VERY SIMILAR PRACTICE TEST 5

Time : 3 hrs. Max. Marks : 300

PHYSICS

1. In a particular system, the unit of length, mass and time are chosen to be 10 cm, 10 g and 0.1 s respectively. The unit of force in this system will be equivalent to
(a) 0.1 N (b) 1 N
(c) 10 N (d) 100 N

2. A cyclotron is operated at an oscillator frequency of 24 MHz and has a dee radius $R = 60$ cm. What is magnitude of the magnetic field B (in tesla) to accelerate deuterons (mass $= 3.34 \times 10^{-27}$ kg)?
(a) 9.5 (b) 7.2 (c) 5.0 (d) 3.2

3. The speed of a projectile at its maximum height is $\frac{\sqrt{3}}{2}$ times its initial speed. If the range of the projectile is P times the maximum height attained by it, then P equals
(a) $\frac{4}{3}$ (b) $2\sqrt{3}$ (c) $4\sqrt{3}$ (d) $\frac{3}{4}$

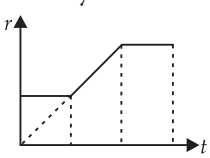
4. The total intensity of the earth's magnetic field at equator is 5 units. What is its value at the poles?
(a) 5 (b) 4 (c) 3 (d) 2

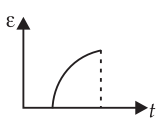
5. A uniform solid cylinder has a radius R and length L. If the moment of inertia of this cylinder about an axis passing through its centre and normal to its circular face is equal to the moment of inertia of the same cylinder about an axis passing through its centre and perpendicular to its length, then
(a) $L = R$ (b) $L = \sqrt{3}R$
(c) $L = \frac{R}{\sqrt{3}}$ (d) $L = \sqrt{\frac{3}{2}}R$

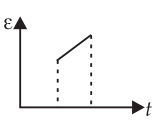
6. A coil of inductance 300 mH and resistance 2 Ω is connected to a source of voltage 2 V. The current reaches half of its steady state value in time t is
(a) 0.05 s (b) 0.1 s (c) 0.15 s (d) 0.3 s

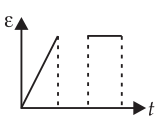
7. A body is projected up with a velocity equal to $\left(\frac{3}{4}\right)^{\text{th}}$ of the escape velocity from the surface of the earth. The height it reaches is
(Radius of the earth = R)
(a) $\frac{10}{9}R$ (b) $\frac{9}{7}R$ (c) $\frac{9}{8}R$ (d) $\frac{10}{3}R$

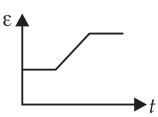
8. Radius of a circular ring is changing with time and the ring is placed in a uniform magnetic field perpendicular to its plane. The variation of r with time t as shown in the figure. The magnitude of induced emf (ε) is best represented by



(a) 

(b) 

(c) 

(d) 

9. A gaseous mixture consists of 16 g of helium and 16 g of oxygen. The ratio C_P / C_V of the mixture is
(a) 1.4 (b) 1.54 (c) 1.59 (d) 1.62

10. A ray incident at a point at an angle of incidence of 60° enters a glass sphere of refractive index $\mu = \sqrt{3}$ and is reflected and refracted at the further surface of the sphere. The angle between the reflected and refracted rays at this surface is
(a) 50° (b) 60° (c) 90° (d) 40°

11. An air column in a pipe which is closed at one end, will be in resonance with the vibrating body of frequency 166 Hz, if the length of the air column is
(a) 0.5 m (b) 1.0 m (c) 1.5 m (d) 2.0 m

12. Two coherent monochromatic light beams of intensities I and $4I$ are superimposed. The maximum and minimum possible intensities in the resulting beam are
(a) $5I$ and I (b) $5I$ and $3I$
(c) $9I$ and I (d) $9I$ and $3I$

13. If the work done in stretching a wire by 1 mm is 2 J, the work necessary for stretching another wire of same material but with double radius of cross-section and half the length by 1 mm is
(a) 16 J (b) 8 J (c) 4 J (d) $\frac{1}{4}$ J

