DPP-01 : Acid base Concepts

1. Which of the following is not a strong electrolyte ?
(1) Fused NaCl (2) Acetic acid (3) Perchloric acid (aq.) (4) Sodium hydroxide (aq.)

2. Which of the following is the strongest acid?
(1) H_3PO_4 (2) H_2SO_4 (3) HNO_2 (4) CH_3COOH

3. Select Polyprotic Arrhenius acids from the following :
(1) H_3PO_2 (2) H_3PO_3 (3) H_3BO_3 (4) HCOOH

4. According to Bronsted and Lowrry concept, water is a/an:
(1) Base (2) Acid (3) Amphoteric (4) Salt

5. Which of the following salts of H_3PO_3 exist(s) ?
(I) NaH_2PO_3 (II) Na_2HPO_3 (III) Na_3PO_3
(1) I and II only (2) I, II and IIII (3) II and III only (4) III only

6. An acid with molelcular formula $C_7H_6O_3$ forms three types of sodium salts. i.e., $C_7H_5O_3Na$, $C_7H_4O_3Na_2$ and $C_7H_3O_3Na_3$. The basicity of the acid is:
(1) One (2) Two (3) Three (4) Four

7. In a reaction,

$$HCO_3^- + H_2O \rightleftharpoons CO_3^{-2} + H_3O^+$$

Which two substances are Bronsted bases ?
(1) CO_3^{-2} & H_3O^+ (2) HCO_3^- & H_3O^+ (3) HCO_3^- & CO_3^{-2} (4) CO_3^{-2} & H_2O

8. Consider various species generated when H_3PO_4 dissolved in water. Among these, the conjugate acid of HPO_4^{2-} is :
(1) H_3PO_4 (2) $H_2PO_4^-$ (3) PO_4^{3+} (4) H_3O^+

9. The following equilibrium is established when $HClO_4$ is dissolved in weak acid HF.

$$HF + HClO_4 \rightleftharpoons ClO_4^- + H_2F^+$$

Which of the following is correct set of conjugate acid base pair ?
(1) HF and $HClO_4$ (2) HF and ClO_4^- (3) HF and H_2F^+ (4) $HClO_4$ & H_2F^+

10. In the equilibrium

$$CH_3COOH + HF \rightleftharpoons CH_3COOH_2^+ + F^-$$

(1) F^- is the conjugate acid of CH_3COOH
(2) F^- is the conjugate base of HF
(3) CH_3COOH is the conjugate acid of $CH_3COOH_2^+$
(4) $CH_3COOH_2^+$ is the conjugate base of CH_3COOH

11. Boric acid H_3BO_3 is a :

(1) Arrhenius acid (2) Bronsted acid (3) Lewis acid (4) All of these

12. Which of the following can act both as Bronsted acid and Bronsted base ?

(1) Cl^- (2) HCO_3^- (3) H_3O^+ (4) OH^-

13. Identify the amphoteric species from the following ?

(I) H_2O (II) NH_3 (III) $H_2PO_4^-$ (IV) HCO_3^-

(1) I, II (2) III, IV (3) I, II, III (4) I, II, III, IV

14. Which of the following is the strongest conjugate base?

(1) Cl^- (2) CH_3COO^- (3) SO_4^{--} (4) NO_2^-

15. Which of the reagents listed below could be added to water to make 0.1M solution of NH_4^+ ?

(1) NH_3 (0.1 M) (2) NH_4Cl (0.1 M) (3) both (4) none of these

DPP-02 : Ostwald dilution law, Property of water, pH scale, Relation between K_a and K_b for conjugated acid and base

1. The degree of dissociation in a weak electrolyte increases :

(1) On increasing dilution (2) On increasing pressure

(3) On decreasing dilution (4) None of these

2. At infinite dilution, the percentage ionisation for both strong and weak electrolytes is :

(1) 1% (2) 20% (3) 50% (4) 100%

3. Ostwald's dilution law gives satisfactory results with the solution of which electrolyte ?

(1) HCl (2) HNO_3 (3) CH_3COOH (4) NaOH

4. Aniline is a very weak base. Which of the given aniline solution will have highest degree of dissociation?

(1) 1M aniline (2) 0.1 M aniline (3) 0.01 M aniline (4) 0.02 M aniline

5. pH of human blood is 7.4. Then H^+ concentration will be:

(1) 4×10^{-8} (2) 2×10^{-8} (3) 4×10^{-4} (4) 2×10^{-4}

6. The concentration of H_3O^+ ions in pure water is 10^{-6} mol dm^{-3}. The corresponding concentration of OH^- ions will be :

(1) 10^{-14} mol dm^{-3} (2) 10^{-8} mol dm^{-3} (3) 10^{-6} mol dm^{-3} (4) 10^{-7} mol dm^{-3}

7. pH of pure water is 7 at 298K. If the solution is heated to 320K, which of the following statement is true?

