020253

Paper Code No. B-53 Question Booklet No. ..

ENTRANCE EXAMINATION- 2020

(SET-A)

Candidate's Roll No. [redacted] Signature of the invigilator

Time: 1 HOUR 30 MINUTES BSC (CHEMISTRY) Maximum Marks: 100

Instructions to Candidates

1. Do not write your name or put any other mark of identification anywhere in the OMR Response Sheet. If ANY MARK OF IDENTIFICATION IS DISCOVERED ANYWHERE IN OMR RESPONSE SHEET, the OMR sheet will be cancelled and will not be evaluated.
2. **This Question Booklet contains the cover page and a total of 100 Multiple Choice Questions of 1 mark each.**
3. Space for rough work has been provided at the beginning and end. Available space on each page may also be used for rough work.
4. There is negative marking in Multiple Choice Questions. For each wrong answer 0.25 marks will be deducted.
5. USE/POSSESSION OF ELECTRONIC GADGETS LIKE MOBILE PHONE, iPhone, iPad, pager ETC. is strictly PROHIBITED.
6. Candidate should check the serial order of questions at the beginning of the test. If any question is found missing in the serial order, it should be immediately brought to the notice of the invigilator. No pages should be torn out from this question booklet.
7. Answer must be marked in the OMR response sheet which is provided separately. OMR Response sheet must be handed over to the invigilator before you leave the seat.
8. The OMR response sheet should not be folded or wrinkled. The folded or wrinkled OMR Response Sheet will not be evaluated.
9. Write your Roll Number in the appropriate space (above) and on the OMR Response Sheet. Any other details, if asked for, should be written only in the space provided.
10. There are four options to each question marked A, B, C and D. Select one of the most appropriate option and fill up the corresponding oval/circle in the OMR Response Sheet provided to you. The correct procedure for filling up the OMR Response Sheet is mentioned below.

CORRECT METHOD
(A) ● (C) (D)

WRONG METHOD					
(A) (B) (C) (D)	(A) (B) (D)	(A) (B) (C) (D)	(A) ● (C) (D)	(A) ● (C) (D)	● (B) (C) ●

1. How many electrons are there in 1 coulomb of negative charge ?

(a) 6.25×10^{18} (b) 62.5×10^{18}

(c) 6.023×10^{23} (d) 1.6×10^{-19}

2. A chage Q is divided into two parts q and $Q-q$. If the coulomb repulsive between them where they are separated is to be maximum, the ratio of Q/q should be

(a) 1 : 1 (b) 2 : 1

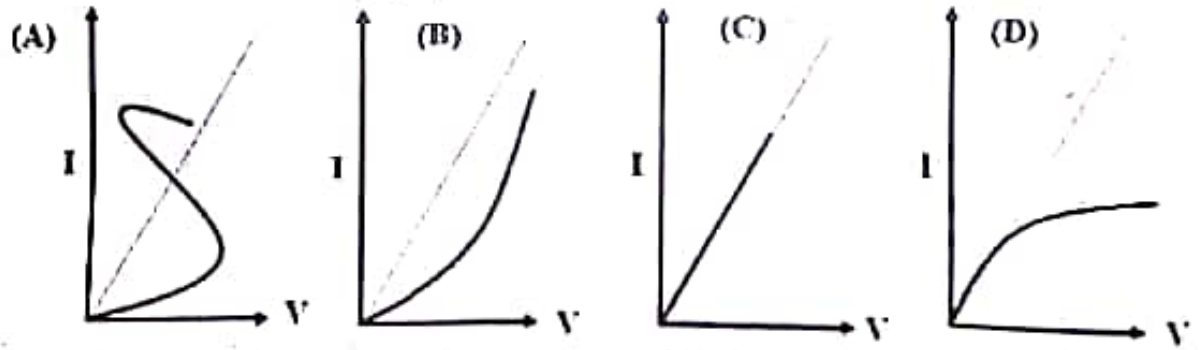
(c) 1 : 2 (d) 1 : 4

3. Consider two capacitances of capacity C_1 and C_2 which are connected in series and have potential difference V between them. What is the potential difference across C_1?