14. The incident intensity on a horizontal surface at sea level from sun is about 1 kW m^{-2}. Assuming that 50 percent of this intensity is reflected and 50 percent is absorbed, the radiation pressure on this horizontal surface is
(a) 5×10^{-11} Pa (b) 5×10^{-6} Pa
(c) 1×10^{-6} Pa (d) 1×10^{-11} Pa

15. A parallel plate capacitor of capacity 100 μF is charged by a battery of 50 volts. The battery remains connected and if the plates of the capacitor are separated so that the distance between them becomes double the original distance, the additional energy given to the battery by the capacitor in joules is
(a) $\frac{125 \times 10^{-3}}{2}$ (b) 12.5×10^{-3}
(c) 1.25×10^{-3} (d) 0.125×10^{3}

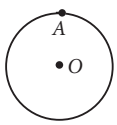
16. Given that a photon of light of wavelength 10,000 Å has an energy equal to 1.23 eV. When light of wavelength 5000 Å and intensity I_0 falls on a photoelectric cell, the surface current is 0.40×10^{-6} A and the stopping potential is 1.36 V, then the work function is
(a) 0.43 eV (b) 0.55 eV
(c) 1.10 eV (d) 1.53 eV

17. A glass capillary tube of inner diameter 0.28 mm is lowered vertically into water in a vessel. The pressure to be applied on the water in the capillary tube so that water level in the tube is same as that in the vessel in N m^{-2} is (Surface tension of water = 0.07 N m^{-1} and atmospheric pressure = 10^5 N m^{-2})
(a) 10^3 (b) 99×10^3
(c) 100×10^3 (d) 101×10^3

18. The largest wavelength in the ultraviolet region of the hydrogen spectrum is 122 nm. The smallest wavelength in the infrared region of the hydrogen spectrum (to the nearest integer) is
(a) 802 nm (b) 823 nm
(c) 1882 nm (d) 1648 nm

19. Mean free path of a gas molecule is
(a) inversely proportional to number of molecules per unit volume
(b) inversely proportional to diameter of the molecule
(c) directly proportional to the square root of the absolute temperature
(d) directly proportional to the molecular mass

20. A disc passes through a pin at the rim and is capable of oscillating freely. The period of oscillation of the disc is

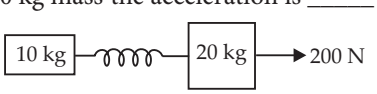


(a) $T = 2\pi\sqrt{\frac{2}{3}\frac{R}{g}}$ (b) $T = 2\pi\sqrt{\frac{4}{3}\frac{R}{g}}$
(c) $T = 2\pi\sqrt{\frac{3}{2}\frac{R}{g}}$ (d) none of these

NUMERICAL VALUE TYPE

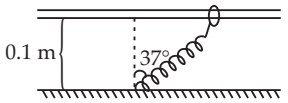
21. There are two radioactive substances A and B. Decay constant of B is two times that of A. Initially, both have equal number of nuclei. After n half lives of A, rate of disintegration of both are equal. The value of n is _____.

22. Two masses of 10 kg and 20 kg respectively are connected by a massless spring. A force of 200 N is applied on the 20 kg mass as shown in the figure. At the instant shown, the 10 kg mass has acceleration 12 m s^{-2}. For 20 kg mass the acceleration is _____ m s^{-2}.



23. One end of a spring of natural length $l_0 = 0.1$ m and spring constant $k = 80$ N m^{-1} is fixed to the ground and the other end is fitted with a smooth ring of mass $m = 2$ g, which is allowed to slide on a horizontal rod fixed at a height $h = 0.1$ m.

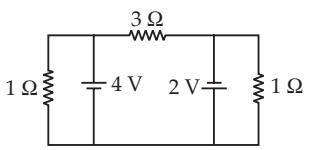
Initially the spring makes an angle of 37° with the vertical when the system is released from rest.



When the spring becomes vertical, if the speed of ring is v, then the value of v is _____ m s^{-1}.

(Given $\cos 37° = \frac{4}{5}$)

24. In the network shown in the figure, the value of current through 4 V battery is _____ A.



25. In brass, the velocity of longitudinal wave is 100 times the velocity of the transverse wave. If $Y = 1 \times 10^{11}$ N m^{-2}, then stress in the wire is $x \times 10^7$ N m^{-2}. The value of x _____.

