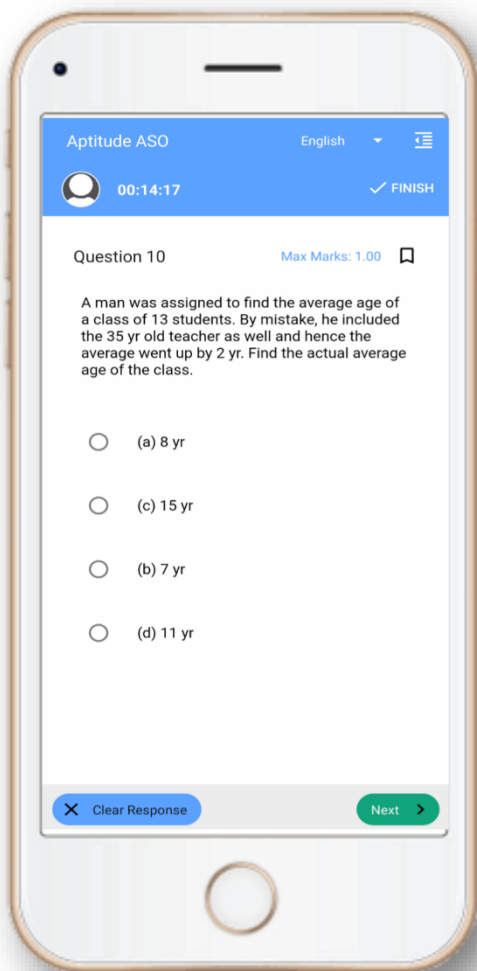


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B - SECTION - III

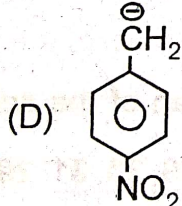
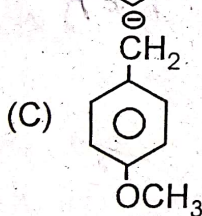
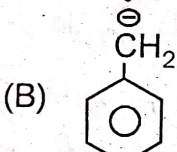
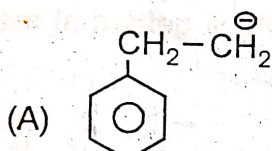
SCIENCE (CBZ)

CHEMISTRY

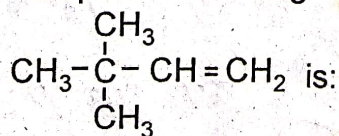
41. Which of the following ores does not contain sulphur ?

- (A) Argentite
(B) Cassiterite
(C) Cinnabar
(D) Galena

42. The most stable carbanion among the following is :



43. The IUPAC name of the compound having the formula



- (A) 3, 3, 3 trimethyl propane

(B) 1, 1, 1 trimethyl-2-pentene

(C) 3, 3 Dimethyl-1-butene

(D) 2, 2 Dimethyl 3-butene

44. The hydrocarbon which is formed by only single covalent bonds between the atoms is :

(A) C_5H_{10}

(B) C_6H_6

(C) C_5H_8

(D) C_4H_4

45. The correct order in which the following compounds are arranged in order of increasing acidity is :

(A) Methyl alcohol < Phenol < p-nitro phenol

(B) Methyl alcohol < p-nitrophenol < phenol

(C) p-Nitrophenol < Methyl alcohol < phenol

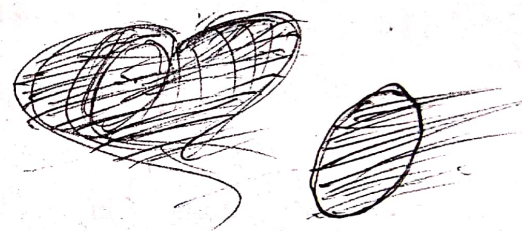
(D) Phenol < Methyl alcohol < p-nitrophenol

46. Oxidation number of sulphur in sodium tetrathionate is :
- (A) +2
(B) +2.5
(C) +3
(D) +6
47. If the molecular weight of KMnO_4 is 'M' then the equivalent weight of KMnO_4 in the reaction :
- $$\text{KMnO}_4 + \text{H}_2\text{SO}_4 + \text{H}_2\text{C}_2\text{O}_4 \longrightarrow \text{K}_2\text{SO}_4 + \text{MnSO}_4 + \text{CO}_2 + \text{H}_2\text{O}$$
- is :
- (A) $\frac{M}{5}$
(B) $\frac{M}{3}$
(C) $\frac{M}{4}$
(D) $\frac{M}{2}$
48. The volume of CO_2 at NTP obtained by complete decomposition of 1gm of marble is :
- (A) 22.4 L
(B) 2.24 L
(C) 0.224 L
(D) 0.0224 L
49. The density of a gas is found to be 1.56 g/litre at 745 mm pressure

and 65°C . The molecular mass ($\text{g}\cdot\text{mol}^{-1}$) is :

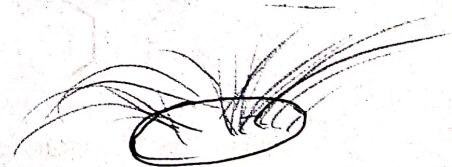
- (A) 22.1
(B) 44.2
(C) 66.3
(D) 88.4
50. If rate of diffusion of O_2 is r_1 then under similar conditions of temperature and pressure the rate of diffusion of SO_2 is :

- (A) $\sqrt{2}r_1$
(B) $\frac{r_1}{\sqrt{2}}$
(C) $2r_1$
(D) $\frac{r_1}{2}$



51. The number of unpaired electrons present in Cr^{3+} is :

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



52. The set of quantum numbers (n , l , m and s) that represent valency electron of sodium is :

- (A) $3, 2, 1, +\frac{1}{2}$
(B) $3, 2, 0, +\frac{1}{2}$
(C) $3, 1, 1, -\frac{1}{2}$
(D) $3, 0, 0, +\frac{1}{2}$

53. The correct order of electron affinity of the following elements is :
- (A) $N < O < F < Cl$
 (B) $O < N < Cl < F$
 (C) $N < Cl < O < F$
 (D) $N < O < Cl < F$
54. The correct order of ionisation potential of the following elements is :
- (A) $C < N < O < F$
 (B) $C > N > O > F$
 (C) $C < O < N < F$
 (D) $C < O < F < N$
55. The d-orbital that participates in dsp^3 hybridisation with trigonal bipyramidal geometry is :
- (A) dz^2
 (B) dxy
 (C) $dx^2 - y^2$
 (D) dxz
56. Ice floats in water. This is due to the presence of :
- (A) Ionic bond
 (B) Covalent bond
 (C) Intermolecular hydrogen bond
 (D) Intra molecular hydrogen bond
57. 100 ml of 1 N NaOH solution, 200 ml of 0.5 N NaOH solution, 500 ml of 0.1 N NaOH solution and 200 ml of 0.25 N NaOH solution are mixed together. The normality of the resultant solution is :
- (A) 0.1
 (B) 0.2
 (C) 0.3
 (D) 0.4
58. The pH of 0.01 M acetic acid with degree of dissociation 0.001 is :
- (A) 5
 (B) 4
 (C) 3
 (D) 2
59. If K_f and K_b represents the equilibrium constants of the forward and backward chemical reactions respectively of a particular reversible reaction then :
- (A) $K_f = K_b$
 (B) $K_f = \frac{1}{K_b}$
 (C) $K_f > K_b$
 (D) $K_f < K_b$
60. The purest form of iron is :
- (A) Pig iron
 (B) Steel
 (C) Wrought iron
 (D) Cast iron