

# University of Health Sciences, Lahore



Total MCQs: 220

Max. Marks: 1100

## ENTRANCE TEST – 2014

For F.Sc. and Non-F.Sc. Students  
Time Allowed: 150 minutes

### Instructions:

- Read the instructions on the MCQs Response Form carefully.
- Choose the **Single Best Answer** for each question.
- Candidates are strictly prohibited from giving any identification mark except Roll No. & Signature in the specified columns only.

## COMPULSORY QUESTION FOR IDENTIFICATION

**Q-ID. What is the color of your Question Paper?**

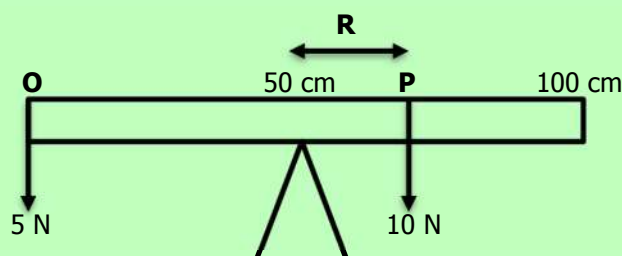
- A) White. C) Pink.  
B) Blue. **D) Green.**

**Ans: Colour of your Question Paper is Green.**  
**Fill the Circle Corresponding to Letter 'D'**  
**against 'ID' in your MCQ response form**  
**(Exactly as shown in the diagram).**

	A	B	C	D
ID	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## PHYSICS

- Q.1** The formula for electric field strength is ' $E = F/Q$ ', where E is electric field strength and F is force and Q is charge. Which one of the following options gives the correct base units for electric field strength?  
A)  $\text{kgms}^{-3}\text{A}^{-1}$  C)  $\text{kg}^2\text{m}^{-2}\text{s}^{-3}\text{A}$   
B)  $\text{kgs}^{-2}\text{A}^{-3}$  D)  $\text{ms}^{-1}\text{A}^{-3}$
- Q.2** Which set of the prefixes gives values in increasing order?  
A) Pico, Mega, Kilo, Tera C) Tera, Pico, Micro, Kilo  
B) Pico, Micro, Mega, Giga D) Giga, Kilo, Milli, Nano
- Q.3** Two forces, 5 N and 10 N are acting at 'O' and 'P' respectively on a uniform meter rod suspended at the position of centre of gravity 50 cm mark as shown in the figure.

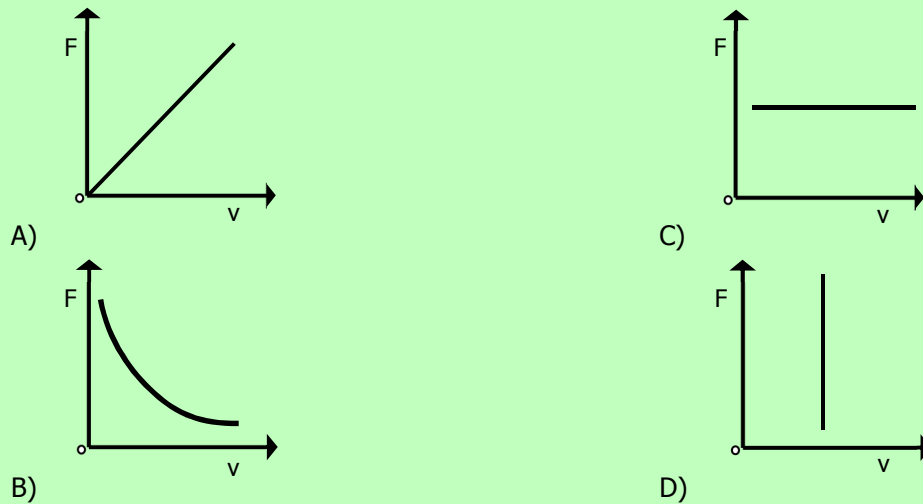


**What is the position of 'P' on meter rod?**

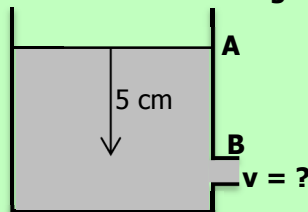
- A) 80 cm C) 70 cm  
B) 75 cm D) 65 cm

- Q.4** An oil film floating on water surface exhibits colour pattern due to the phenomenon of:  
A) Diffraction C) Interference  
B) Polarization D) Surface tension

**Q.5** Which of the following is the best graphical representation between drag force ' $F$ ' on a spherical object of radius ' $r$ ' and its speed ' $v$ ' through a fluid of viscosity ' $\eta$ '?



**Q.6** What is the speed of an incompressible non-viscous liquid flowing out from 'B' contained in a container as shown in the figure? Where  $AB = 5$  m and  $g = 10$  m/s<sup>2</sup>.



- A) 5 m/s  
B) 10 m/s  
C) 2 m/s  
D) 50 m/s

**Q.7** For the horizontal pipe, the fluid inside it is flowing horizontally then Bernoulli's equation can be written as

- A)  $P + \rho v^2 = \text{constant}$   
B)  $2P + \rho v^2 = \text{constant}$   
C)  $P + 2\rho v^2 = \text{constant}$   
D)  $2P + 2\rho v^2 = \text{constant}$

**Q.8** The value of the least distance of distinct vision or near point is \_\_\_\_\_ for a normal human eye.

- A) 20 cm  
B) 25 cm  
C) 10 cm  
D) 15 cm

**Q.9** In a compound microscope, the magnification by objective = 20, magnification by eyepiece = 11, then the total magnification is

- A)  $M = -220$   
B)  $M = -0.19$   
C)  $M = -0.05$   
D)  $M = 220$

**Q.10** The distance between atoms is 0.30 nm. What will be the wavelength of X-rays at angle  $\theta = 30^\circ$  for 1<sup>st</sup> order diffraction?

- A)  $\lambda = 0.60$  nm  
B)  $\lambda = 0.30$  nm  
C)  $\lambda = 0.20$  nm  
D)  $\lambda = 0.90$  nm

**Q.11** A 100 kg man is standing in an elevator, which accidentally falls freely. What will be the weight of the person in the freely falling elevator (take  $g = 10$  m/s<sup>2</sup>)

- A) 1000 N  
B) 10 N  
C) 500 N  
D) Zero

**Q.12** Frequency of simple pendulum of length 9.8 m will be

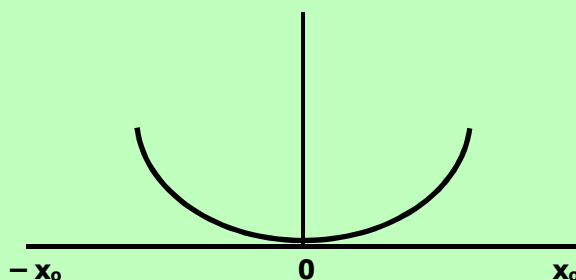
- A)  $2\pi$  Hertz  
B)  $\pi/2$  Hertz  
C)  $1/2\pi$  Hertz  
D)  $\pi/4$  Hertz

**Q.13** A body performs simple harmonic motion with a period of 0.063 s. The maximum speed of 3.0 ms<sup>-1</sup>. What are the values of the amplitude ' $x_0$  (m)' and angular frequency ' $\omega$  (rads<sup>-1</sup>)'?

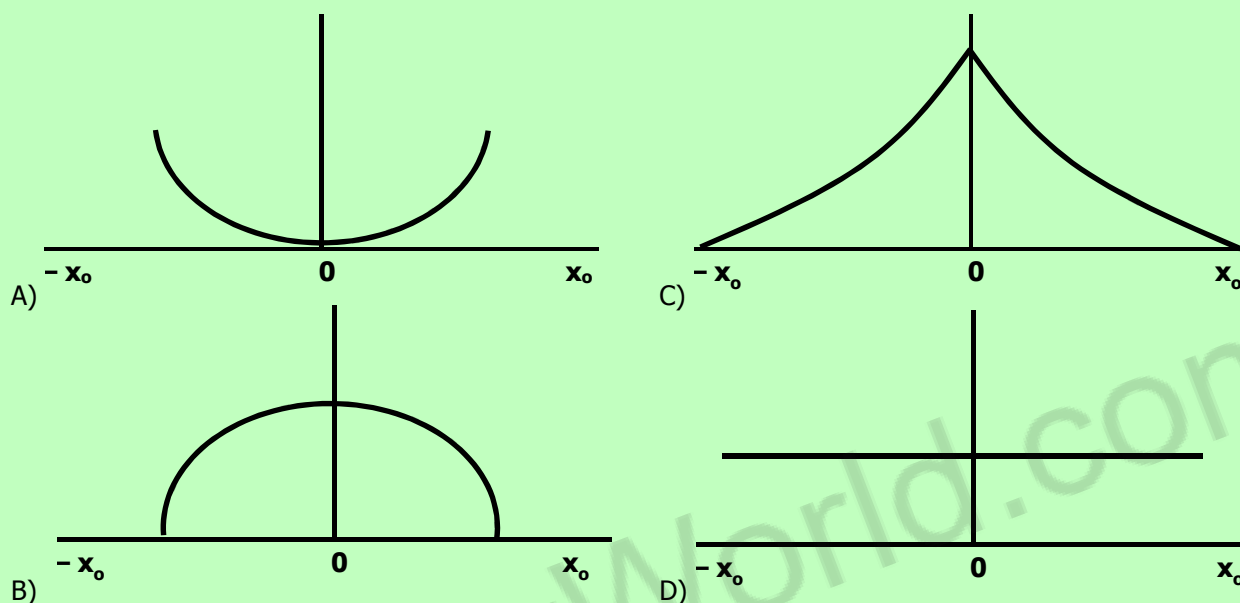
- A)  $x_0 = 0.03$ ,  $\omega = 100$   
B)  $x_0 = 0.19$ ,  $\omega = 16$   
C)  $x_0 = 5.3$ ,  $\omega = 16$   
D)  $x_0 = 3.3$ ,  $\omega = 100$

