c) Water pollution (d) Soil erosion

119.Which ecological pyramid is always straight
(a) Pyramid of biomass (b) Pyramid of numbers
(c) Pyramid of energy
(d) Pyramid of number and biomass

120.Attack of Ssthma in certain person may be due to
(a) Eating of some seasonal vegetables
(b) Inhalation of some air borne pollen
(c) Exposure of cold temperature
(d) Low concentration of CO_2 due to increased rate of photosynthesis

121. An organism with other individual of the same species is known as:
(a) Population (b) Extrapolation (c) Biome (d) Genome

122.Select from the following, a group of plant Kingdom where seeds are present but fruits are absent?
(a) Pteridophyta (b) Bryophyta
(c) Gymaosperms (d) Angiosperms (Monocots only)

123.During EMP pathway the metal ion involved at various stages is:
(a) Mn (b) Mg (c) Cu (d) Fe

124.Who is bacterium eater?
(a) TMV (b) Prion (c) Cyanobacteria (d) Coliphage

125.The head piece (F_1) of phosphrylating complex is a peripheral protein complex which consist of
(a) five identical units (b) five different units
(c) Two identical units (d) Two different units

126.Which of the following describes the lightness & darkness of the colour
(a) Hue (b) Value (c) Intensity (d) Thrust

127.Which of the following is a body building food
(a) Carbohydrate (b) Fats (c) Protein (d) Water

128.The energy cost of rest and physical activity is expressed as multiples of BMR which is called
(a) Performance activity ratio (b) Perspiration activity ratio
(c) Physical activity ratio (d) Pascal activity ratio

129.Which of the following is a non-essential Amino Acid
(a) Histidine (b) Leucine (c) Alanine (d) Methionine

130.I kilocalorie is equal to
(a) 4.184 kilo joules (b) 4.195 kilo joules
(c) 5.184 kilo joules (d) 4.100 kilo joules

131.Japanese art of flower arrangement is called
(a) Moribana (b) Ikebana (c) Nagarie (d) Scalene

132.Total inability to write is known as
(a) Aphasia (b) Dsysphasia (c) Agraphia (d) Noteasia

133.Which of the following involves the modification of existing mental structure to fit new perception of the environment
(a) Assimilation (b) Dissemination
(c) Accommodation (d) Equilibrium

134.Infant mortality rate refers to the death rate of children in the first year of life. It is calculated per
(a) 100 children born (b) 1000 children born
(c)10000 children born (d) 100000 children born

135.Ability of the fibres to cling together is called
(a) Crimp (b) Pliability (c) Resiliency (d) Cohesiveness

136.Terysilk is the blend of
(a) Silk and cotton (b) Silk and Polyester
(c) Silk and Rayon (d) Silk and Acetate

137.Which of the following is found in the nectar of most flower and is also known as levulose
(a) Fructose (b) Galactose (c) Maltose (d) Lactose

138.From which Greek word the term 'PROTEIN' is derived
(a) Proteeno (b) Prostes (c) Proteo (d) Pressteo

139. Which of the following dyes are applied in an Alkaline bath
(a) Acid Dyes (b) Basic Dyes (c) Disperse syes (d) Dircet dy

140.Which vitamin deficiency causes 'toad skin'?
(a) Vitamin K (b) Vitamin E
(c) Vitamin B_1 (d) Vitamin A

141.Which food contains protein lysine?
(a) Pulses (b) Wheat (c) Rice (d) Barley

142.What is term given to a condition where abnormal clotting of blood takes place?
(a) Hàemophilia (b) Muscular Dystrophy
(c) Myopia (d) Hypertension

143.Which one of the following is invisible fat?
(a) Butter (b) Pure ghee (c) Oil (d) Nuts

144.Which one is an example of mineral stain
(a) Oil (b) Black ink (c) Grease (d) Varnish

145."Boredom and frustration" are examples of which kind of fatigue?
(a) Psychological (b) Physical
(c) Physiological (d) Postural

146.Name the process of putting plan into action.
(a) Implementation (b) Encouragement
(c) Supervision (d) Allocation

147.Which one is not an element of management process?
(a) Planning (b) Organizing (c) Controlling (d) Dovetailing

148.Which fibres are stronger when wet:
(a) Cotton (b) Wool (c) Silk (d) Nylon

149.Reducing the amount of time and energy spent on a particular job is:
(a) Time management (b) Physiological management
(c) Work simplification (d) Time & motion study

150.When the essential nutrients are supplied and utilized to maintain health and well being at the highest possible level, it is called
(a) Over nutrition (b) Optimum nutrition
(c) Mal nutrition (d) Nutrition

Answers: B.Sc- 2016-2017- Paper Series-A

1-b, 2-a, 3-b, 4-d, 5-d, 6-b, 7-d, 8-d, 9-b, 10-a, 11-c, 12-b, 13-c, 14-c, 15-c, 16-c, 17-d, 18-c, 19-b, 20-c,21-a, 22-a, 23-d, 24-a, 25-b, 26-c, 27-b, 28-b, 29-c, 30-a,31-a,32-d,33-c,34-d,35-d,36-c,37-c,38-a,39-a,40-a,41-b,42-c,43-b, 44-d,45-c,46-b,47-a,48-b,49-b,50-d,51-a,52-c,53-d,54-a,55-b,56-a, 57-c,58-c,59-d,60-b,61-a,62-d,63-a,64-b,65-a,66-c,67-a,68-b,69-z, 70-a, 71-b,72-c,73-c,74-b,75-a,76-b,77-b,78-c,79-b,80-d,81-c,82-b,83-a, 84-b, 85-c,86-d,87-c,88-d,89-b,90-b,91-c,92-a, 93-c, 94-a, 95-d, 96-b, 97-b, 98-c,99-a,100-c,101-b,102-c,103-c,104-b,105-b, 106-b, 107-c, 108-b, 109-a, 110-b,111-d,112-c,113-a, 114-c, 115-c, 116-d, 117-a,118-b,119-c, 120-b,121-a,122-c,123-b,124-d, 125-b, 126-c, 127-c,128-c,129-c,130-a,131-b,132-c,133-c, 134-b, 135-d, 136-b, 137-a,138-c,139-a,140-d,141-z,142-a,143-d,144-b,145-a,146-a,147-d,148-a,149-c,150-b.