(1) pH will decrease (2) pOH will increase

(3) pH will increase (4) pH will decrease and pOH will increase

8. The ionic product of water at 25°C is 10^{-14} . The ionic product at 90°C will be :

(1) 1×10^{-20} (2) 1×10^{-12} (3) 1×10^{-14} (4) 1×10^{-16}

9. The values of dissociation constants of some acids (at 25°C) are as follows. Indicate which is the strongest acid in water ?

(1) 1.4×10^{-2} (2) 1.6×10^{-4} (3) 4.4×10^{-10} (4) 4.3×10^{-7}

10. For two acids A and B, $pK_a = 1.2$, $pK_b = 2.8$ respectively in value, then which is true ?

(1) A and B both are equally acidic (2) A is stronger than B

(3) B is stronger than A (4) Neither A nor B is strong

11. Select the correct statement :

(1) If $[H^+] = y \times 10^{-x}$ M then pH = x – log y (2) If $[H^+] = \frac{1}{y} \times 10^{-x}$ M then pH = x + log y

(3) At 25°C, pH of a solution = 14 + log $[OH^-]$ (4) All of the above

DPP-03 : p^H Calculations : Solutions of Strong Acid, Strong Base and their mixture

1. The pH of M/10 HCl is :

(1) 3 (2) 4 (3) 2 (4) 1

2. The pH of solution obtained by mixing 500 ml of 0.15 M H_2SO_4 with 500 ml of 0.1 M NaOH is :

(1) 0 (2) 1 (3) 2 (4) 7

3. The pH value of 10^{-4} M NaOH solution is :

(1) 4 (2) 10 (3) 6 (4) between 6-7

4. What will be the pH of a solution formed by mixing 40 cm^3 of 0.1 M HCl with 10 cm^3 of 0.45 M NaOH ?

(1) 10 (2) 8 (3) 5 (4) 12

5. Which one has pH =12 ?

(1) 0.01 M KOH (2) 1 M KOH (3) 1 M NaOH (4) 0.5 M $Ca(OH)_2$

6. Given pH of a solution A is 3 and it is mixed with another solution B having pH 2 keeping the volume same. If both are mixed, then resultant pH of the solution will be :

(1) 3.2 (2) 2.26 (3) 3.4 (4) 3.5

7. On adding 0.04 g solid NaOH to a 100 mL, $\frac{M}{200}$ $Ba(OH)_2$ solution, determine change in pH :

(1) 0 (2) +0.3 (3) –0.3 (4) +0.7

8. The pH value of 1.0×10^{-8} M HCl solution is less than 8 because

(1) HCl is completely ionised at this concentration

(2) The ionization of water is negligible

(3) The ionization of water cannot be assumed negligible in comparison with this low concentration of HCl

(4) The pH cannot be calculated at such a low concentration of HCl

9. The pH of 10^{-7} M NaOH is

(1) 7.01 (2) Between 7 and 8 (3) Between 9 and 10 (4) Greater than 10

DPP-04 : p^H Calculations : Weak Acid, Weak Base, Polyprotic acid

1. The pH of 0.1 M NH_4OH ($K_b = 1.8 \times 10^{-5}$) is :

(1) 1 (2) 13 (3) 5.7 (4) 11.1

2. The pH of 0.1M CH_3COOH (dissociation constant of acetic acid is 1.80×10^{-5} at 25ºC) will be :

(1) 5 (2) 2.873 (3) 1 (4) 0.18

3. The concentration of a weak monoprotic acid is C moles L^{-1} and ionisation constant K_a. The pH of the solution is :

(1) $\frac{1}{2} pK_a - \frac{1}{2} \log C$ (2) $(K_a \times C)^{1/2}$ (3) $\frac{1}{2} pK_a + \frac{1}{2} \log C$ (4) $\alpha.c$