- Q.14** Food being cooked in microwave oven is an example of  
 A) Beats  
 B) Overtones  
 C) Resonance  
 D) Stationary waves

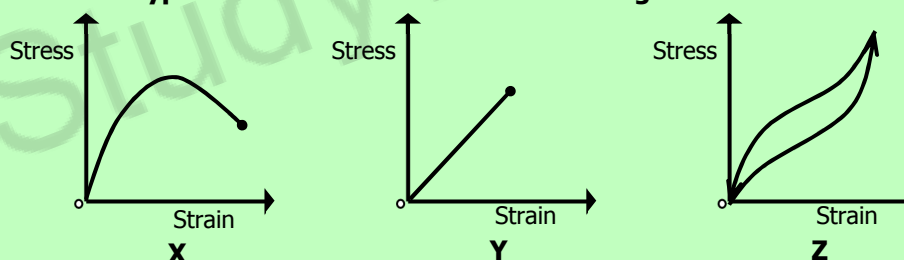
- Q.15** Potential energy of a mass spring system with respect to displacement during simple harmonic motion (SHM) is shown in the figure.



Which of the following represents the total energy of mass spring system during SHM?



- Q.16** Three graphs for three types of materials are shown in the figure.



Which row describes the correct materials?

	X	Y	Z
A)	Brittle	Ductile	Polymer
B)	Brittle	Polymer	Ductile
C)	Polymer	Brittle	Ductile
D)	Ductile	Brittle	Polymer

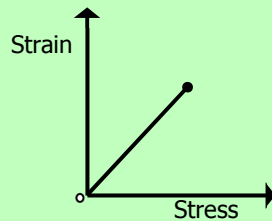
- Q.17** A gas containing 'N' number of molecules of a gas having mass of each molecule 'm' is in a cubic container having length of each side 'a'. What is the density of gas contained in cube?

- A)  $N/a^2$   
 B)  $m/a^3$   
 C)  $Nm/a^3$   
 D)  $Na^3/m$

- Q.18** In 'General Gas Equation  $PV=nRT$ ', 'n' represents the number of moles of gas. Which of the following represents the relation of 'n'?

- A)  $n = NN_A$   
 B)  $n = N/N_A$   
 C)  $n = N_A/N$   
 D)  $n = N + N_A$

**Q.19 Which feature of the following graph represents Young's Modulus?**



- A) Area under graph  
 B) Gradient of the graph  
 C) Reciprocal of the gradient  
 D) Product of gradient and area of the curve.

**Q.20 At triple point of water, the pressure of gas is 2680 Pa, by changing 'T' the pressure increases to 4870 Pa. Then 'T' is:**

- A) 496.38 K  
 B) 438.96 K  
 C) Zero  
 D) 496.38 °F

**Q.21 The relation between Celsius and Fahrenheit scales is:**

$$\frac{C}{100} = \frac{F - 32}{180}$$

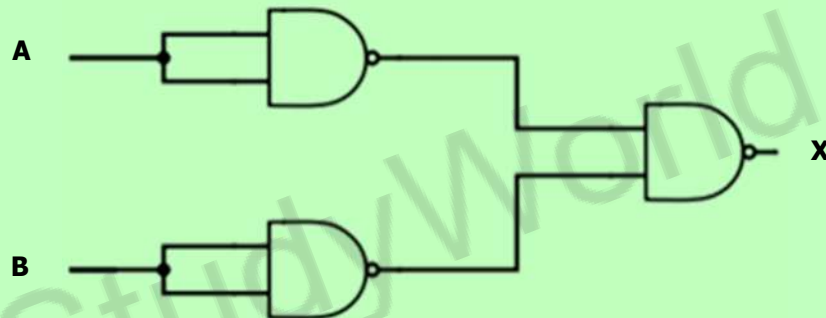
**At what temperature both scales give the same reading?**

- A) -100°  
 B) -40°  
 C) -180°  
 D) -273°

**Q.22 A heat engine working according to second law of thermodynamics has 50% efficiency. What will be the temperature of its low temperature reservoir if high temperature reservoir is 327 °C?**

- A) 27 °C  
 B) 127 °C  
 C) 300 °C  
 D) 600 °C

**Q.23 Three NAND gates are connected as shown in the figure.**



**Which of the following logic gate is formed in the connected circuit?**

- A) OR  
 B) AND  
 C) NOR  
 D) NAND

**Q.24 What is the output of the truth table?**

A	B	Output x = AB + AB
0	0	
0	1	
1	0	
1	1	

A)

X
0
0
1
1

B)

X
1
1
1
0

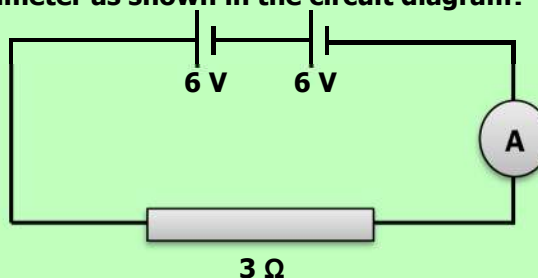
C)

X
1
0
0
1

D)

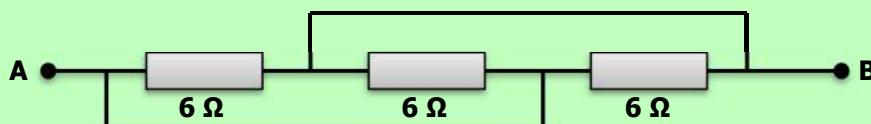
X
0
1
1
1

**Q.25** What is the reading of Ammeter as shown in the circuit diagram?



- A) 1 A  
B) 15 A  
C) 5 A  
D) 10 A

**Q.26** Three  $6\ \Omega$  are connected as shown in the diagram.



What is the resistance between points 'A' and 'B'?

- A)  $6\ \Omega$   
B)  $16\ \Omega$   
C)  $4\ \Omega$   
D)  $2\ \Omega$

**Q.27** The difference between the plates of a parallel plate capacitor is 2.0 mm and area of each plate is  $2.0\ \text{m}^2$ . The plates are in a vacuum. A potential difference of  $1.0 \times 10^4\ \text{V}$  is applied across the plates. Find the capacitance.

- A)  $4 \times 10^{-3}\ \text{F}$   
B)  $3.54 \times 10^{-9}\ \text{F}$   
C)  $8.85 \times 10^{-9}\ \text{F}$   
D)  $9.0 \times 10^{-9}\ \text{F}$

**Q.28** A solenoid 15 cm long has 300 turns of wire. A current of 5 A flows through it. What is the magnitude of magnetic field inside the solenoid?

- A)  $75 \times 10^7\ \text{T}$   
B)  $60 \times 10^{+3}\ \text{T}$   
C)  $4\pi \times 10^{-3}\ \text{T}$   
D)  $750\pi \times 10^{+3}\ \text{T}$

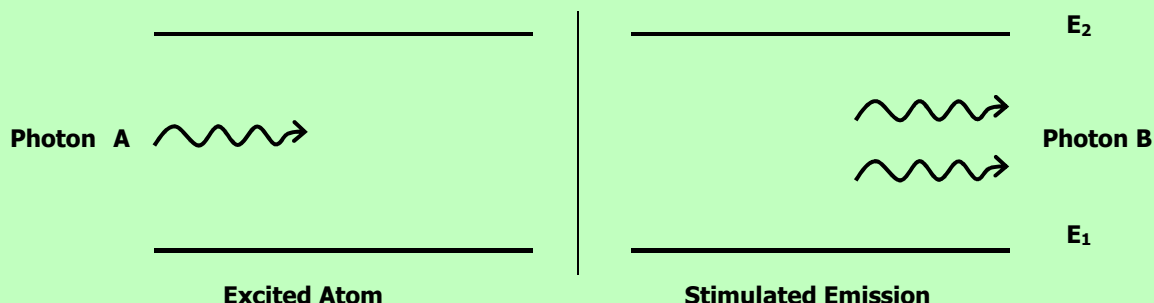
**Q.29** Due to current in a straight conductor the difference between magnetic field lines

- A) Increases away from conductor  
B) Decreases away from conductor  
C) Increases towards conductor  
D) Decreases and then increases towards conductor

**Q.30** Magnetic Resonance Imaging (MRI) is used to identify the image of

- A) Tumors and inflamed tissues  
B) Blood cells  
C) Skin cells  
D) Bone structures

**Q.31** Stimulated emission of two photons 'A' and 'B' during LASER action is shown in figure:



What is the relation of wavelengths of two photons?