CHEMISTRY

26. For a reaction $\frac{1}{2}A \longrightarrow 2B$, rate of disappearance of A is related to rate of appearance of B by the expression

(a) $\frac{-d[A]}{dt} = \frac{1}{4}\frac{d[B]}{dt}$ (b) $\frac{-d[A]}{dt} = 4\frac{d[B]}{dt}$

(c) $\frac{-d[A]}{dt} = \frac{1}{2}\frac{d[B]}{dt}$ (d) $\frac{-d[A]}{dt} = \frac{d[B]}{dt}$

27. For the reduction of NO_3^- ion in an aqueous solution, $E°$ is +0.96 V. Values of $E°$ for some metal ions are given below :

$V^{2+}_{(aq)} + 2e^- \rightarrow V$; $E° = -1.19$ V

$Fe^{3+}_{(aq)} + 3e^- \rightarrow Fe$; $E° = -0.04$ V

$Au^{3+}_{(aq)} + 3e^- \rightarrow Au$; $E° = +1.40$ V

$Hg^{2+}_{(aq)} + 2e^- \rightarrow Hg$; $E° = +0.86$ V

The pair of metals that is not oxidised by NO_3^- in aqueous solution is

(a) V and Hg (b) Hg and Fe

(c) Fe and Au (d) Fe and V

28. For an octahedral complex, which of the following d-electron configurations will give maximum CFSE?

(a) d^6 (High spin) (b) d^5 (Low spin)

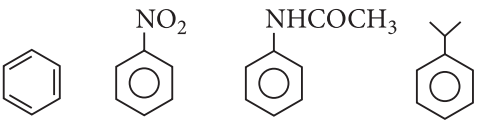
(c) d^4 (Low spin) (d) d^7 (High spin)

29. Which one of the following compounds has the trigonal bipyramidal geometry with three equatorial positions occupied by lone pairs of electrons?

(a) $AlCl_3$ (b) XeF_2

(c) $Pt(NH_3)_2Cl_2$ (d) CH_3MgBr

30.



(i) (ii) (iii) (iv)

The correct order towards electrophilic substitution reaction is

(a) (iv) > (iii) > (ii) > (i)

(b) (i) > (ii) > (iii) > (iv)

(c) (iii) > (ii) > (i) > (iv)

(d) (iii) > (iv) > (i) > (ii)

31. We have three aqueous solutions of NaCl labelled as 'A', 'B' and 'C' with concentrations 0.1 M, 0.01 M and 0.001 M, respectively. The value of van't Hoff factor for these solutions will be in the order

(a) $i_A < i_B < i_C$ (b) $i_A > i_B > i_C$

(c) $i_A = i_B = i_C$ (d) $i_A < i_B > i_C$

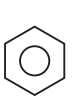
32. A solution of sulphur dioxide in water reacts with H_2S precipitating sulphur. Here sulphur dioxide acts as

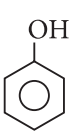
(a) an oxidising agent (b) a reducing agent

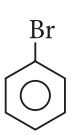
(c) an acid (d) a catalyst.

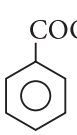
33. $CH_3(CH_2)_4CH_3 \xrightarrow[773\text{ K, }10\text{-}20\text{ atm}]{CrO_3/Al_2O_3} A \xrightarrow{Br_2/Fe} B \xrightarrow[\text{ether}]{Mg} C \xrightarrow{H_2O} D$

What is D ?

(a) 

(b) 

(c) 

(d) 

34. Among the following molecules :
(i) XeO_3 (ii) $XeOF_4$
(iii) XeF_6
those having same number of lone pairs on Xe are
(a) (i) and (ii) only (b) (i) and (iii) only
(c) (ii) and (iii) only (d) all of these.

35. A white solid (*X*) on heating evolves CO_2 and gives a white residue (*Y*) which is soluble in water. (*Y*) also gives CO_2 when treated with dilute acid. (*X*) and (*Y*) are respectively
(a) Na_2CO_3 and $NaHCO_3$
(b) $NaHCO_3$ and Na_2CO_3
(c) $CaCO_3$ and $CaHCO_3$
(d) $CaHCO_3$ and $CaCO_3$

36. For the process,
$H_2O_{(l)}$ (1 bar, 373 K) $\rightleftharpoons H_2O_{(g)}$ (1 bar, 373 K), the correct set of thermodynamic parameters is
(a) $\Delta G = 0, \Delta S = +ve$ (b) $\Delta G = 0, \Delta S = -ve$
(c) $\Delta G = +ve, \Delta S = 0$ (d) $\Delta G = -ve, \Delta S = +ve$.