4. Pure water is kept in a vessel and it remains exposed to atmospheric CO_2 which is absorbed. Then its pH will be :

(1) Greater than 7 (2) Less than 7

(3) 7 (4) Depends on ionic product of water

5. Find the percentage ionisation of 0.2 M acetic acid solution, whose dissociation constant is 1.8×10^{-5}

(1) 0.198 (2) 0.290 (3) 0.950 (4) None of these

6. The pH of a 0.1 M aqueous solution of a weak acid (HA) is 3. What is its degree of dissociation ?

(1) 1% (2) 10% (3) 50% (4) 25%

7. 0.02 M monobasic acid dissociates 2%. Hence, pH of the solution is :

(1) 0.3979 (2) 1.3979 (3) 1.699 (4) 3.3979

8. Concentration of CH_3COO^- is 0.001 M, when 0.1 moles of CH_3COOH were dissolved in 1L water. K_a of CH_3COOH is :

(1) 2×10^{-5} (2) 10^{-5} (3) 10^{-6} (4) 2×10^{-4}

9. For two weak acis A and B, the ratio of their percent ionization is 4 : 9. The ratio of their K_a would be :

(1) 4 : 9 (2) 2 : 3 (3) 16 : 81 (4) 3 : 2

10. The ionisation constant of an acid, K_a, is the measure of strength of an acid. The K_a values of acetic acid, hypochlorous acid and formic acid are 1.74×10^{-5}, 3.0×10^{-8} and 1.8×10^{-4} respectively. Which of the following orders of pH of 0.1 mol dm^{-3} solutions of these acids is correct?

(1) acetic acid > hypochlorous acid > formic acid

(2) hypochlorous acid > acetic acid > formic acid

(3) formic acid > hypochlorous acid > acetic acid

(4) formic acid > acetic acid > hypochlorous acid

11. For diprotic acid H_2S, which is the best way to represent its ionisation in water ?

(1) $H_2S \rightleftharpoons 2H^+ + S^{2-}$ (2) $H_2S \rightleftharpoons H^+ + HS^-$; $HS^- \rightleftharpoons H^+ + S^{2-}$

(3) both (4) none of these

12. The ionisation constant of a tribasic acid is K_a. If its first , second and third ionisation constant are K_{a_1}, K_{a_2} and K_{a_3} respectively then :

(1) $K_a = K_{a_1} \times K_{a_2} \times K_{a_3}$ (2) $K_a = \frac{K_{a_1}}{K_{a_2} \times K_{a_3}}$

(3) $K_{a_2} = \frac{K_{a_1} \times K_a}{K_{a_3}}$ (4) None of these

13. What will be the pH of a 0.01 M H_3PO_4 solution having $[PO_4^{3-}] = 10^{-5}$ M ? $\left[K_{a_1} = 10^{-4}, K_{a_2} = 10^{-6}, K_{a_3} = 10^{-8}\right]$

(1) 3 (2) 4 (3) 5 (4) 6

14. K_a for a weak acid HA is 1.44×10^{-5}. What is the concentration of A^- when 0.01 mole of HA is dissolved in 1L of 0.01M HCl solution ?

(1) 0.01 M (2) 1.2×10^{-3} M (3) 1.44×10^{-5}M (4) 0.012 M

DPP-05 : Salt Hydrolysis

1. The reverse process of neutralisation is :

(1) Hydrolysis (2) Decomposition (3) Dehydration (4) Synthesis

2. When a salt 'X' is dissolved in water at pH = 7, the resulting solution becomes alkaline in nature. Salt 'X' is made up of :

(1) strong acid and strong base (2) weak acid and weak base
(3) weak acid and strong base (4) strong acid and weak base

3. The salt that when added to water will not change its pH is :

(1) Na_2CO_3 (2) NaCl (3) KCN (4) NH_4Cl

4. The most acidic aqueous solution is :

(1) CH_3COONa (2) Na_2CO_3 (3) NH_4Cl (4) Na_2HPO_4

5. The pH a 0.01 M solution of ammonium acetate can be changed by changing :

(1) the temperature (2) the volume of solution
(3) the concentration (4) the pressure on solution

6. Which of the following salts undergo anionic hydrolysis ?

(1) Na_3PO_4 (2) NaCl (3) NH_4Cl (4) $FeSO_4$

7. The aqueous solution of which of the following salt has the lowest pH ?

(1) NaClO (2) $NaClO_2$ (3) $NaClO_3$ (4) $NaClO_4$

8. Select the correct combination :

(1) The aqueous solution of each Na_3BO_3 and Na_3PO_4 – Acidic nature
(2) The aqueous solution of each Na_3BO_3 and CH_3COONa – basic nature
(3) The aqueous solutions of each CH_3COONa and NaCN – acidic nature
(4) The aqueous solutions of each Na_3PO_4 and NH_4Cl – acidic nature

9. What is the pH of an aqueous solution of ammonium acetate ($K_a = K_b = 1.8 \times 10^{-5}$) ?

(1) > 7 (2) 7.0 (3) < 7.0 (4) Zero

10. If $pK_b > pK_a$ then the solution of the salt of weak acid and weak base will be –

(1) Neutral (2) Acidic (3) Basic (4) Amphoteric

11. $pOH = 7 - 0.5\ pK_a + 0.5\ pK_b$ is true for which pair of cation and anion?