- A)  $\lambda_A = \lambda_B$   
B)  $\lambda_A > \lambda_B$   
C)  $\lambda_A < \lambda_B$   
D)  $\lambda_A = 2\lambda_B$

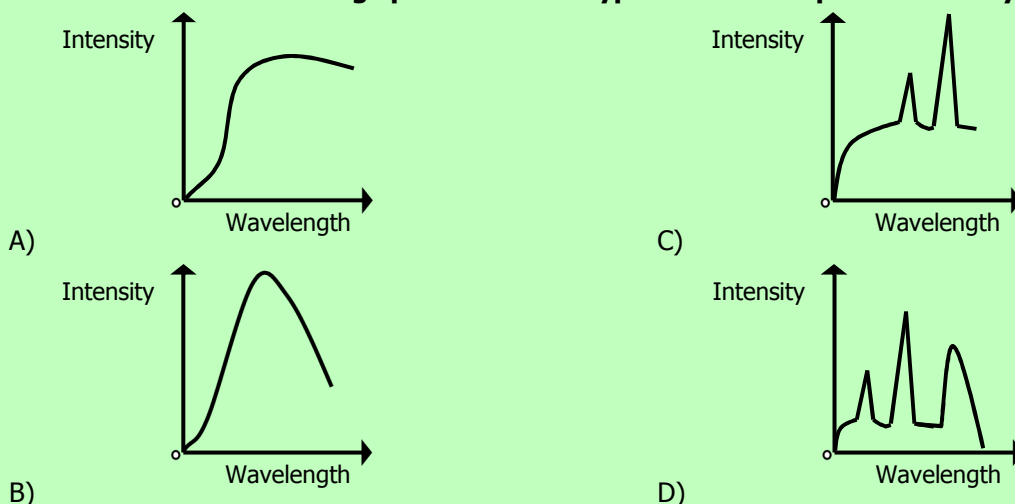
**Q.32** Bones absorb greater amount of incident X-rays than flesh. This is because of the fact that

- A) Bones lie between the flesh  
B) Bones are light in color  
C) Bones contain material of low densities  
D) Bones contain material of high densities

**Q.33 Which of the following techniques is the practical application of X-rays?**

- A) Magnetic Resonance Imaging  
B) Ultrasonography  
C) Computerized Axial Topography  
D) Positron Emission Tomography

**Q.34 Which one of the following spectra is most typical of the output of an X-ray tube?**



**Q.35 Which one of the following has the largest energy content?**

- A)  $\gamma$ -rays  
B) X-rays  
C) Infra-red radiations  
D) Ultra-violet radiations

**Q.36 What will be the energy of accelerated electron used to produce X-rays when the accelerating potential is 2 kV?**

- A)  $2 \times 10^{-19}$  J  
B)  $1.6 \times 10^{-19}$  J  
C)  $3.2 \times 10^{19}$  J  
D)  $3.2 \times 10^{-16}$  J

**Q.37 Process of generating three dimensional images of objects by using laser beam is called**

- A) Photography  
B) 3-D cinema  
C) Holography  
D) Tomography

**Q.38 Which one of the following isotopes of Iodine is used for the treatment of thyroid cancer?**

- A) I - 113  
B) I - 120  
C) I - 131  
D) I - 140

**Q.39 A beta ( $\beta$ ) particle is a fast-moving electron. During a  $\beta$  – decay how the atomic number and mass number of a nucleus change?**

	Atomic Number	Mass Number
A)	Remains the same	Increases by one
B)	Increases by one	Decreases by two
C)	Increases by one	Remains the same
D)	Decreases by two	Decreases by four

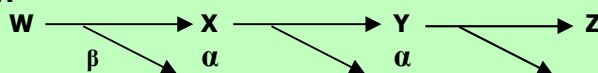
**Q.40 A Uranium isotope  $^{232}_{92}\text{U}$  undergoes one  $\alpha$ -decay and one  $^0_{-1}\beta$  – decay. What is the final product?**

- A) 90  
B) 92  
C) 89  
D) 88

**Q.41 A naturally occurring radioactive element decays two alpha particles. Which one of the following represents status of daughter element with respect to mass number 'A' and charge number 'Z'?**

- A) 'Z' decreases by 4 and 'A' decreases by 2  
B) 'Z' decreases by 2 and 'A' decreases by 4  
C) 'Z' decreases by 4 and 'A' decreases by 8  
D) 'Z' decreases by 8 and 'A' decreases by 4

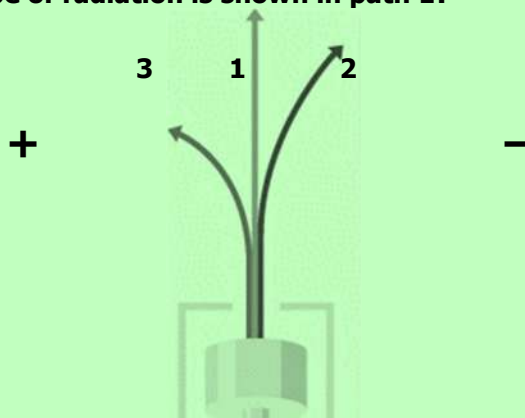
**Q.42 A radioactive isotope 'W' decays to 'X' which decays to 'Y' and 'Y' decays to 'Z' as represented by the figure below:**



**What is the change in the atomic number from 'W' to 'Z'?**

- A) Increases by 3  
B) Decreases by 3  
C) Increases by 5  
D) Decreases by 5

- Q.43** Three paths of radioactive radiations are observed as shown in the figure in the presence of electric field. Which type of radiation is shown in path 1?



- A) Alpha  
B) Beta  
C) Gamma  
D) Cathode rays
- Q.44** What is the absorbed dose 'D' of a sample of 2 kg which is given an amount of 100 J of radioactive energy?
- A) 200 Gy  
B) 102 Gy  
C) 50 Gy  
D) 98 Gy

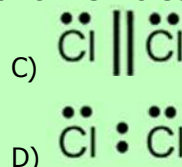
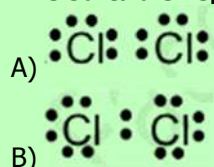
## CHEMISTRY

- Q.45** A polymer of empirical formula  $\text{CH}_2$  has molar mass of  $28000 \text{ g mol}^{-1}$ . Its molecular formula will be
- A) 100 times that of its empirical formula  
B) 200 times that of its empirical formula  
C) 500 times that of its empirical formula  
D) 2000 times that of its empirical formula
- Q.46** The number of molecules in 9 g of ice ( $\text{H}_2\text{O}$ ) is
- A)  $6.02 \times 10^{24}$   
B)  $6.02 \times 10^{23}$   
C)  $3.01 \times 10^{24}$   
D)  $3.01 \times 10^{23}$
- Q.47** Ice is less dense than water at:
- A)  $0^\circ\text{C}$   
B)  $4^\circ\text{C}$   
C)  $-4^\circ\text{C}$   
D)  $2^\circ\text{C}$
- Q.48** At a given temperature and pressure, the one which shows marked deviation from ideal behavior is
- A)  $\text{N}_2$   
B)  $\text{N}_3$   
C)  $\text{CO}_2$   
D) He
- Q.49** According to the number of protons, neutrons and electrons given in the table, which one of the following options is correct?

Species	Proton	Neutron	Electron
As	33	42	30
Ga	31	39	28
Ca	20	20	20

- A)  $\text{As}^{-3}$ ,  $\text{Ga}^{+3}$ , Ca  
B)  $\text{As}^{+1}$ ,  $\text{Ga}^{+2}$ , Ca  
C)  $\text{As}^{+3}$ ,  $\text{Ga}^{+3}$ ,  $\text{Ca}^{+2}$   
D)  $\text{As}^{+1}$ , Ga,  $\text{Ca}^{+2}$
- Q.50** If the  $e/m$  value of electron is  $1.7588 \times 10^{11} \text{ coulombs Kg}^{-1}$ , then what would be the mass of electron in grams (charge on electron is  $1.6022 \times 10^{-19} \text{ coulombs}$ )?
- A)  $9.1095 \times 10^{-31} \text{ g}$   
B)  $91.095 \times 10^{-31} \text{ g}$   
C)  $9.1095 \times 10^{-28} \text{ g}$   
D)  $0.919095 \times 10^{-33} \text{ g}$

- Q.51** The suitable representation of dot structure of chlorine molecule is:





**Q.52** When the two partially filled atomic orbitals overlap in such a way that the probability of finding electron is maximum around the line joining the two nuclei, the result is the formation of

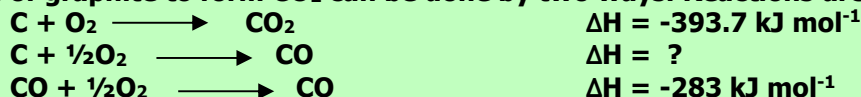
- A) Sigma Bond  
B) Pi-Bond  
C) Hydrogen Bond  
D) Metallic Bond

**Q.53**  $2\text{H}_2 + \text{O}_2 \longrightarrow 2\text{H}_2\text{O}$   $\Delta H = +285.5 \text{ kJ mol}^{-1}$

What will be the enthalpy change in the above reaction?

- A) 205.5 kJ/mol  
B) Zero kJ/mol  
C) -205.5 kJ/mol  
D) 1 kJ/mol

**Q.54** Combustion of graphite to form  $\text{CO}_2$  can be done by two ways. Reactions are given as follows:



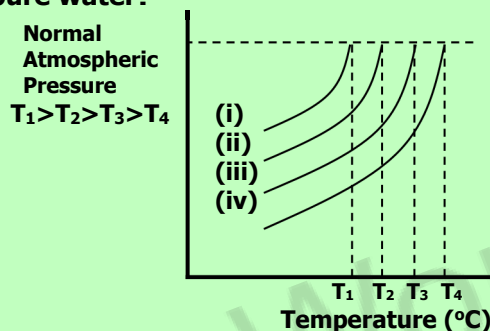
What will be enthalpy of formation of CO?