37. Following are the properties related to adsorption :
I. Reversible
II. Results into unimolecular layer
III. Low heat of adsorption
IV. Occurs at low temperature and decreases with increasing temperature.
Which of the above properties are for physical adsorption?
(a) I, II, III only (b) I, III, IV only
(c) II, III, IV only (d) I, III only

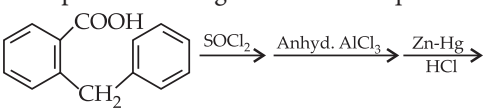
38. Which of the following chemicals are used to manufacture methyl isocyanate that caused "Bhopal Gas Tragedy"?
(i) Methylamine (ii) Phosgene
(iii) Phosphine (iv) Dimethylamine
(a) (i) and (ii) (b) (iii) and (iv)
(c) (i) and (iii) (d) (ii) and (iv)

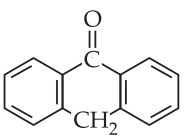
39. A solution of (+)-2-chloro-2-phenylethane in toluene racemises slowly in the presence of a small amount of $SbCl_5$, due to the formation of
(a) carbanion (b) carbene
(c) free radical (d) carbocation.

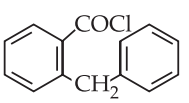
40. Which one of the following statements is not true regarding (+) lactose?
(a) (+)-Lactose, $C_{12}H_{22}O_{11}$ contains 8 –OH groups.
(b) On hydrolysis (+)-lactose gives equal amount of *D*(+)-glucose and *D*(+)-galactose.
(c) (+)-Lactose is a β-glycoside formed by the union of a molecule of *D*(+)-glucose and a molecule of *D*(+)-galactose.
(d) (+)-Lactose is a reducing sugar and does not exhibit mutarotation.

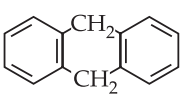
41. Which of the following is used is Clark's method for the removal of temporary hardness?
(a) Na_2CO_3
(b) $Ca(OH)_2$
(c) $Na_2Al_2Si_2O_8 \cdot xH_2O$
(d) $Na_2[Na_4(PO_3)_6]$

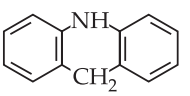
42. Final product of the given reaction sequence is



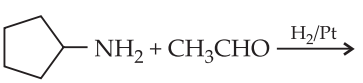
(a) 

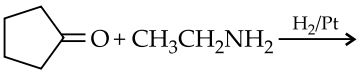
(b) 

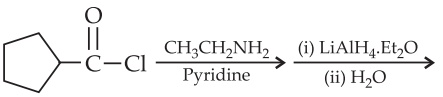
(c) 

(d) 

43. Which of the following statements is correct for the periodic classification of elements?
(a) Atomic size gradually increases from left to right in a period of representative elements.
(b) Across a transition series, atomic size gradually but somewhat irregularly decreases and then increases at the end of the series.
(c) Electron gain enthalpies of third period elements, sulphur and chlorine are less negative than those of oxygen and fluorine of second period in respective groups.
(d) Ionisation potential gradually but irregularly decreases across a period in representative elements.

44. Which of the following reactions does not give *N*-ethyl cyclopentyl amine as a major product?
(a) 

(b) 

(c) 

(d) 

45. Which of the following crystals has unit cell such that $a \neq b \neq c$ and $\alpha \neq \beta \neq \gamma \neq 90°$?
(a) $K_2Cr_2O_7$ (b) $NaNO_3$
(c) KNO_3 (d) K_2SO_4

NUMERICAL VALUE TYPE

46. The number of ethers in the given list which cannot be prepared by Williamson's synthesis is_____.
$CH_3OCH_2CH_3$, $C_6H_5OCH_3$, $C_6H_5OCH_2CH_3$, $(C_6H_5)_2O$,$(CH_3)_3COCH_3$, $(CH_3)_3COCH_2CH_3$, $(CH_3)_3COC(CH_3)_3$, $(C_2H_5)_2O$,$C_6H_5CH_2OC_6H_5$

47. At 400 K, the root mean square speed of a gas X (molecular weight = 40) is equal to the most probable speed of gas Y at 60 K. The molecular weight of Y is_____.