(1) $C_6H_5NH_3^+$, CH_3COO^- (2) Na^+, CN^-
(3) Al^{3+}, Cl^- (4) NH_4^+, NO_3^-

12. The hydrolysis constant of 0.5 M ammonium benzoate is 6.25×10^{-6}. The percentage hydrolysis of the salt is :
(1) 0.25 (2) 0.177 (3) 0.125 (4) 0.50

13. A solution of 0.10 M NaZ has pH = 8.90. The K_a of HZ is :
(1) 1.6×10^{-4} (2) 1.6×10^{-5} (3) 6.3×10^{-10} (4) 6.3×10^{-11}

14. The pH of 0.01 M sodium acetate solution is : $[K_a(CH_3COOH)] = 2 \times 10^{-5}$
(1) 7.25 (2) 6.5 (3) 8.05 (4) 8.35

DPP-06 : Buffer Solutions

1. pH of circulating blood is maintained around 7.4 by the action of buffer system of :
(1) $H_2PO_4^-/HPO_4^{2-}$ (2) CO_2 / HCO_3^- (3) NH_4Cl/NH_4OH (4) CH_3COO^-/CH_3COONa.

2. Which of the following does not act as a buffer solution ?
(1) Sodium acetate and acetic acid (2) Boric acid and borax
(3) Na_3PO_4 and Na_2HPO_4 (4) Sodium acetate and sodium citrate

3. Addition of sodium acetate solution to acetic acid cause the following change
(1) pH increases (2) pH decreases (3) pH remains unchanged (4) pH becomes 7

4. Buffer solutions have constant acidity and alkalinity because :
(1) these give unionised acid or base on reaction with added acid or alkali.
(2) acids and alkalies in these solution are shielded from attack by other ions.
(3) they have large excess of H^+ or OH^- ions.
(4) they have fixed value of pH.

5. In which of the following respective volume ratios should 0.1 M NH_4OH solution & 0.1 M HCl solution be mixed, so that the resulting solution behaves like a buffer solution ?
(1) 1 : 1 (2) 2 : 1
(3) 1 : 2 (4) No such volume ratio is possible

6. Which may be added to one litre of water to act a buffer:
(1) One mole of CH_3COOH and one mole of HCl (2) One mole of NH_4OH and one mole of NaOH
(3) One mole of NH_4Cl and one mole of HCl (4) One mole of CH_3COOH and 0.5 mole of NaOH

7. Which of these mixtures constitute buffer solutions ?
Mixture 1 : 25 mL of 0.10 M HNO_3 and 25 mL of 0.10 M $NaNO_3$
Mixture 2 : 25 mL of 0.10 M $(COOH)_2$ and 25 mL of 0.10 M NaOH
(1)1 only (2) 2 only (3) both 1 and 2 (4) neither 1 nor 2

8. Calculate the pH of a solution made by mixing 150 cm^3 of 0.10 M CH_3 COONa and 250 cm^3 of 0.10 M CH_3COOH. [K_a of $CH_3COOH = 1.8 \times 10^{-5}$]
(1) 237 (2) 4.52 (3) 4.74 (4) 4.97

9. A buffer solution is prepared by mixing 0.050 moles of a weak acid HA and 0.20 moles of NaA in sufficient amount of water to give 500 mL of solution (K_a for HA is 4.5×10^{-4}). The pH of this solution is :
(1) 1.97 (2) 2.17 (3) 2.74 (4) 3.95

10. A buffer solution with pH 9 is to be prepared by mixing NH_4Cl and NH_4OH . Calculate the number of moles of NH_4Cl that should be added to one litre of 1.0 M NH_4OH. [$K_b = 1.8 \times 10^{-5}$]

(1) 3.4 (2) 2.6 (3) 1.5 (4) 1.8

11. Which of the given solutions have pOH = pK_b (NH_3) ?

(1) 10 ml of 0.1 M HCl + 10 ml of 0.2 M NH_3 (2) 10 ml of 0.1 M HCl + 20 ml of 0.1 M NH_3

(3) 50 ml of 0.2 M HCl + 20 ml of 1M NH_3 (4) all of these

12. K_b of aniline is 10^{-10} . A solution containing equal moles of aniline and anilinium chloride will be :

(1) basic (2) neutral (3) acidic (4) can't be predicted

13. The ionization constant of a certain weak acid is 10^{-4}. What should be the [salt] to [acid] ratio if we have to prepare a buffer with pH = 5 using this acid and one of the salts ?