(a) $V\dfrac{C_1}{C_1+C_2}$ (b) $V\dfrac{C_2}{C_1+C_2}$

(c) $V\dfrac{C_1+C_2}{C_1}$ (d) $V\dfrac{C_2}{C_1}$

4. Which of the following graphs is correct for I-V characteristic of a semiconductor



5. A resistance R is to be measured using a meter bridge. A student chooses the standard resistance S to be $100\,\Omega$. She finds that the null point at $l_1 = 2.9$ cm. She is told to improve the accuracy. Which of the following is a useful way?

(a) She should measure l_1 more accurately.

(b) She should change S to 1000 Ω and repeat the experiment.

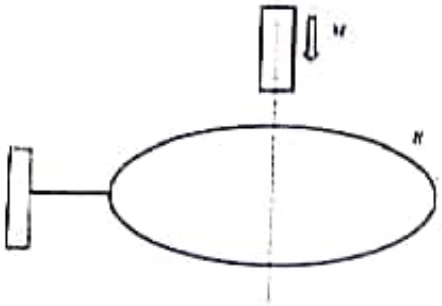
(c) She should change S to 3 Ω and repeat the experiment.

(d) She should give up hope of a more accurate measurement with a meter bridge.

6. What do we call the cell that converts the potential energy from a fuel into electricity?

(a) Electrolytic cell
(b) Galvanic cell
(c) Dry cell
(d) Fuel cell

7. A small magnet M is allowed to fall through a fixed horizontal conducting ring R. Let g be the acceleration due to gravity. The acceleration of M will be:



(I) $< g$ when it is above R and moving toward R
(II) $> g$ when it is above R and moving toward R
(III) $< g$ when it is below R and moving away from R
(IV) $> g$ when it is below R and moving away from R

(a) I and III
(b) II
(c) II and IV
(d) III

8. A force F is given by $F = at + bt^2$, where t is time. What are the dimensions of constant a and b?

(a) $[a]=[MLT^3]$, $[b]=[MLT^4]$
(b) $[a]=[MLT^2]$, $[b]=[MLT^3]$
(c) $[a]=[ML^{-1}T^{-1}]$, $[b]=[ML^{-1}T^{-2}]$
(d) $[a]=[ML^{-1}T^{-3}]$, $[b]=[ML^{-1}T^{-4}]$

P.T.O.

9. A rectangular, a square, a cricular and an elliptical loop, all in the (x-y) plane, are moving out of a uniform field with a constant velocity V = Vi (in the X-direction). The magnet field is directed along the negative z-axis direction. The induced emf, during the passage of these loops, out of the field region will not remain constant for

(a) the rectangular and square loops

(b) the circular and elliptical loops

(c) only the rectangle and elliptical loops

(d) all the four loops

10. A dc ammeter and a hot wire ammeter are connected to a circuit in series. When a direct current is passed through circuit, the dc ammeter shows 6A. When ac current flows through circuit, the ac ammeter shows 8A. What will be reading of each ammeter if dc and ac current flows simultaneously through the circuit?

(a) dc = 6A, ac = 10A (b) dc = 6A, ac = 5A

(c) dc = 5A, ac = 8A (d) dc = 2A, ac = 3A

11. Mass M is split into two parts m and $M-m$, which are then separated by certain distance. What is the ratio of m/M which maximises the gravitational forces between them?

(a) 3/2 (b) 1/2

(c) 2 (d) 2/3

12. Two point particles with masses m_1 and m_2 are thrown at angles θ_1 and θ_2 with horizontal with speeds v_1 and v_2 respectively. R, H and T are range, height and total time of flight respectively. Let $v_1 \sin\theta_1 = v_2 \sin\theta_2$. Then for both particles, which of the following is true?

(a) T, H and R are different.