48. At a certain temperature and total pressure of 10^5 Pa, iodine vapour contains 40% by volume of I atoms, $I_{2(g)} \rightleftharpoons 2I_{(g)}$. The K_p for the equilibrium is $x \times 10^4$. The value of x is _____.

49. The molarity of a sulphuric acid solution in which the mole fraction of water is 0.86, is_____.

50. To stop the flow of photoelectrons produced by electromagnetic radiation incident on a certain metal, a negative potential of 300 V is required. If the photoelectric threshold of metal is 1500 Å, the frequency of the incident radiation is $x \times 10^{16}$ Hz. the value of x is_____.

MATHEMATICS

51. Let U be a universal set and $A \cup B \cup C = U$. Then $((A - B) \cup (B - C) \cup (C - A))' =$
(a) $A \cup B \cup C$ (b) $A \cap B \cap C$
(c) $A \cup (B \cap C)$ (d) $A \cap (B \cup C)$

52. The value of sum $\sum_{n=1}^{13} (i^n + i^{n+1})$, where $i = \sqrt{-1}$ equals
(a) i (b) $i - 1$ (c) $-i$ (d) 0

53. The function $f(x) = e^{ax} + e^{-ax}$, $a > 0$ is monotonically increasing for
(a) $-1 < x < 1$ (b) $x < -1$
(c) $x > -1$ (d) $x > 0$

54. If $\begin{vmatrix} a+1 & a+2 & a+p \\ a+2 & a+3 & a+q \\ a+3 & a+4 & a+r \end{vmatrix} = 0$, then p, q, r are in :
(a) AP (b) GP
(c) HP (d) none of these

55. If α and β are solutions of $\sin^2 x + a(\sin x) + b = 0$ as well as that of $\cos^2 x + c(\cos x) + d = 0$, then $\sin(\alpha + \beta)$ is equal to
(a) $\frac{2bd}{b^2 + d^2}$ (b) $\frac{a^2 + c^2}{2ac}$
(c) $\frac{b^2 + d^2}{2bd}$ (d) $\frac{2ac}{a^2 + c^2}$

56. $\lim_{x \to 0} \frac{\sin(\pi \cos^2 x)}{x^2} =$
(a) $-\pi$ (b) π (c) $\frac{\pi}{2}$ (d) 1

57. If $\bar{x}_1$ and $\bar{x}_2$ are means of two distribution such that $\bar{x}_1 < \bar{x}_2$ and $\bar{x}$ is the mean of the joint distribution then
(a) $\bar{x} = \frac{\bar{x}_1 + \bar{x}_2}{2}$ (b) $\bar{x} > \bar{x}_2$
(c) $\bar{x} < \bar{x}_1$ (d) $\bar{x}_1 < \bar{x} < \bar{x}_2$

58. If $\int_0^x f(t)dt = x + \int_x^1 tf(t)dt$, then $f(x) =$
(a) $\frac{1}{1-x}$ (b) $\frac{1}{x-1}$ (c) $\frac{1}{1+x}$ (d) $\frac{1}{x}$

59. If $f(x) = \begin{cases} 3(1+|\tan x|)^{\frac{\alpha}{|\tan x|}}; \frac{-1}{2} < x < 0 \\ \beta \quad ; x = 0 \\ 3\left(1+\left|\frac{\sin x}{3}\right|\right)^{\frac{6}{|\sin x|}}; 0 < x < \frac{2}{3} \end{cases}$

is a continuous function at $x = 0$, then the ordered pair (α, β) is equal to

(a) $(2, e^2)$ (b) $\left(2, \frac{2}{e^2}\right)$

(c) $(2, 3e^2)$ (d) $\left(2, \frac{3}{e^2}\right)$

60. The bisector of the acute angle formed between the lines $4x - 3y + 7 = 0$ and $3x - 4y + 14 = 0$ has the equation

(a) $x + y + 3 = 0$ (b) $x - y - 3 = 0$

(c) $x - y + 3 = 0$ (d) $3x + y - 7 = 0$

61. The solution of the differential equation $y\frac{dy}{dx} = x\left[\frac{y^2}{x^2} + \frac{\phi\left(\frac{y^2}{x^2}\right)}{\phi'\left(\frac{y^2}{x^2}\right)}\right]$ is (where c is a constant)