(1) 1 : 10 (2) 10 : 1 (3) 5 : 4 (4) 4 : 5

14. In a mixing of acetic acid and sodium acetate the ratio of concentration of the salts to the acid is increased ten times. Then the pH of the solution :

(1) Increases by one (2) Decreases by one (3) Decrease ten fold (4) Increase ten fold

DPP-07: Solubility product and solubility calculation

1. Which is the correct representation of the solubility product constant of Ag_2CrO_4 ?

(1) $[Ag^+]^2\,[CrO_4^{-2}]$ (2) $[Ag^+]\,[CrO_4^{-2}]$ (3) $[2Ag^+]\,[CrO_4^{-2}]$ (4) $[2Ag^+]^2\,[CrO_4^{-2}]$

2. If the solubility of calcium fluoride in pure water is x mol/L, Its solubility product is :

(1) $\sqrt{2}x$ (2) $2x^2$ (3) $4x^3$ (4) x^2

3. The solubility of $PbCl_2$ is:

(1) $\sqrt{K_{sp}}$ (2) $\sqrt[3]{K_{sp}}$ (3) $\sqrt[3]{\frac{K_{sp}}{4}}$ (4) $\sqrt{8K_{sp}}$

4. The aqueous solution of which of the following sulphides would contain maximum concentration of S^{2-} ions:

(1) MnS ($K_{sp} = 1.1 \times 10^{-21}$) (2) ZnS ($K_{sp} = 1.1 \times 10^{-23}$)

(3) PbS ($K_{sp} = 1.1 \times 10^{-35}$) (4) CuS ($K_{sp} = 1.1 \times 10^{-30}$)

5. The solubility product of Ag_2CrO_4 is 32×10^{-12} . What is the concentration of CrO_4^{2-} ions in that solution

(1) 2×10^{-4} M (2) 16×10^{-4} M (3) 8×10^{-4} M (4) 8×10^{-8} M

6. The solubility of $BaSO_4$ in water is 2.33×10^{-3} g / litre. Its solubility product will be (molecular weight of $BaSO_4$ = 233)

(1) 1×10^{-5} (2) 1×10^{-10} (3) 1×10^{-15} (4) 1×10^{-20}

7. K_{sp} of AgCl is 1.8×10^{-11}. The minimum volume of water required to dissove 1.9 mg of AgCl is approximetaly ?

(1) 10L (2) 2L (3) 1L (4) 20L

8. If the K_{sp} of CaF_2 at 25ºC is 1.6×10^{-10}, then the number of moles of the salt must be dissolved in 2.0 L of water at 25ºC to form a saturated solution is :

(1) 2.6×10^{-2} mol (2) 1.3×10^{-3} mol (3) 6.8×10^{-4} mol (4) 3.4×10^{-4} mol

9. Solubility of BaF_2 in a solution of $Ba(NO_3)_2$ will be represented by the concentration term:

(1) $[Ba^{2+}]$ (2) $[F^-]$ (3) $1/2[F^-]$ (4) $2[NO_3^-]$

10. The solubility of CaF_2 ($K_{sp} = 3.4 \times 10^{-11}$) in 0.005 M solution of BaF_2 is :

(1) 3.4×10^{-19} M (2) 1.36×10^{-6} M (3) 3.4×10^{-7} M (4) 1.36×10^{-7} M

11. K_{sp} of AgCl is 1×10^{-10}. Its solubility in 0.1 M KNO_3 will be :

(1) 10^{-5} moles/litre (2) $> 10^{-5}$ moles/litre (3) $< 10^{-5}$ moles/litre (4) None of these

12. Solubility of AgCl will be minimum in :

(1) 0.001M $AgNO_3$ (2) Pure water (3) 0.01 M $CaCl_2$ (4) 0.01 M NaCl

13. The necessary condition for saturated solution is :

(1) Product of ionic concentrations raised to power their number produced from one formula unit = Solubility product