(b) H and R will be the same but T will be different

(c) T and R are same but H will be different

(d) T and H are same but R is different

13. A body is moving with uniform velocity of 8m/s. When the body just crossed another body, the second one starts and moves with uniform acceleration of 4m/s. The time after which two bodies meet will be

(a) 2s (b) 4s

(c) 6s (d) 8s

14. A monkey of mass m (in kg) slides down a light rope attached to a fixed spring balance, with an acceleration a. The reading on the spring balance is W (in kg) [g is an acceleration due to gravity]. Which of the following is true?

(I) The force of friction exerted by the rope on the monkey is $m(g-a)$

(II) $m = Wg/(g-a)$

(III) $m = W/(1+a/g)$

(IV) The tension in the rope is Wg

(a) I, II (b) II, IV

(c) I, II, III (d) I, II, IV

15. A man weighing 80 kg is standing on a trolley weighing 320 kg. The trolley is resting on a frictionless horizontal rails. If the man starts walking on the trolley along the rails at speed 1 m/s with respect to the trolley. Then after 4s, his displacement with respect to the ground will be:

(a) 4m (b) 3.8m

(c) 3.2m (d) 0.8m

16. A machine gun is mounted on a 2000 kg car on a horizontal frictionless surface. At some instant the gun fires bullets of mass 10 gm velocity of 500 m/s with respect to the car. The number of bullets fired per second is 10. The average thrust on the system is:

(a) 40 N (b) 50N

(c) 0.0002 N (d) 0.002 N

17. A cylindrical block of wood of mass m and area of cross-section A is floating in water (density ρ) with its axis vertical. It is depressed a little and released. If the motion of the block is simple harmonic, the period of oscillation is:

(a) $2\pi\sqrt{m/\rho Ag}$ (b) $2\pi\sqrt{mg/\rho A}$

(c) $2\pi\sqrt{\rho Ag/m}$ (d) $(2\pi/mg)\sqrt{\rho A}$

18. What is the time taken by the body to slide down an inclined plane if the length of the inclined plane is L, a as the retardation, and θ is the angle of inclination.

(a) $\sqrt{\frac{2l}{g\sin\theta}}$

(b) $\sqrt{\frac{2l}{a\sin\theta}}$

(c) $\sqrt{\frac{2l}{(a+g)\sin\theta}}$

(d) $\sqrt{\frac{2l}{(a-g)\sin\theta}}$

19. A Proton and an a-particle have the same de Broglie wavelength. What is the same for both of them?

(a) Energy

(b) momentum

(c) Frequency

(d) Mass

20. Which of the following statements is correct regarding the photoelectric experiment?

(a) The photocurrent increases with intensity of light

(b) Stopping potential increases with increase in intensity of incident light

(c) the photocurrent increases with increase in frequency

(d) All of the above

21. A free neutron decays to a proton but a free proton does not decay to a neutron. This is because

(a) neutron is an uncharged particle whereas proton is a charged particle

(b) neutron is a composite particle made up of a proton and an electron whereas proton is fundamental particle

(c) neutron has larger rest mass than the proton

(d) weak forces can operate in a neutron but not in a proton.

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22. Two coherent monochromatic light beams of intensities I and 4I superimpose. The maximum and minimum possible intensities in the resulting bean are:

(a) 8I and I

(b) 5I and 3I

(c) 3I and I

(d) 9I and I

23. Two identical monoatomic gases at temperature T_1 and T_2 are mixed so that there is no loss of energy. If the masses and the number of the molecules of the two gases are m_1, m_2 and n_1, n_2 respectively. The temperature of the mixture is :

(a) $T = \frac{n_1 T_2 + n_2 T_1}{n_1 + n_2}$

(b) $T = \frac{n_1 T_1 + n_2 T_2}{n_1 + n_2}$

(c) $T = \sqrt{\frac{n_1 T_2 + n_2 T_2}{n_1 + n_2}}$

(d) $T = \frac{n_1 \sqrt{T_2} + n_2 \sqrt{T_2}}{n_1 + n_2}$

24. If the earth were to suddenly expand to two times of its present radius without any change in its mass, the duration of the new day will be nearly (in hours)

(a) 48 hours

(b) 36 hours

(c) 12 hours

(d) 96 hours

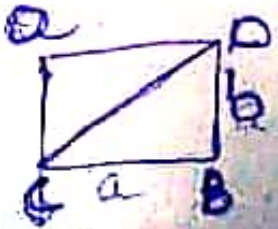
25. Four solid sphere A, B, C and D each of mass m and radius a, are placed with their centres on the four corner of a square of side b. What is the moment of inertia of the system about one side of the square?