(a) $\phi\left(\frac{y^2}{x^2}\right) = cx$ (b) $x\phi\left(\frac{y^2}{x^2}\right) = c$

(c) $\phi\left(\frac{y^2}{x^2}\right) = cx^2$ (d) $x^2\phi\left(\frac{y^2}{x^2}\right) = c$

62. Let $P(x_1, y_1)$ and $Q(x_2, y_2)$ are two points such that their abscissa x_1 and x_2 are the roots of the equation $x^2 + 2x - 3 = 0$ while the ordinates y_1 and y_2 are the roots of the equation $y^2 + 4y - 12 = 0$. The centre of the circle with PQ as diameter is

(a) $(-1, -2)$ (b) $(1, 2)$

(c) $(1, -2)$ (d) $(-1, 2)$

63. The negation of $p \wedge (q \rightarrow \sim r)$ is

(a) $p \vee (q \wedge r)$ (b) $\sim p \vee (q \wedge r)$

(c) $\sim p \wedge (q \wedge r)$ (d) $p \vee (q \vee r)$

64. The sums of n terms of two arithmetic series are in the ratio $2n + 3 : 6n + 5$, then the ratio of their 13^{th} terms is

(a) 53 : 155 (b) 27 : 77

(c) 29 : 83 (d) 31 : 89

65. Two integers x and y are chosen with replacement out of the set $\{0, 1, 2, 3, ..., 10\}$. Then the probability that $|x - y| > 5$ is

(a) $\frac{81}{121}$ (b) $\frac{30}{121}$ (c) $\frac{25}{121}$ (d) $\frac{20}{121}$

66. $\tan 100° + \tan 125° + \tan 100° \tan 125° =$

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

67. The number of values of k for which the system of equations $(k + 1)x + 8y = 4k$, $kx + (k + 3)y = 3k - 1$ has infinitely many solutions, is

(a) 0 (b) 1

(c) 2 (d) Infinite

68. If the integral $\int \frac{5\tan x}{\tan x - 2}\,dx = x + a\ln|\sin x - 2\cos x| + k$, then a is equal to

(a) 1 (b) 2 (c) -1 (d) -2

69. The coefficient of x^{32} in the expansion of $\left(x^4 - \frac{1}{x^3}\right)^{15}$ is

(a) ${}^{15}C_5$ (b) ${}^{15}C_6$ (c) ${}^{15}C_4$ (d) ${}^{15}C_7$

70. If the lines $x = 1 + s$, $y = -3 - \lambda s$, $z = 1 + \lambda s$ and $x = \frac{t}{2}$, $y = 1 + t$, $z = 2 - t$ are coplanar, then $\lambda =$

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

NUMERICAL VALUE TYPE

71. If number of numbers greater than 3000, which can be formed by using the digits 0, 1, 2, 3, 4, 5 without repetition, is n then $\frac{n}{230}$ is equal to

72. If the vectors $2\hat{i} - 3\hat{j} + 4\hat{k}, \hat{i} + 2\hat{j} - \hat{k}$ and $m\hat{i} - \hat{j} + 2\hat{k}$ are coplanar, then what is the value of m?

73. Suppose a, x, y, z and b are in A.P. when $x + y + z = 15$, and a, α, β, γ, b are in H.P. when $\frac{1}{\alpha} + \frac{1}{\beta} + \frac{1}{\gamma} = \frac{5}{3}$. Find a if $a > b$.

74. The distance between the parallel planes $x - 2y + 2z - 8 = 0$ and $6y - 3x - 6z = 57$ is

75. The value of x in the given equation $4^x - 3^{x-\frac{1}{2}} = 3^{x+\frac{1}{2}} - 2^{2x-1}$ is

Practice Test-5

- Use Blue/Black ball point pen only for marking responses.
- Mark only one choice for each question as indicated.