- A) -676 kJ mol<sup>-1</sup>  
B) -110 kJ mol<sup>-1</sup>  
C) 110 kJ mol<sup>-1</sup>  
D) 676 kJ mol<sup>-1</sup>

**Q.55** The value of equilibrium constant ( $K_c$ ) for the reaction  $2\text{HF}_{(s)} \rightleftharpoons \text{H}_{2(g)} + \text{F}_{2(g)}$  is  $10^{-13}$  at  $2000^\circ\text{C}$ . Calculate the value of  $K_p$  for this reaction:

- A)  $2 \times 10^{-13}$   
B)  $10^{-13}$   
C)  $186 \times 10^{-13}$   
D)  $3.48 \times 10^{-9}$

**Q.56** The vapor pressure lines for pure as well as solutions of different concentrations are shown. Which line represents pure water?



- A) (i)  
B) (ii)  
C) (iii)  
D) (iv)

**Q.57** In  $\text{SO}_4^{2-}$  the oxidation number of Sulphur is

- A) -8  
B) +8  
C) -6  
D) +6

**Q.58** Coinage metals Cu, Ag, and Au are the least reactive because they have:

- A) Negative reduction potential  
B) Positive reduction potential  
C) Negative oxidation potential  
D) Positive oxidation potential

**Q.59** What will be the pH of a solution of NaOH with a concentration of  $10^{-3} \text{ M}$ ?

- A) 3  
B) 14  
C) 11  
D) 7

**Q.60** If the reactant or product of a chemical reaction can absorb ultraviolet, visible or infrared radiation, then the rate of a chemical reaction can best be measured by which one of the following methods?

- A) Chemical method  
B) Spectrometry  
C) Graphical method  
D) Differential method

**Q.61** For the reaction  $2\text{NO} + \text{O}_2 \rightleftharpoons 2\text{NO}_2$ , the rate equation for the forward reaction is

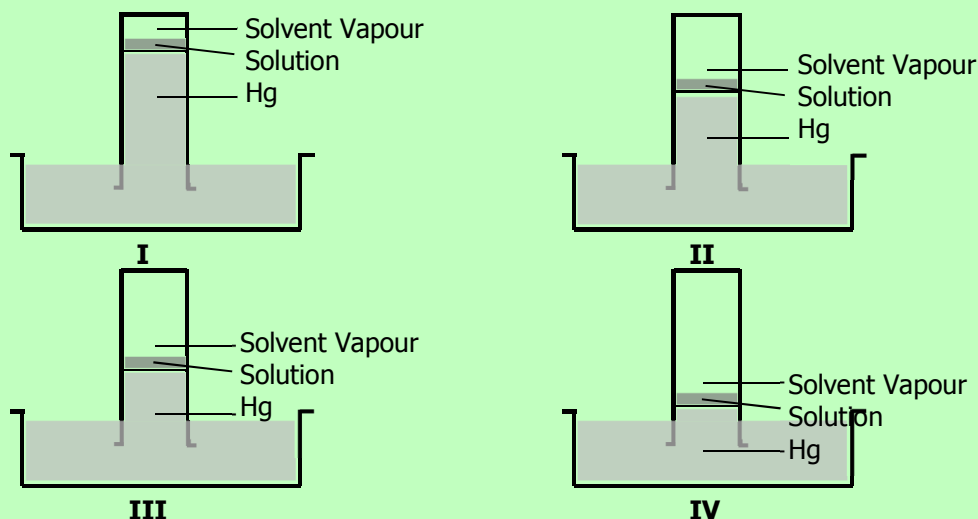
- A) Rate =  $k [\text{NO}] [\text{O}_2]$   
B) Rate =  $k [\text{NO}]^2 [\text{O}_2]$   
C) Rate =  $k [\text{NO}_2]^2$   
D) Rate =  $k [\text{NO}_2]$

**Q.62** Radon is \_\_\_\_\_ emitter and being radioactive is used in \_\_\_\_\_ treatment in radiotherapy:

- A)  $\beta$ , cancer  
B)  $\alpha$ , cancer  
C)  $\alpha$ , kidney stone  
D)  $\beta$ , kidney stone



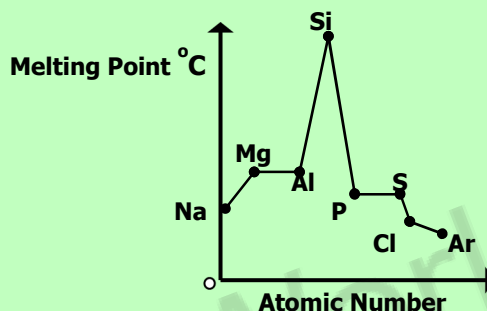
- Q.63** One mole of glucose was dissolved in 1 kg of water, ethanol, ether and benzene separately and the molal boiling point constant of each individual solution was found to be 0.52, 1.75, 2.16 and 2.70 in the units of  $^{\circ}\text{C kg mol}^{-1}$  respectively. Which of the following figures shows benzene as solvent in solution?



A) I  
B) II

C) III  
D) IV

- Q.64** The trends, in melting points of the elements of 3rd period, are depicted in figure below.



The sharp decrease observed from 'Si' to 'P' is due to

- A) Decrease in atomic radius from 'Si' to 'P'  
B) Change in bonding and structure of two elements  
C) Different universities of two elements  
D) Increase in electron density from 'Si' to 'P'

- Q.65** Arrange the following elements according to the trend of ionization energies. (C, N, Ne, B)

- A)  $\text{Ne} < \text{N} < \text{C} < \text{B}$   
B)  $\text{B} < \text{N} < \text{C} < \text{Na}$   
C)  $\text{B} < \text{C} < \text{N} < \text{Na}$   
D)  $\text{Ne} < \text{B} < \text{C} < \text{N}$

- Q.66** Which one of the following noble gases is used for providing an inert atmosphere for welding?

- A) Helium  
B) Neon  
C) Argon  
D) Krypton

- Q.67** Electronic configuration of Manganese (Mn) is

- A) Mn (Ar)  $\begin{array}{ccccc} 3d & & 4s \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \end{array}$   
B) Mn (Ar)  $\begin{array}{ccccc} 3d & & 4s \\ \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow \\ \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow \end{array}$   
C) Mn (Ar)  $\begin{array}{ccccc} 3d & & 4s \\ \uparrow\downarrow & \uparrow\downarrow & \uparrow & \uparrow & \uparrow \\ \uparrow\downarrow & \uparrow\downarrow & \uparrow & \uparrow & \uparrow \end{array}$   
D) Mn (Ar)  $\begin{array}{ccccc} 3d & & 4s \\ \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow & \uparrow \\ \uparrow\downarrow & \uparrow\downarrow & \uparrow\downarrow & \uparrow & \uparrow \end{array}$

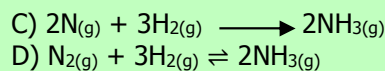
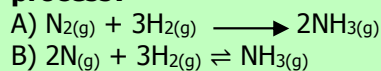
- Q.68** The percentage of carbon in different types of iron products is in the order of

- A) Cast Iron > Wrought Iron > Steel  
B) Wrought Iron > Steel > Cast Iron  
C) Cast Iron > Steel > Wrought Iron  
D) Cast Iron > Steel > Wrought Iron

- Q.69** Which one of the following is correct equation of 1<sup>st</sup> ionization of sulphuric acid?

- A)  $\text{H}_2\text{SO}_{4(\text{aq})} + \text{H}_2\text{O}_{(\text{l})} \longrightarrow 2\text{H}^+ + \text{SO}_4^{2-}$   
B)  $\text{H}_2\text{SO}_{4(\text{aq})} + \text{H}_2\text{O}_{(\text{l})} \longrightarrow \text{H}^+_{(\text{aq})} + \text{HSO}_4^-$   
C)  $\text{H}_2\text{SO}_{4(\text{aq})} + \text{H}_2\text{O}_{(\text{l})} \longrightarrow 2\text{H}^+ + \text{SO}_4^{2-}$   
D)  $\text{H}_2\text{SO}_{4(\text{aq})} + \text{H}_2\text{O}_{(\text{l})} \longrightarrow \text{H}_3\text{O}^+ + \text{SO}_4^{2-}$

**Q.70 Which one of the following is the correct chemical reaction for Ammonia formation by Haber process?**



**Q.71 The pH of acid rain is**

- A) 7  
 B) Between 5 and 7

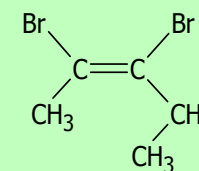
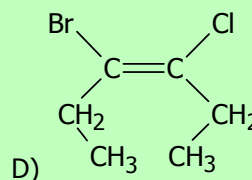
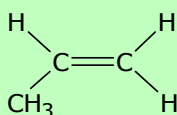
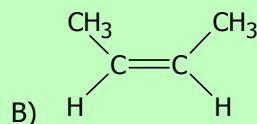
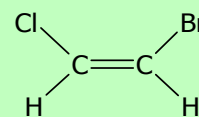
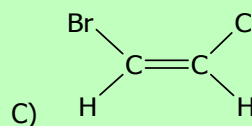
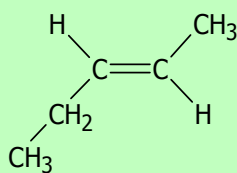
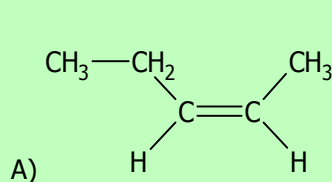
- C) Below 5  
 D) Between 7 and 14

**Q.72 Which one of the following products is obtained when sulphur trioxide is absorbed in concentrated sulphuric acid?**