(a) $\frac{2}{5}m\left(4a^2 + 5b^2\right)$

(b) $\frac{2}{5}m\left(5a^2 + 4b^2\right)$

(c) $\frac{2}{5}m\left(4a^2 + 9b^2\right)$

(d) $\frac{2}{5}m\left(7a^2 + 4b^2\right)$



26. The heat involved in a reversible process between two states can be made integrable when mulliplied with an integrating factor

(a) 1/V
(b) V
(c) T
(d) 1/T

27. If $f(x)=|x|+x^2$ then $f'(-1)=?$

(a) –3
(b) –1
(c) 1
(d) 3

28. If $\hat{a}$ and $\hat{b}$ are unit vectors, then what is the angle between $\hat{a}$ and $\hat{b}$ for $(\sqrt{3}\hat{a}-\hat{b})$ to be a unit vector ?

(a) 30°
(b) 45°
(c) 60°
(d) 90°

29. For which of the following distribution means and variance are equal ?

(a) Normal Distribution
(b) Poisson Distribution
(c) Binomial Distribution
(d) Negative Binomial Distribution

30. Find the equation of the tangent to the curve $y=e^{-2x}$ for $x=ln2$

(a) $2y=x+2\ln2$
(b) $2y=-x+2\ln2$
(c) $4y=2x+1+2\ln2$
(d) $4y=-2x+1+2\ln2$

31. What is the first derivative of $y=x^{e^x}$?

(a) $x^{e^x}+\ln x$
(b) $x^{e^x}[e^x+e^x \ln x]$
(c) $x^{e^x}\left[\frac{e^x}{x}+e^x \ln x\right]$
(d) $x^{e^x}\ln x+e^x$

32. Calculate $\lim_{x\to 0}\frac{1-\cos x}{2x^2}=?$

(a) 0
(b) $\frac{1}{2}$
(c) $\frac{1}{4}$
(d) 1

33. Co-efficient of x^5 in the expansion of $(1+x^2)^5(1+x)^4$ is

(a) 30 (b) 40

(c) 50 (d) 60

34. If the 2^{nd}, 5^{th} and 9^{th} of an A.P are in G.P, then the common ratio of this G.P is:

(a) 8/5 (b) 4/3

(c) 1 (d) 7/4

35. A value of θ for which $\frac{2+3i\sin\theta}{1-2i\sin\theta}$ is purely imaginary, is:

(a) $\frac{\pi}{3}$ (b) $\frac{\pi}{6}$

(c) $\sin^{-1}\left(\frac{\sqrt{3}}{4}\right)$ (d) $\sin^{-1}\left(\frac{1}{\sqrt{3}}\right)$

36. If $A=\begin{bmatrix}1 & 2 & 2\\ 2 & 1 & -2\\ a & 2 & b\end{bmatrix}$ is a matrix satisfying the equation $AA^T = 9I$, where I is 3×3 identity matrix, then the pair (a, b) is equal to:

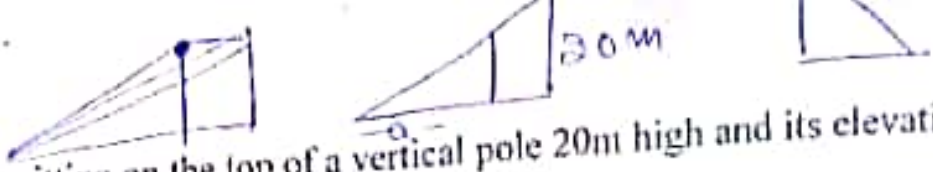
(a) (2, –1) (b) (–2, 1)