Correct marking ● ⓑ ⓒ ⓓ

Wrong marking ⊗ ⓐ ◐ ⓐ

1.	ⓐ	ⓑ	ⓒ	ⓓ	26.	ⓐ	ⓑ	ⓒ	ⓓ	51.	ⓐ	ⓑ	ⓒ	ⓓ
2.	ⓐ	ⓑ	ⓒ	ⓓ	27.	ⓐ	ⓑ	ⓒ	ⓓ	52.	ⓐ	ⓑ	ⓒ	ⓓ
3.	ⓐ	ⓑ	ⓒ	ⓓ	28.	ⓐ	ⓑ	ⓒ	ⓓ	53.	ⓐ	ⓑ	ⓒ	ⓓ
4.	ⓐ	ⓑ	ⓒ	ⓓ	29.	ⓐ	ⓑ	ⓒ	ⓓ	54.	ⓐ	ⓑ	ⓒ	ⓓ
5.	ⓐ	ⓑ	ⓒ	ⓓ	30.	ⓐ	ⓑ	ⓒ	ⓓ	55.	ⓐ	ⓑ	ⓒ	ⓓ
6.	ⓐ	ⓑ	ⓒ	ⓓ	31.	ⓐ	ⓑ	ⓒ	ⓓ	56.	ⓐ	ⓑ	ⓒ	ⓓ
7.	ⓐ	ⓑ	ⓒ	ⓓ	32.	ⓐ	ⓑ	ⓒ	ⓓ	57.	ⓐ	ⓑ	ⓒ	ⓓ
8.	ⓐ	ⓑ	ⓒ	ⓓ	33.	ⓐ	ⓑ	ⓒ	ⓓ	58.	ⓐ	ⓑ	ⓒ	ⓓ
9.	ⓐ	ⓑ	ⓒ	ⓓ	34.	ⓐ	ⓑ	ⓒ	ⓓ	59.	ⓐ	ⓑ	ⓒ	ⓓ
10.	ⓐ	ⓑ	ⓒ	ⓓ	35.	ⓐ	ⓑ	ⓒ	ⓓ	60.	ⓐ	ⓑ	ⓒ	ⓓ
11.	ⓐ	ⓑ	ⓒ	ⓓ	36.	ⓐ	ⓑ	ⓒ	ⓓ	61.	ⓐ	ⓑ	ⓒ	ⓓ
12.	ⓐ	ⓑ	ⓒ	ⓓ	37.	ⓐ	ⓑ	ⓒ	ⓓ	62.	ⓐ	ⓑ	ⓒ	ⓓ
13.	ⓐ	ⓑ	ⓒ	ⓓ	38.	ⓐ	ⓑ	ⓒ	ⓓ	63.	ⓐ	ⓑ	ⓒ	ⓓ
14.	ⓐ	ⓑ	ⓒ	ⓓ	39.	ⓐ	ⓑ	ⓒ	ⓓ	64.	ⓐ	ⓑ	ⓒ	ⓓ
15.	ⓐ	ⓑ	ⓒ	ⓓ	40.	ⓐ	ⓑ	ⓒ	ⓓ	65.	ⓐ	ⓑ	ⓒ	ⓓ
16.	ⓐ	ⓑ	ⓒ	ⓓ	41.	ⓐ	ⓑ	ⓒ	ⓓ	66.	ⓐ	ⓑ	ⓒ	ⓓ
17.	ⓐ	ⓑ	ⓒ	ⓓ	42.	ⓐ	ⓑ	ⓒ	ⓓ	67.	ⓐ	ⓑ	ⓒ	ⓓ
18.	ⓐ	ⓑ	ⓒ	ⓓ	43.	ⓐ	ⓑ	ⓒ	ⓓ	68.	ⓐ	ⓑ	ⓒ	ⓓ
19.	ⓐ	ⓑ	ⓒ	ⓓ	44.	ⓐ	ⓑ	ⓒ	ⓓ	69.	ⓐ	ⓑ	ⓒ	ⓓ
20.	ⓐ	ⓑ	ⓒ	ⓓ	45.	ⓐ	ⓑ	ⓒ	ⓓ	70.	ⓐ	ⓑ	ⓒ	ⓓ
21.					46.					71.				
22.					47.					72.				
23.					48.					73.				
24.					49.					74.				
25.					50.					75.				