- A) Oleum  
 B) Aqua Regia

- C) Hydrogen sulphide  
 D) Sulphate ion

**Q.73 Which one of the following pair of compounds is cis and trans isomers of each other?**



**Q.74 Which one of the following compound is a ketone?**

- A)  $\text{CH}_3 - \text{O} - \text{CH}_2 - \text{CH}_3$   
 B)  $\text{CH}_3 - \text{CO} - \text{CH}_2 - \text{CH}_3$

- C)  $\text{CH}_3\text{COCOOH}$   
 D)  $\text{CH}_3 - \text{CH}_2\text{CHO}$

**Q.75 Addition of unsymmetrical reagent to an unsymmetrical alkene is governed by:**

- A) Cannizzaro's Reaction  
 B) Kirchhoff Rule

- C) Aldol Condensation  
 D) Markownikov's Rule

**Q.76 Ethylene glycols are used as**

- A) Anesthetic  
 B) Knocking agent

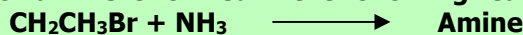
- C) Freezing agent  
 D) Anti-freezing agent

**Q.77 The halothane used in hospitals as an anesthetic is chemically**

- A) 1-Bromo-1-chloro-2, 2, 2-trifluoroethane  
 B) 2-Bromo-2-chloro-1, 1, 1-trifluoroethane

- C) 1, 1, 1-Trifluoro-2-bromo-2-chloroethane  
 D) 2-Chloro-2-bromo-1, 1, 1-trifluoroethane

**Q.78 If halogenoalkanes are mixed with an excess of ethanoic ammonia and heated under pressure, amine are formed. Which amine is formed in the following reaction?**



- A)  $\text{CH}_3 - \text{CH}_2 - \text{NH} - \text{CH}_2 - \text{CH}_3$   
 B)  $\text{CH}_3 - \text{CH}_2 - \text{NH}_2$

- C)  $\text{CH}_3 - \text{CH}_2 - \text{CH}_2 - \text{NH}_2$   
 D)  $\text{H}_2\text{N} - \text{CH}_2 - \text{CH}_2 - \text{NH}_2$

**Q.79 Primary, secondary and tertiary alcohols can be identified and distinguished by**

- A) Lucas test  
 B) Iodoform test

- C) Baeyer's test  
 D) Silver mirror test

**Q.80 Which one of the following alcohol is indicated by formation of yellow crystals in Iodoform test?**

- A) Methanol  
 B) Ethanol

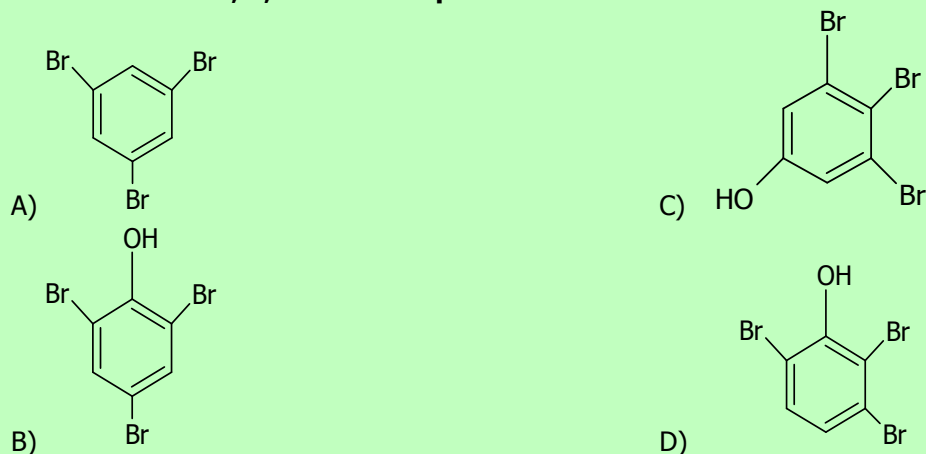
- C) Butanol  
 D) Propanol

**Q.81 Ethyl butyrate and butyl butanoate are esters with the flavor of**

- A) Pear  
 B) Banana

- C) Pineapple  
 D) Apple

**Q.82** The formula of 2, 4, 6-tribromo phenol is



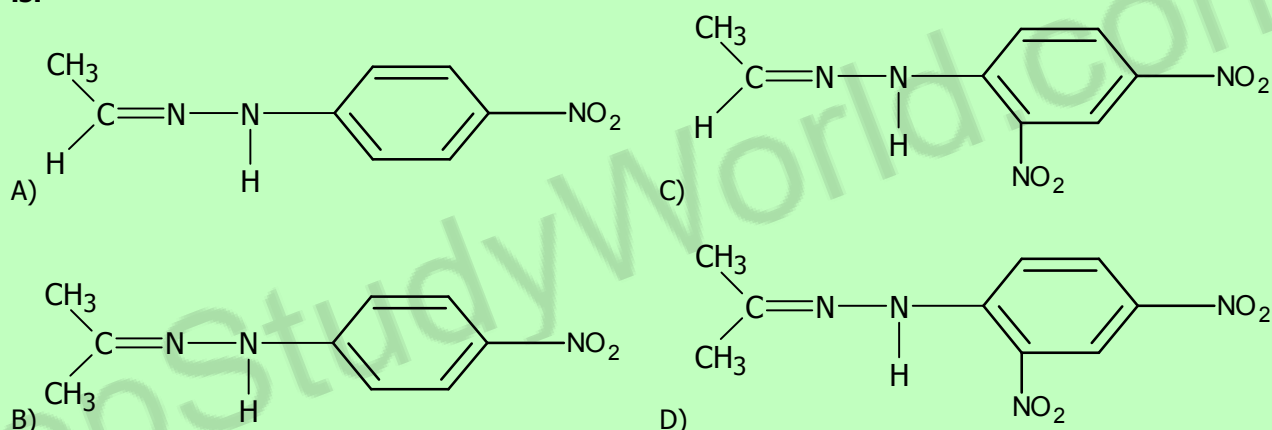
**Q.83** Which one of the following groups is indicated when HCl is formed by reaction of ethanol with phosphorous pentachloride?

- A) Amino group  
B) Hydroxyl group  
C) Halide group  
D) Hydride group

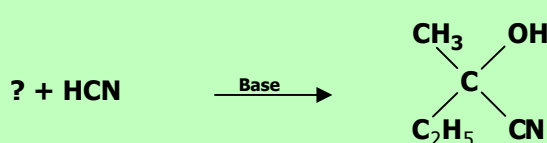
**Q.84** A student mixed ethyl alcohol with small amount of sodium dichromate and added it to the hot solution of dilute sulphuric acid. A vigorous reaction took place. He distilled the product formed immediately. What was the product?

- A) Acetone  
B) Acetic acid  
C) Dimethyl ether  
D) Acetaldehyde

**Q.85** The structural formula of the product of reaction of acetone with 2, 4-dinitrophenyl hydrazine is:



**Q.86** For the reaction:



- A)  $\text{C}_2\text{H}_5\text{COCH}_3$   
B)  $\text{C}_2\text{H}_5\text{CH}(\text{CH}_3)\text{OH}$   
C)  $\text{CH}_3\text{COCH}_3$   
D)  $\text{C}_2\text{H}_5\text{CH}_2\text{CHO}$

**Q.87** Acetamide is formed by dehydration of

- A) Oxalic acid  
B) Ethanoic acid  
C) Butanoic acid  
D) Propanoic acid

**Q.88** Organic compounds 'X' and 'Y' both can react with Na-Metal to evolve hydrogen gas. If 'X' and 'Y' react with each other form an organic compound 'Z' which gives fruity smell. What type of compound 'X', 'Y' and 'Z' are?

	X	Y	Z
A)	Alcohol	Ester	Acetic Acid
B)	Alcohol	Ester	Mineral Acid
C)	Alcohol	Acetic Acid	Ester
D)	Alcohol	Mineral Acid	Ester

**Q.89 The amino acids which are not prepared in human body are called**

- A) Essential amino acids  
B) Non-essential amino acids  
C) Alpha amino acids  
D) Beta amino acids

**Q.90 Indicate the cyclic amino acid from the following:**

- A) Cysteine  
B) Serine  
C) Haloamine  
D) Proline

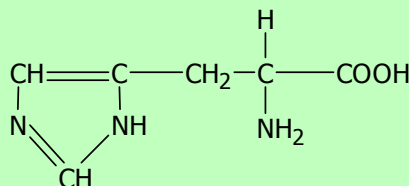
**Q.91 Which one of the following is Glutamic Acid?**

- A)  $\begin{array}{c} \text{H} \\ | \\ \text{H}_2\text{N}-\text{C}-\text{COOH} \\ | \\ \text{CH}_2\text{CH}_2\text{CO}_2\text{H} \end{array}$   
B)  $\begin{array}{c} \text{H} \\ | \\ \text{H}_2\text{N}-\text{C}-\text{COOH} \\ | \\ \text{CH}_2\text{COOH} \end{array}$   
C)  $\begin{array}{c} \text{H} \\ | \\ \text{H}_2\text{N}-\text{C}-\text{COOH} \\ | \\ \text{H} \end{array}$   
D)  $\begin{array}{c} \text{H} \\ | \\ \text{H}_2\text{N}-\text{C}-\text{COOH} \\ | \\ \text{CH}_3 \end{array}$

**Q.92 At low pH or in acidic condition amino acid exists as**

- A) Anion  
B) Cation  
C) Zwitter ion  
D) Neutral specie

**Q.93 The structure shown below represents:**



- A) Proline  
B) Histidine  
C) Glycine  
D) Lysine

**Q.94 Which one of the following reagent is used for identification of amino acids?**

- A) Fehling's solution  
B) Benedict's solution  
C) Ninhydrin  
D) Copper (II) Sulphate