(c) (2, 1) (d) (–2, –1)

37. The integral $\int\left(1+x-\frac{1}{x}\right)e^{\left(x+\frac{1}{x}\right)}dx$ is equal to

(a) $(x+1)e^{\left(x+\frac{1}{x}\right)}+c$ (b) $-xe^{\left(x+\frac{1}{x}\right)}+c$

(c) $(x-1)e^{\left(x+\frac{1}{x}\right)}+c$ (d) $xe^{\left(x+\frac{1}{x}\right)}+c$



38. A bird is sitting on the top of a vertical pole 20m high and its elevation from a point O on the ground is 45°. It flies off horizontally straight away from the point O. After one second, the elevation of the bird from O is reduced to 30°. Then the speed (in m/sec) of the bird is

(a) $20\sqrt{2}$ (b) $20(\sqrt{3}-1)$

(c) $20(\sqrt{2}-1)$ (d) $20(\sqrt{3}-\sqrt{2})$

39. The number of *HCL* molecules present in 10 ml of 0.1 N *HCL* solution is:

(a) 6.022×10^{23} (b) 6.022×10^{22}

(c) 6.022×10^{21} (d) 6.022×10^{20}

40. In a reaction ΔH and ΔS both are more than zero. In which of the following cases the reaction would be spontaneous ?

(a) $\Delta H > T\Delta S$ (b) $T\Delta S > \Delta H$

(c) $\Delta H = T\Delta S$ (d) none of these

41. Heats of combustion of CH_4, C_2H_4, C_2H_6 are –890, –1411 and –1560 kJ/mol respectively. Which has the lowest fuel value in kJ/g?

(a) CH_4 (b) C_2H_4

(c) C_2H_6 (d) all same

42. The half-life period of a radioactive nuclide is 3 hours. In 8 hours its activity will be reduced by a factor of

(a) 1/9 (b) 1/8

(c) 1/27 (d) 1/6

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43. The ratio of rms velocity to average velocity of gas molecules at a particular temperature is

(a) 1.086 : 1 (b) 1 : 1.086

(c) 2 : 1.086 (d) 1.086 : 2

44. Which of the following colligative properties is associated with the concentration term '*molarity*' ?

(a) Lowering of vapour pressure (b) Osmotic pressure

(c) Depression in freezing point (d) Elevation in boiling point

45. A one-litre container contains 2 moles of PCl_5 initially. If at equilibrium, K_c is found to be 1, degree of dissociation of PCl_5 is:

(a) 1 (b) –1

(c) 1/2 (d) 50

46. For a reversible reaction if the concentration of the reactants are doubled, equilibrium constant will be:

(a) doubled (b) halved

(c) one-fourth (d) same

47. The *pH* of 0.1 M NH_3 solution $\left(K_b = 1.8 \times 10^{-5}\right)$ is

(a) 11.3 (b) 1

(c) 13 (d) none of these

48. A first order reaction is carried out with an initial concentration of 10 mole per litre and 80% of the reactant changed into product. Now if the same reaction is carried out with an initial concentration of 5 mole per litre, the % of the reactant changing to the product is

(a) 40 (b) 80

(c) 160 (d) can't be calculated

49. In a galvanic cell

(a) Chemical reaction produces electrical energy

(b) electrical energy produces chemical reaction

(c) Reduction occurs at anode

(d) Oxidation occurs at cathode

50. The number of atoms per unit cell in a simple cube, face-centred cube and body centred cube are respectively

(a) 1, 2, 4 (b) 8, 14, 9

(c) 8, 4, 2 (d) 1, 4, 2

51. In the Froth Floatation process, zinc sulphide and lead sulphide can be separated by:

(a) using collectors (b) Adjusting the proportion of oil to water

(c) Using water (d) using froth stabilisers

52. Which of the following is the most stable complex species ?

(a) $[Fe(CO)_5]$ (b) $[Fe(CN)_6]^{3-}$

(c) $[Fe(H_2O)_6]^{3+}$ (d) $[Fe(C_2O_4)_3]^{3-}$

53. Which of the following elements does not show allotropy?

(a) Nitrogen (b) Bismuth

(c) Antimony (d) Arsenic

54. The oxidation state of central atom in the anion of compound NaH_2PO_2 will be:

(a) +3 (b) +5

(c) +1 (d) −3

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55. Which of the following is correct for P_4 molecule of white phosphorus?