(2) Products of ionic concentrations raised to power their number produced from one formula unit < solubility products

(3) Product of ionic concentrations raised to power their number produced from one formula unit > solubility product

(4) None of the above

14. Which one of the following is most soluble ?

(1) CuS ($K_{sp} = 8\times10^{-37}$) (2) MnS ($K_{sp} = 7\times10^{-16}$)

(3) Bi_2S_3 ($K_{sp} = 1\times10^{-70}$) (4) Ag_2S ($K_{sp} = 6\times10^{-51}$)

15. If each of the following salts has $K_{sp} = 1 \times 10^{-9}$, which of them is the least soluble in water ?

(1) XY (2) XY_2 (3) X_2Y (4) X_3Y

16. Equal volumes of two solutions are mixed. The one in which $CaSO_4$ ($K_{sp} = 2.4 \times 10^{-5}$) is precipitated is :

(1) 0.02 M $CaCl_2$ + 0.004 M Na_2SO_4 (2) 0.002 M $CaCl_2$ + 0.04 M Na_2SO_4

(3) 0.2 M $CaCl_2$ + 0.004 M Na_2SO_4 (4) 0.2 M $CaCl_2$ + 0.0004 M Na_2SO_4.

17. If K_{sp} (AgCl) is 10^{-10}, then which of the solution are saturated with AgCl ?

(1) $[Ag^+] = 10^{-10}$, $[Cl^-] = 1M$ (2) $[Ag^+] = 10^{-11}$, $[Cl^-] = 1M$

(3) $[Ag^+] = 10^{-6}$ M $[Cl^-] = 10^{-5}$ M (4) $[Ag^+] = 10^{-2}M$, $[Cl^-] = 10^{-8.5}M$

18. K_{sp} of AgBr is 5×10^{-13}. Precipitation of AgBr will take place in a solution having :

(1) 0.1 M $AgNO_3$ and 5×10^{-12} M NaBr (2) 5×10^{-12} M $AgNO_3$ and 0.1 M NaBr

(3) 2×10^{-6} M $AgNO_3$ and 4×10^{-8} M NaBr (4) 2×10^{-6} M $AgNO_3$ and 4×10^{-6} M NaBr

ANSWER KEY

DPP-01

1.	(2)	**2.**	(2)	**3.**	(2)	**4.**	(3)	**5.**	(1)	**6.**	(3)	**7.**	(4)
8.	(2)	**9.**	(3)	**10.**	(2)	**11.**	(3)	**12.**	(2)	**13.**	(4)	**14.**	(2)
15.	(2)												

DPP-02

1.	(1)	**2.**	(4)	**3.**	(3)	**4.**	(3)	**5.**	(1)	**6.**	(3)	**7.**	(1)
8.	(2)	**9.**	(1)	**10.**	(2)	**11.**	(4)						

DPP-03

1.	(4)	**2.**	(2)	**3.**	(2)	**4.**	(4)	**5.**	(1)	**6.**	(2)	**7.**	(2)
8.	(3)	**9.**	(2)										

DPP-04

1.	(4)	**2.**	(2)	**3.**	(1)	**4.**	(2)	**5.**	(3)	**6.**	(1)	**7.**	(4)
8.	(2)	**9.**	(3)	**10.**	(2)	**11.**	(2)	**12.**	(1)	**13.**	(3)	**14.**	(3)

DPP-05

1.	(1)	**2.**	(3)	**3.**	(2)	**4.**	(3)	**5.**	(1)	**6.**	(1)	**7.**	(4)
8.	(2)	**9.**	(2)	**10.**	(2)	**11.**	(1)	**12.**	(1)	**13.**	(2)	**14.**	(4)

DPP-06

1.	(2)	**2.**	(4)	**3.**	(1)	**4.**	(1)	**5.**	(2)	**6.**	(4)	**7.**	(4)
8.	(2)	**9.**	(4)	**10.**	(4)	**11.**	(4)	**12.**	(3)	**13.**	(2)	**14.**	(1)

DPP-07

1.	(1)	**2.**	(3)	**3.**	(3)	**4.**	(1)	**5.**	(1)	**6.**	(2)	**7.**	(3)
8.	(3)	**9.**	(3)	**10.**	(3)	**11.**	(1)	**12.**	(3)	**13.**	(1)	**14.**	(2)
15.	(1)	**16.**	(3)	**17.**	(1)	**18.**	(4)						