**Q.95 Which one of the following is an example of condensation polymer?**

- A) Polyvinylchloride  
B) Polystyrene  
C) Polyethene  
D) Polyamide

**Q.96 Among the most common disaccharides, which one of the followings is present in the milk?**

- A) Sucrose  
B) Maltose  
C) Fructose  
D) Lactose

**Q.97 Fats are a type of lipid called glycerides. They are esters of long chain carboxylic acids:**

- A) Propene-1, 2, 3-triol  
B) Propane-1, 2, 3-triol  
C) Propene-1, 2, 3-diol  
D) Propane-1, 2, 3-diol

**Q.98 Which one of the following base is NOT present in RNA?**

- A) Cytosine  
B) Adenine  
C) Thymine  
D) Guanine

**Q.99 Collagen proteins are present in \_\_\_\_\_ throughout the body**

- A) Muscle  
B) Red blood cells  
C) Tendons  
D) Blood plasma

**Q.100 \_\_\_\_\_ is an eye irritant.**

- A) Peroxyacetyl nitrate  
B) Peroxyacetyl nitrite  
C) Peroxymethoxy aniline  
D) Peroxyacetyl aniline

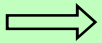
- Q.101** Polystyrene is an addition polymer. Which one of the following structures represents the monomer of polystyrene?
- A)  $\text{CH}_2=\text{CH}_2$  C)  $\text{CH}_2=\text{CH}-\text{Cl}$   
 B)  $\text{CH}_2=\text{CH}-\text{CH}_3$  D)  $\text{CH}_2=\text{CH}-\text{C}_6\text{H}_5$
- Q.102** Which one of the following pollutants can cause death of a person by binding with haemoglobin of red blood cells?
- A) Chlorofluorocarbons C) Carbon monoxide  
 B) Oxides of Sulphur D) Oxides of nitrogen

## ENGLISH

- Q.103** It is our national duty to \_\_\_\_\_ our vote in the general election.
- A) Throw C) Drop  
 B) Cast D) Refuse
- Q.104** She is intelligent enough to \_\_\_\_\_ things to serve her own purpose.
- A) Pick C) Give  
 B) Maneuver D) Take
- Q.105** She \_\_\_\_\_ about the excitement on hearing the news of her sister's wedding.
- A) Ran C) Talked  
 B) Jigged D) Wept
- Q.106** Everyone should be \_\_\_\_\_ duties and assignments according to his/her abilities.
- A) Prevented C) Delegated  
 B) Advised D) Suggested

⇒ **SPOT THE ERROR:** In the following sentences, some segments of each sentence are underlined. Your task is to identify that underlined segment of the sentence, which contains the mistake that needs to be corrected. Fill the Circle corresponding to that letter under the segment in the MCQ Response Form.

- Q.107** We were ten miles up the highway when I happened to saw this classified advertisement in the newspaper.
- A) B) C) D)
- Q.108** "All is well what ends well", said the father when he had finished the story.
- A) B) C) D)
- Q.109** Rubber tubes upon which children had swing in backyards hung suspended like stopped clock pendulums in the blazing air.
- A) B) C) D)
- Q.110** The child was fully dressed and sitting in her father's lap near the kitchen table.
- A) B) C) D)
- Q.111** The three Abdal Rahman, like his illustrious predecessor, was a young man of twenty-three when he took office.
- A) B) C) D)
- Q.112** Enlarged and beautified by later Caliphs, Al-Zahra become the nucleus of a royal suburb whose remain partly evacuated in and after 1910, can still be seen.
- A) B) C) D)



In each of the following question, four alternative sentences are given. Choose the **CORRECT** one and fill the Circle corresponding to that letter in the MCQ Response Form.

**Q.113**

- A) I thought it over very carefully before broaching the subject to Asma.
- B) I thought it on very carefully before broaching the subject to Asma.
- C) I thought it by very carefully before broaching the subject to Asma.
- D) I thought it upon very carefully before broaching the subject to Asma.

**Q.114**

- A) He left into a blaze of anger.
- B) He left with a blaze of anger.
- C) He left in a blaze of anger.
- D) He left back in a blaze of anger.

**Q.115**

- A) Shahid battered Anwar down submission.
- B) Shahid battered Anwar into submission.
- C) Shahid down battered Anwar into submission.
- D) Shahid was battered Anwar down submission.

**Q.116**

- A) Pride was an intrinsic component of his personal makeup.
- B) Pride was a intrinsic component of his personal makeup.
- C) Pride an intrinsic component of his personal makeup.
- D) Pride were an intrinsic component of his personal makeup.

**Q.117**

- A) The government introduced tax laws which gave incentives to factory workers to reduce pollution.
- B) The government introduced tax laws who gave incentives to factory workers to reduce pollution.
- C) The government introduced tax laws which have incentives to factory workers to reduce pollution.
- D) The government introduced tax laws which has incentives to factory workers to reduce pollution.

**Q.118**

- A) It was cold and foggy, and he dared not to going out.
- B) It was cold and foggy, and he dared not for going out.
- C) It was cold and foggy, and he dared not go out.
- D) It was cold and foggy, and he dared not gone out.

**Q.119**

- A) There was much cheering and singing and a bread fighting across the dining hall.
- B) There was much cheering and singing and a bread fight across the dining hall.
- C) There was more cheer and singing and a bread fighting across the dining hall.
- D) There was much cheer and singing and a bread fighting across the dining hall.

**Q.120**

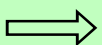
- A) Both parents of Jameel were then long died.
- B) Both parents of Jameel were then long dead.
- C) Both parents of Jameel were by then long dead.
- D) Both parents of Jameel were by then long died.

**Q.121**

- A) But the men ate their supper with good appetites.
- B) But the men ate their supper in good appetites.
- C) But the men ate their supper for good appetites.
- D) But the men ate their supper into good appetites.

**Q.122**

- A) The boy was afraid of going to jail.
- B) The boy was afraid off going to jail.
- C) The boy was afraid on going to jail.
- D) The boy was afraid by going to jail.



In each of the following question, four alternative meanings of a word are given. You have to select the **NEAREST CORRECT MEANING** of the given word and fill the appropriate Circle on the MCQ Response Form.

**Q.123 DISDAIN**

- A) Vice
- B) Dislike
- C) Contempt
- D) Ignorance

- Q.124 SAGACITY**  
 A) Suspicious  
 B) Cruelty  
 C) Wisdom  
 D) Foolishness
- Q.125 FLAUNT**  
 A) Snipe  
 B) Dance  
 C) Show off  
 D) Preserve
- Q.126 URBANE**  
 A) Suave  
 B) Rough  
 C) Bad  
 D) Dishonest
- Q.127 DIASPORA**  
 A) Gathering  
 B) Dispersion  
 C) Alliance  
 D) Animosity
- Q.128 IMPETUOUS**  
 A) Honest  
 B) Impulsive  
 C) Lazy  
 D) Liar
- Q.129 VOCIFEROUS**  
 A) Hidden  
 B) Loud  
 C) Strong  
 D) Weak
- Q.130 TRANSIENT**  
 A) Permanent  
 B) Temporary  
 C) Long  
 D) Good
- Q.131 PROWESS**  
 A) Hindrance  
 B) Skill  
 C) Reservation  
 D) Bad name
- Q.132 BEQUEATH**  
 A) Grant  
 B) Imbibe  
 C) Irrigate  
 D) Hope

## **BIOLOGY**

- Q.133 The use of living organisms in industry for the production of useful products is known as**  
 A) Parasitology  
 B) Biochemistry  
 C) Biotechnology  
 D) Molecular Biology
- Q.134 Plants having foreign DNA incorporated into their cells are called:**  
 A) Clone plants  
 B) Transgenic plants  
 C) Parthenocarpic plants  
 D) Mutant giants
- Q.135 Treatment by using attenuated culture of bacteria is called**  
 A) Chemotherapy  
 B) Sterilization  
 C) Antisepsis  
 D) Vaccination
- Q.136 The major cause of hepatitis B is**  
 A) Blood transfusion  
 B) Blood clotting  
 C) Absence of fibrinogen  
 D) Contaminated soil
- Q.137 During animal cell division, the spindle fibres are formed from**  
 A) Mitochondria  
 B) Centrioles  
 C) Ribosomes  
 D) Lysosomes
- Q.138 Which component of the cell is concerned with cell secretions?**  
 A) Plasma membrane  
 B) Golgi complex  
 C) Cytoskeleton  
 D) Mitochondria