(a) It has 6 lone pairs of electrons. (b) It has six P–P single bonds.

(c) It has three P–P single bonds. (d) All the above

56. Element of group- 15 form compounds in +5 oxidation state. However, bismuth forms only one well characterized compound in +5 oxidation state which is:

(a) Bi_2O_5 (b) BiF_5

(c) $BiCl_5$ (d) Bi_2S_5

57. Which of the following is isoelectronic pair?

(a) ICl_2, ClO_2 (b) BrO_2, BrF_2

(c) ClO_2, BrF (d) CN^-, O_3

58. Interstitial compounds are formed when small atoms are trapped inside the crystal lattice of metals. Which of the following is not the characteristic property of interstitial compounds ?

(a) They have high melting points in comparison to pure metals.

(b) They are very hard.

(c) They retain metallic conductivity.

(d) They are chemically very reactive.

59. Which of the following lanthanoids show +2 oxidation state besides the characteristic oxidation state +3 of lanthanoids?

(a) Ce (b) Eu

(c) Yb (d) Both B and C

60. IUPAC name of $\left[Pt(NH_3)_2Cl(NO_2)\right]$ is:

(a) Platinum diaminechloronitrite

(b) Chloronitrito-N-ammineplatinum (II)

(c) Diamminechloridonitrito-N-platinum (II)

(d) Diamminechloronitrito-N-platinate (II)

61. Due to the presence of ambidentate ligands coordination compounds show isomerism. Palladium complexes of the type $\left[Pd(C_6H_5)_2(SCN)_2\right]$ and $\left[Pd(C_6H_5)_2(NCS)_2\right]$ are

(a) linkage isomers

(b) coordination isomers

(c) ionisation isomers

(d) geometrical isomers

62. Atomic number of Mn, Fe, and Co are 25, 26 and 27 respectively. Which of the following inner orbital octahedral complex ions are diamagnetic ?

(a) $\left[Co(NH_3)_6\right]^{3+}$

(b) $\left[Mn(CN)_6\right]^{3-}$

(c) $\left[Fe(CN)_6\right]^{4-}$

(d) Both A and C

63. Which one of the following does not have sp^2 hybridised carbon ?

(a) acetone

(b) acetic acid

(c) acetonitrile

(d) acetamide

64. Asprin is known as:

(a) acetyl salicyclic acid

(b) phenyl salicylate

(c) acetyl salicylate

(d) salicyclic acid

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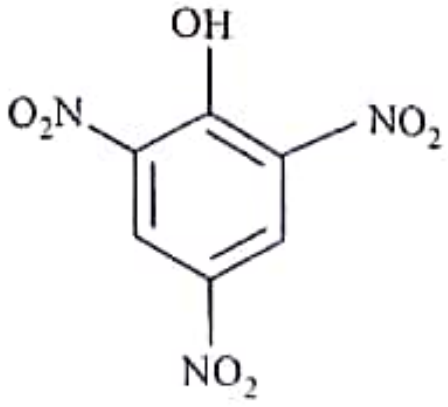
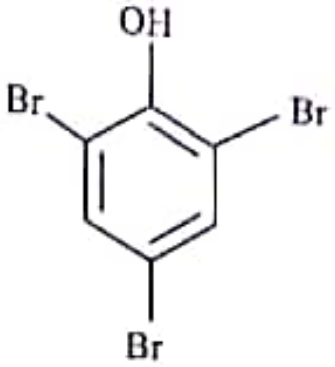
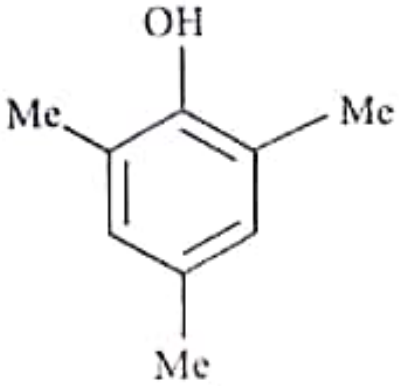
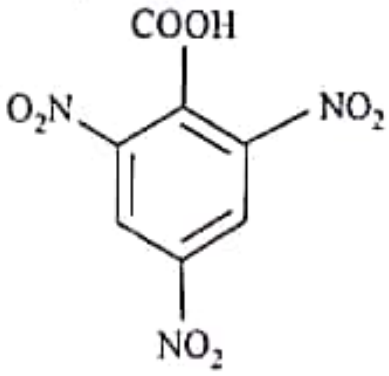
65. Picric acid is:

(a) 

(b) 

(c) 

(d) 

66. Which of the following compounds on hydrolysis gives methane ?

(a) CaC_2 (b) Mg_2C_3

(c) Al_4C_3 (d) Cu_2Cl_2

67. The most concentrated source of energy in the human body is:

(a) Nucleic acids (b) Sugars

(c) Proteins (d) Fats

68. When cyclohexane is poured in water, it floats, because:

(a) Cyclohexane is in 'boat' form

(b) Cyclohexane is less dense than water

(c) Cyclohexane is in 'chair' form

(d) Cyclohexane is in 'crown' form

69. Which of the vitamins given below is water soluble?

(a) Vitamin K (b) Vitamin D

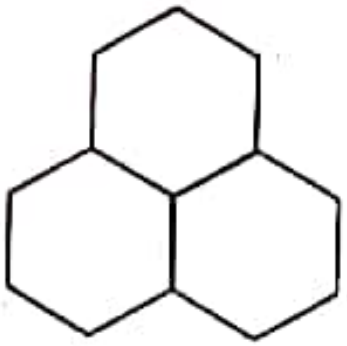
(c) Vitamin E (d) Vitamin C

70. Which compound has the highest melting point?

(a) p-Dibromobenzene (b) o-Dibromobenzene

(c) m-Dibromobenzene (d) Bromobenzene

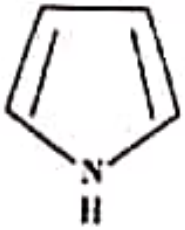
71. How many 2^0 and 3^0 carbon atoms are present in the given compounds respectively?



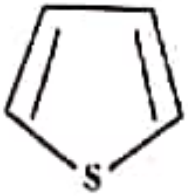
(a) 10 and 4 (b) 9 and 4

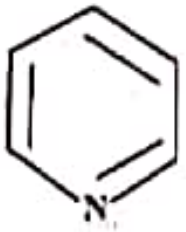
(c) 9 and 3 (d) 6 and 1

72. Which is the structure of pyrrole?

(a) 

(b) 

(c) 

(d) 

73. Which of the following compound has linear structure?

(a) methane (b) ethane

(c) acetylene (d) ethylene

74. Which among the following is most acidic?

(a) CH_3COOH (b) CF_3COOH

(c) CCl_3COOH (d) CBr_3COOH

75. How many sigma and pi bonds are present respectively, in $CH_2=C=CH_2$?

(a) 8 and 2 (b) 3 and 3

(c) 4 and 4 (d) 6 and 2

76. Drawing attention to the pitfalls of _____ solely on uranium as a fuel for nuclear reactors, Indian scientists warned that uranium would not last for long and thus research on thorium as its _____ must be revived.

(a) using, substitute

(b) believing, replacement

(c) relying, alternative

(d) reckoning, option

77. In an effort to provide _____ for higher education to all, most of the universities have been providing education without adequate infrastructure, thus churning out _____ graduates every year.

(a) chances, fresh

(b) platform, capable

(c) opportunities, unemployable

(d) prospects, eligible

78. The move to allow the dumping of mercury _____ an outcry from residents of the area who _____ that high levels of mercury will affect their health.

(a) resulted, insist
(b) provoked, fear
(c) incited, determined
(d) activated, accept

79. In the sentence given below a word is printed **bold**. Below it four choices are given. Select the word which is closest in meaning to the word printed in bold and can replace it without altering the meaning of the sentence.

The leader nodded **his approbation.**

(a) understanding
(b) approval
(c) admiration
(d) adulation

80. In the following question choose the word which best expresses the meaning of the given word: **Meld**

(a) Soothe
(b) Merge
(c) Purchase
(d) Glisten

Fill in the blanks with one of the options given:

81. The member countries of BRICS are _____

(a) Britain, Russia, Ireland, Canada and Sweden
(b) Brazil, Russia, Indonesia, China and South Africa
(c) Brazil, Russia, India, China and South Africa
(d) Britain, Russia, India, Canada and Spain

P.T.O

82. _____ was a German philosopher, economist and revolutionary socialist.

(a) David Ricardo (b) Karl Marx

(c) Adam Smith (d) John Maynard Keynes

83. Rashid is well acquainted _____ him.

(a) of (b) at

(c) with (d) by

84. Choose the word which is the exact OPPOSITE of the word: **Expand**

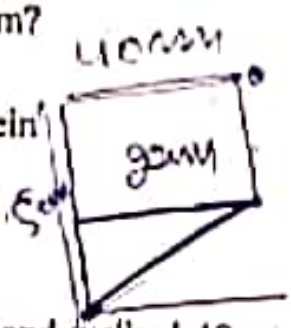
(a) Convert (b) Condense

(c) Congest (d) Conclude

85. Which scientist discovered the radioactive element radium?

(a) Isaac Newton (b) Albert Einstein

(c) Benjamin Franklin (d) Marie Curie



86. Parul walked 50 meters towards North, took a left turn and walked 40 metres. She again took a left turn and walked 50 metres. How far is she from the starting point?

(a) 100 metres (b) 60 metres

(c) 70 metres (d) 40 metres

87. What number should replace the question mark?

11		13		15
	22		24	
31		?		
			44	
		53		

(a) 33 (b) 23

(c) 43 (d) 32

88. What number should come in the place of the question mark?

1	9	25	?	81	121

(a) 46 (b) 36

(c) 49 (d) 52

89. Milk of magnesia is:

(a) Antacids (b) Bleaching powder

(c) Sodium chloride (d) Methyl orange

90. An earthquake can also be known by which of the following terms?

(a) Quake (b) Tremor

(c) Temblor (d) all of the above

91. In which of the following is the "ring of fire" located?

(a) Antarctica (b) Atlantic Ocean

(c) Indian Ocean (d) Pacific Ocean

92. Remote sensing involves the use of

(a) EMR (b) NMR

(c) ESR (d) SSR

93. Volta meter can not be used to measure

(a) Current
(b) Electrochemical equivalent
(c) Potential difference
(d) Charge

94. The absorption of ink by blotting paper involves

(a) Diffusion
(b) Capillary action
(c) Viscosity
(d) Surface tension

95. Which of the following is the smallest temperature?

(a) 1 °F
(b) 1 °R
(c) 1 K
(d) 1 °C

96. A body at rest can have

(a) Speed
(b) Velocity
(c) Momentum
(d) Energy

97. Which of the following is a scalar quantity?

(a) Moment of a force
(b) Power
(c) Acceleration
(d) Electric field

98. Pakyong Airport is greenfield airport near

(a) Gangtok
(b) Assam
(c) Mizoram
(d) None

99. Prague is the capital of

(a) Croatia
(b) Czech Republic
(c) Liberia
(d) Lebanon

100. Which of the following is correct sequence of sea ports of India from "South to North"?

(a) Cochin → Thiruvananthapuram → Calicut → Mangalore

(b) Calicut → Thiruvananthapuram → Cochin → Mangalore

(c) Thiruvananthapuram → Cochin → Calicut → Mangalore

(d) Thiruvananthapuram → Calicut → Mangalore → Cochin

P.T.O.