- Q.139 During which period of interphase (cell cycle) DNA is synthesized?**  
A) G<sub>1</sub> C) S  
B) G<sub>2</sub> D) G<sub>0</sub>
- Q.140 Peptidoglycan or murein is a special or distinctive feature of cell wall in**  
A) Algae C) Bacteria  
B) Fungi D) Plants
- Q.141 In mitochondria, small knob-like structures called F1 particles are found in:**  
A) Outer membrane C) Inner membrane  
B) Outer compartment D) Inner compartment
- Q.142 The most critical phase of mitosis which ensures equal distribution of chromatids in the daughter cells is**  
A) Prophase C) Anaphase  
B) Metaphase D) Telophase
- Q.143 Non-disjunction of 21<sup>st</sup> pair of chromosomes in one of the gamete leads to 47 chromosomes in one individual. This condition is called**  
A) Turner's syndrome C) Down's syndrome  
B) Klinefelter's syndrome D) Jacob's syndrome
- Q.144 The intake of liquid materials across the cell membrane is**  
A) Phagocytosis C) Pinocytosis  
B) Endocytosis D) Exocytosis
- Q.145 Which one of the following is the site of oxidative phosphorylation in mitochondria?**  
A) Cristae C) Outer membrane  
B) Matrix D) Ribosomes
- Q.146 Organelle involved in the synthesis of ATP is**  
A) Ribosome C) Nucleus  
B) Mitochondria D) Centriole
- Q.147 The most common respiratory substrate as a source of energy is**  
A) Glucose C) Fructose  
B) Sucrose D) Insulin
- Q.148 The simplest monosaccharide containing keto group is**  
A) Glyceraldehyde C) Glucose  
B) Dihydroxy acetone D) Ribose
- Q.149 If the genetic code is made up of three nucleotides, then total possible genetic codes will be**  
A) 4 C) 64  
B) 20 D) 61
- Q.150 Waterproof surfaces like cuticle of leaf and protective covering of an insect's body are**  
A) Phospholipids C) Terpenoids  
B) Waxes D) Acyl glycerols
- Q.151 In translation the terminating codon is**  
A) GUA C) UUG  
B) UAA D) AGU
- Q.152 All co-enzymes are derived from**  
A) Proteins C) Metal ions  
B) Carbohydrates D) Vitamins
- Q.153 The competitive inhibitors have structural similarity with**  
A) Active site C) Substrate  
B) Binding site D) Co-enzyme

- Q.154 Which one of the following is the optimum pH of pancreatic lipase enzyme?**  
 A) 7.60 C) 9.00  
 B) 8.00 D) 9.70
- Q.155 A co-factor tightly bound to the enzyme on the permanent basis is called**  
 A) Activator C) Prosthetic group  
 B) Co-enzyme D) Apo-enzyme
- Q.156 Which one of the following cells are mainly infected by HIV?**  
 A) T-killer lymphocytes C) B-plasma cells  
 B) T-helper lymphocytes D) B-memory cells
- Q.157 Which one of the following antibiotic causes permanent discoloration of teeth in young children if it is misused?**  
 A) Penicillin C) Sulfonamide  
 B) Streptomycin D) Tetracycline
- Q.158 What are the sequence of steps in which a bacteriophage attacks bacteria and injects its DNA?**  
 A) Landing → Tail contraction → Penetration → DNA Injection  
 B) Penetration → Landing → Tail contraction → DNA Injection  
 C) Tail contraction → Landing → DNA Injection → Penetration  
 D) Landing → Penetration → Tail contraction → DNA Injection
- Q.159 Athlete's Foot is a disease caused by**  
 A) Bacteria C) Fungus  
 B) Virus D) Arthropod
- Q.160 Ascaris is which one of the following?**  
 A) Ectoparasite C) Respiratory tract parasite  
 B) Intestinal parasite D) Urinogenital tract parasite
- Q.161 Polymorphism is a feature exhibited by members of**  
 A) Coelenterates C) Porifera  
 B) Arthropoda D) Platyhelminthes
- Q.162 Which one of the following is the primary host of liver fluke?**  
 A) Man C) Snail  
 B) Sheep D) Dog
- Q.163 Which one of the following is an example of a free living carnivorous flatworm?**  
 A) Liver fluke C) Tapeworm  
 B) Dugesia D) Schistosoma
- Q.164 The sources of staple food for man are plants which belong to the family:**  
 A) Mimosaceae C) Rosaceae  
 B) Poaceae D) Fabaceae
- Q.165 In human, Escherichia coli is involved in the formation of**  
 A) Calcium C) Vitamin A  
 B) Vitamin D D) Vitamin K
- Q.166 The function of Goblet cells is to secrete**  
 A) Gastrin C) Pepsinogen  
 B) Hydrochloric acid D) Mucus
- Q.167 Gastric glands are composed of \_\_\_\_\_ types of cells**  
 A) Two C) Four  
 B) Three D) Five
- Q.168 HCl in gastric juice is secreted by which one of the following cells?**  
 A) Chief cells C) Mucous cells  
 B) Oxyntic cells D) Kupffer cells

**Q.169 Histamine is produced by which one of the following cells?**

- A) Basophils
- B) Platelets
- C) Monocyte
- D) Eosinophils

**Q.170 Which one of the following is the most numerous / commonest of white blood cells?**

- A) Eosinophils
- B) Monocytes
- C) Neutrophils
- D) Lymphocytes

**Q.171 The oxygenated blood from lungs to heart is transported by the**

- A) Pulmonary artery
- B) Coronary artery
- C) Pulmonary vein
- D) Hepatic artery

**Q.172 Which one of the following proteins takes part in blood clotting?**

- A) Prothrombin
- B) Fibrinogen
- C) Immunoglobulin
- D) Globulin

**Q.173 Which one of the following is responsible for the production of concentrated urine?**

- A) Juxtamedullary nephrons
- B) Cortical nephrons
- C) Proximal tubule
- D) Distal tubule

**Q.174 Reabsorption of useful constituents normally takes place in which one of the following?**

- A) Proximal tubule
- B) Distal tubule
- C) Bowman's capsule
- D) Glomerulus

**Q.175 Which one of the following parts of excretory system in humans acts as countercurrent multiplier?**

- A) Kidney
- B) Cortex
- C) Medulla
- D) Loop of Henle

**Q.176 Anti-Diuretic Hormone (ADH) is released from**

- A) Anterior pituitary lobe
- B) Posterior pituitary lobe
- C) Hypothalamus
- D) Thalamus

**Q.177 Which one of the following is the main nitrogenous waste product in humans?**

- A) Urea
- B) Ammonia
- C) Salts
- D) Uric acid

**Q.178 The right and left cerebral hemispheres are connected by a thick band of nerve fibres called:**

- A) Medulla
- B) Corpus callosum
- C) Pons
- D) Hippocampus

**Q.179 The part of the brain which guides smooth and accurate motions and maintains body position is called**

- A) Cerebrum
- B) Cerebellum
- C) Pons
- D) Medulla

**Q.180 Which one of the following is the effect of sympathetic nervous system?**

- A) Constriction of bronchi
- B) Decrease in heart rate
- C) Promotes digestion or peristalsis
- D) Dilates the pupil

**Q.181 High levels of aluminium may contribute to the onset of which one of the following?**

- A) Parkinson's disease
- B) Epilepsy
- C) Alzheimer's disease
- D) Gonorrhea

**Q.182 Testosterone is produced by which one of the following?**

- A) Sertoli cells
- B) Germinal epithelium
- C) Interstitial cells
- D) Spermatogonia

**Q.183 The oocyte released during ovulation is in**

- A) Anaphase I
- B) Prophase I
- C) Metaphase I
- D) Metaphase II

- Q.184 Yellowish glandular structure formed after the release of egg from follicle is called**  
 A) Corpus callosum C) Corpus luteum  
 B) Graafian follicle D) Follicle atresia
- Q.185 On puberty, the development of primary follicles is stimulated by**  
 A) ICSH C) LH  
 B) FSH D) Estrogen
- Q.186 Causative agent of a sexually transmitted disease that affects mucous membrane of the urinogenital tract is**  
 A) Staphylococcus aureus C) Neisseria gonorrhoeae  
 B) Treponema pallidum D) Escherichia coli
- Q.187 In a human vertebral column, the number of \_\_\_\_\_ vertebrae is 7.**  
 A) Cervical C) Lumbar  
 B) Thoracic D) Sacrum
- Q.188 Which one of the following structures holds the bones together?**  
 A) Joints C) Fibrous capsules  
 B) Cartilages D) Ligaments
- Q.189 Which one of the following cartilages is the most abundant in the human body?**  
 A) Elastic cartilage C) Fibrous Cartilage  
 B) Chondrous cartilage D) Hyaline Cartilage
- Q.190 The repeated protein pattern of myofibrils is called**  
 A) Sarcomere C) Sarcolemma  
 B) Zyomere D) Cross bridges
- Q.191 When more energy is required in muscle contraction then that energy can also be produced by \_\_\_\_\_ as a secondary source.**  
 A) Glucose C) Fructose  
 B) Phosphocreatine D) Lactic acid
- Q.192 Which one of the following is a steroid hormone?**  
 A) Glucagon C) Epinephrine  
 B) Thyroxine D) Oestrogen
- Q.193 The gonadotrophic hormones of anterior lobe of pituitary include:**  
 A) Prolactin, Thyroid Stimulating Hormone, Somatotropin Hormone  
 B) Follicle Stimulating Hormone, Luteinizing Hormone, Prolactin  
 C) Adrenocorticotrophic Hormone, Luteinizing Hormone, Follicle Stimulating Hormone  
 D) Luteinizing Hormone, Follicle Stimulating Hormone, Thyroid Stimulating Hormone
- Q.194 Over-activity of cortical hormone of adrenal gland causes**  
 A) Addison's disease C) Cushing's disease  
 B) Parkinson's disease D) Down's syndrome
- Q.195 How many iodine atoms are present in thyroxine?**  
 A) 3 C) 2  
 B) 4 D) 5
- Q.196 T-lymphocytes recognize antigen and attack microorganisms or transplanted organ and tissues. This effect is called**  
 A) Cell-mediated response C) Active immunity  
 B) Humeral immune response D) Passive immunity
- Q.197 Which part of antibody recognizes the antigen during immune response?**  
 A) Heavy part C) Constant part  
 B) Light part D) Variable part
- Q.198 What type of immunity is achieved by injecting antibodies, antiserum, anti-venom serum?**  
 A) Active immunity C) Artificially induced immunity  
 B) Passive immunity D) Naturally induced immunity

**Q.199 Which one of the following glands is involved in the production of lymphocytes?**

- A) Pineal
- B) Pituitary
- C) Thymus
- D) Adrenal

**Q.200 Antibodies are proteins and made up of how many polypeptide chains?**

- A) One
- B) Two
- C) Three
- D) Four

**Q.201 Oxidative phase of glycolysis starts with dehydrogenation of**

- A) Glycolysis
- B) Ribulose Bisphosphate
- C) Glyceraldehyde 3-phosphate
- D) NADH

**Q.202 In one turn, the Krebs's cycle produces one molecule of ATP, one molecule of FADH<sub>2</sub> and \_\_\_\_\_ molecules of NADH**

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

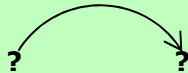
**Q.203 Which one of the following is the stage of cellular respiration for which oxygen is not essential?**

- A) Glycolysis
- B) Pyruvate oxidation
- C) Krebs's cycle
- D) Electron Transport Chain

**Q.204 Pyruvate, the end product of glycolysis moves from cytosol to mitochondrial matrix where it is oxidized into \_\_\_\_\_ producing CO<sub>2</sub> as a by-product.**

- A) Acetic acid (active)
- B) Citrate
- C) NAD
- D) FAD

**Q.205 Pyruvate → Acetyl CoA**



- A) FAD<sup>+</sup> → FADH
- B) NAD<sup>+</sup> → NADH
- C) NADH → NAD + H<sup>+</sup>
- D) FADH<sup>+</sup> → FAD + H<sup>+</sup>

**Q.206 pBr 322 have antibiotic resistance gene for**

- A) Ampicillin and aspirin
- B) Streptomycin and metronidazole
- C) Ampicillin and Tetracycline
- D) Penicillin and metronidazole

**Q.207 Cystic Fibrosis affects which one of the following cells of the body?**

- A) Epithelial cells
- B) Endothelial cells
- C) Plasma cells
- D) Blood cells

**Q.208 The enzymes which act as molecular scissors in recombinant DNA technology is**

- A) Exonucleoses
- B) Endonucleoses
- C) Polymerases
- D) Reverse transcriptases

**Q.209 Which of the following is the correct sequence of PCR?**

- A) Heating → Cooling → Add Primer → Copying of strand
- B) Heating → Add Primer → Cooling → Copying of strand
- C) Add Primer → Heating → Cooling → Copying of strand
- D) Cooling → Add Primer → Heating → Copying of strand

**Q.210 When two different pieces of DNA are joined together, the result is which one of the following?**

- A) Complementary DNA
- B) Mutated DNA
- C) Recombinant DNA
- D) Cloned DNA

**Q.211 Individual successions are known as**

- A) Primary successions
- B) Secondary successions
- C) Seres
- D) Xeroses

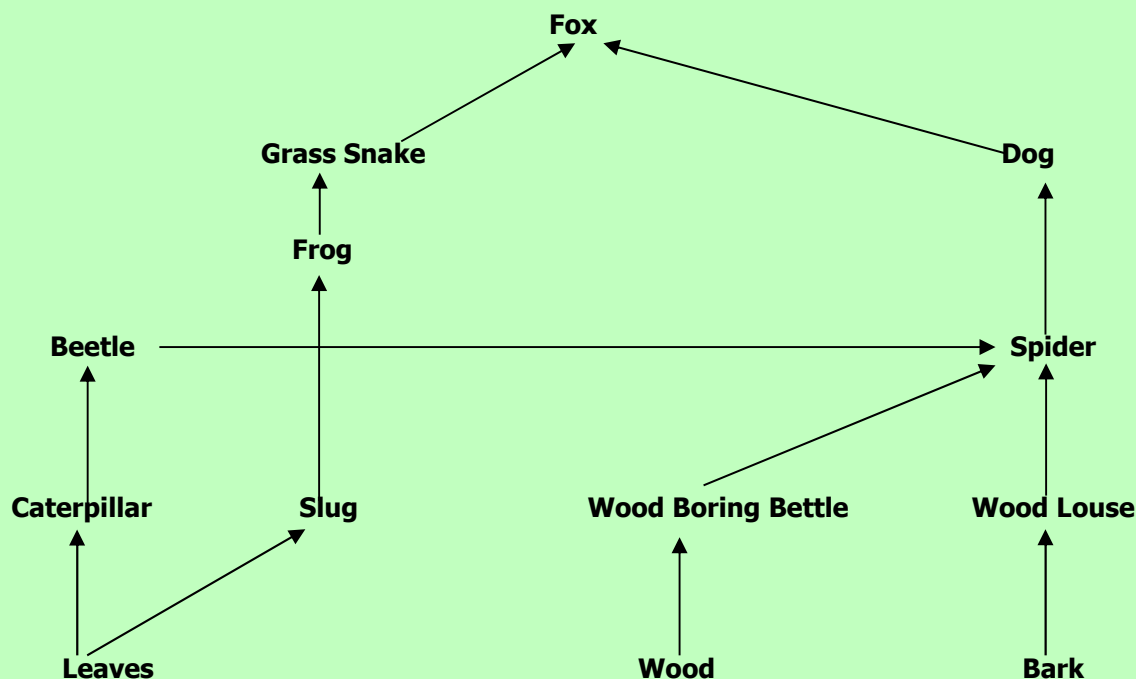
**Q.212 Which one of the following is the ultimate distributional unit within which a species is restrained by the limitations of its physical structure and physiology?**

- A) Niche
- B) Biome
- C) Ecosystem
- D) Habitat

**Q.213 All herbivores belong to which trophic level in the food chain?**

- A) T1  
B) T2  
C) T3  
D) T4

**Q.214 How many food chains are present in following food web?**



- A) 5  
B) 3  
C) 6  
D) 4

**Q.215 The relationship in which one organism gets benefit and the other is not affected is called**

- A) Mutualism  
B) Commensalism  
C) Predation  
D) Parasitism

**Q.216 When a gene expresses the effects of a gene at another focus, this is known as**

- A) Epistasis  
B) Co-dominance  
C) Complete dominance  
D) Mutation

**Q.217 In male the sex determining gene is**

- A) XY  
B) SRY  
C) SYX  
D) SXX

**Q.218 A gene which affects two or more unrelated characteristics is called**

- A) Pleiotropic  
B) Epistatic  
C) Dominant  
D) Mutant

**Q.219 Position of a gene within a DNA molecule is**

- A) Locus  
B) Origin  
C) Amplicon  
D) Filial

**Q.220 Sickle cell anemia is a type of**

- A) Insertion  
B) Transposition  
C) Deletion  
D) Base Substitution

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# UNIVERSITY OF HEALTH SCIENCES, LAHORE

## Entrance Test – 2014

For admission to Medical / Dental Institutions of the Punjab

### ANSWER KEY

The answer key to the questions of Entrance Test 2014 is being released.

Candidates can calculate their scores with the help of carbon copy of their response forms. **Each correct answer carries 05 marks whereas one mark will be deducted from the total score for each wrong answer. Unattempted question carries zero marks.** Complaints/ queries will be dealt only after the declaration of official result of the Entrance Test by the University. No request in this regard will be entertained before that.

Q.No.	Ans	Q.No.	Ans	Q.No.	Ans	Q.No.	Ans	Q.No.	Ans
ID	D	46	D	92	B	138	B	184	C
1	A	47	A	93	B	139	C	185	B
2	B	48	C	94	C	140	C	186	C
3	B	49	C	95	D	141	C	187	A
4	C	50	A	96	D	142	C	188	D
5	A	51	B	97	B	143	C	189	D
6	B	52	A	98	C	144	C	190	A
7	B	53	C	99	C	145	A	191	B
8	B	54	B	100	A	146	B	192	D
9	D	55	B	101	D	147	A	193	B
10	B	56	A	102	C	148	B	194	C
11	D	57	D	103	B	149	C	195	A
12	C	58	B	104	B	150	B	196	B
13	A	59	C	105	B	151	B	197	D
14	C	60	B	106	C	152	D	198	B
15	D	61	B	107	C	153	C	199	C
16	D	62	B	108	A	154	C	200	D
17	C	63	A	109	B	155	C	201	C
18	B	64	B	110	C	156	B	202	C
19	C	65	C	111	A	157	D	203	A
20	A	66	A	112	C	158	A	204	A
21	B	67	A	113	A	159	C	205	B
22	A	68	C	114	C	160	B	206	C
23	A	69	B	115	B	161	B	207	A
24	A	70	D	116	A	162	B	208	B
25	C	71	C	117	A	163	B	209	A
26	D	72	A	118	C	164	B	210	C
27	C	73	A	119	B	165	D	211	C
28	C	74	B	120	C	166	D	212	A
29	A	75	D	121	A	167	B	213	B
30	A	76	D	122	A	168	B	214	D
31	A	77	B	123	C	169	A	215	B
32	D	78	B	124	C	170	D	216	A
33	C	79	A	125	C	171	C	217	B
34	C	80	B	126	A	172	B	218	A
35	A	81	C	127	B	173	A	219	A
36	D	82	B	128	B	174	A	220	D
37	C	83	B	129	B	175	D		
38	C	84	D	130	B	176	B		
39	C	85	D	131	B	177	A		
40	B	86	A	132	A	178	B		
41	C	87	B	133	C	179	B		
42	B	88	C	134	B	180	D		
43	C	89	A	135	D	181	C		
44	C	90	D	136	A	182	C		
45	D	91	A	137	B	183	D		