Additional Problems For Self Practice (APSP)

This Section is not meant for classroom discussion. It is being given to promote self-study and self testing amongst the Resonance students.

PART - I : PRACTICE TEST-1 (IIT-JEE (MAIN Pattern))

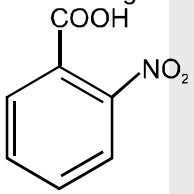
Max. Time : 1 Hr. **Max. Marks : 120**

Important Instructions

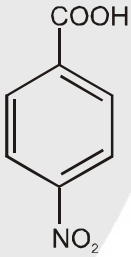
1. The test is of **1 hour** duration.
2. The Test Booklet consists of **30** questions. The maximum marks are **120.**
3. Each question is allotted **4 (four)** marks for correct response.
4. Candidates will be awarded marks as stated above in Instructions No. 3 for correct response of each question. **¼ (one fourth)** marks will be deducted for indicating incorrect response of each question. No deduction from the total score will be made if no response is indicated for an item in the answer sheet.
5. There is only one correct response for each question. Filling up more than one response in any question will be treated as wrong response and marks for wrong response will be deducted accordingly as per instructions 4 above.

1. 2-Acetoxy benzoic acid is used as an :
(1) antimalarial (2) antidepressant (3) antiseptic (4) antipyretic

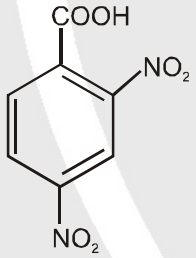
2. Decreasing order of melting point of compound I to IV follows.



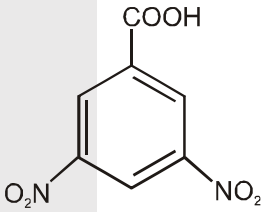
I



II



III



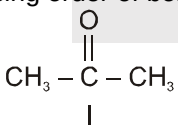
IV

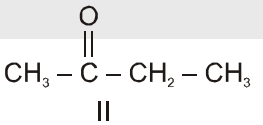
(1) I > II > III > IV (2) IV > III > II > I (3) III > IV > II > I (4) III > IV > I > II

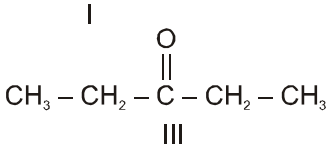
3. A drug that is antipyretic as well as analgesic is :
(1) chloroquin (2) penicillin
(3) paracetamol (4) chloropromazine hydrochloride

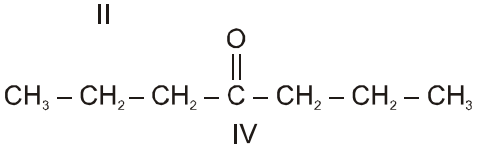
4. Which of the following compounds is used as a body deodorant ?
(1) Aspirin (2) Omeprazole (3) Indigosol-O (4) p-Chlorometaxylenol

5. Decreasing order of boiling point of I to IV follow.


I


II


III


IV

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

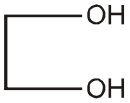
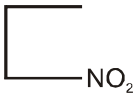
6. Bithional is an example of :
(1) disinfectant (2) antiseptic (3) antibiotic (4) analgesic

7. A is a lighter phenol and B is an aromatic carboxylic acid. Separation of a mixture of A and B can be carried out easily by using a solution of
(1) Sodium hydroxide (2) Sodium sulphate (3) Calcium chloride (4) Sodium bicarbonate

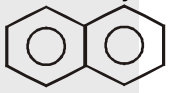
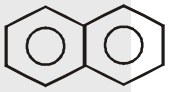
8. Novalgin is a common :
(1) Analgesic (2) Antibiotic (3) Antipyretic (4) Both (1) and (3)

9. Which of the following is/are antidepressant drug/s ?
(1) Cocaine (2) Benzedrine (3) Tofranil (4) All the three

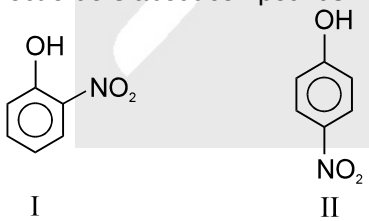
10. Salol can be used as :
(1) Antiseptic (2) Antipyretic (3) Analgesic (4) Disinfectant

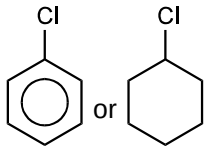
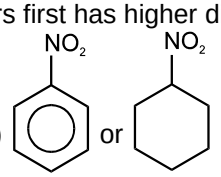
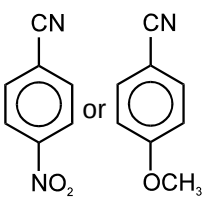
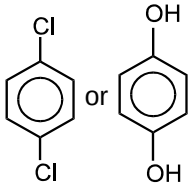
11. Which of the following compounds can be separated by water ?
(1)  (2)  (3)  (4) 

12. A mixture of two aromatic compound A and B when dissolve in NaOH, A is soluble and its residue B gives 2, 4 DNP test, identify compound A and B.
(1) Ph–COOH and Ph–OH (2) Ph – C(=O) – Ph and Ph–NH_2
(3) Ph–OH and Ph–NH_2 (4) Ph – OH and Ph – C(=O) – Ph

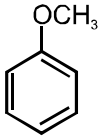
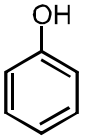
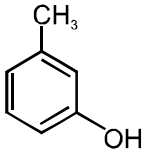
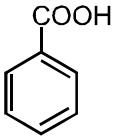
13. When a mixtrue of compound A & B dissolves in H_2O. A is soluble and gives smell of ammonia on heating with addition of conc. NaOH. Its residue B has sublimable nature. Identify A and B.
(1) $ArCONH_2$ and ArCOOH (2) R – C(=O) – NH_2 and 
(3)  and Ar – NO_2 (4) Ar – C(=O) – NH_2 and 

14. Which of the following statement is not true ?
(1) Small aliphatic compound with at least two functional group which can form hydrogen bond are water soluble
(2) Most of the aromatic compounds are water insoluble due to large hydrophobic group of six carbon atom.
(3) Aromatic amines are soluble in aq. NaOH but insoluble in aq. HCl.
(4) Aromatic hydroxy compounds are soluble in aq. NaOH solution.

15. The correct orders about compounds I and II are :

I II
(1) B.P. $\longrightarrow$ I < II (2) Water solubility $\longrightarrow$ I > II
(3) Acid strength $\longrightarrow$ I < II (4) Melting point $\longrightarrow$ II > I

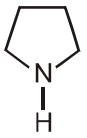
16. In which of the following pairs first has higher dipole moment than second ?
(1)  (2)  (3)  (4) 

17. Which of the following compounds does not form salt with NaOH ?

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

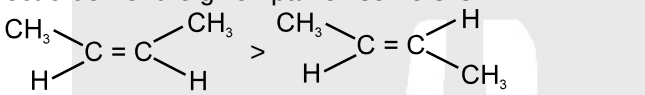
18. The boiling points of two miscible liquids, which do not form azeotropic mixture, are close to each other. Their separation is best carried out by :

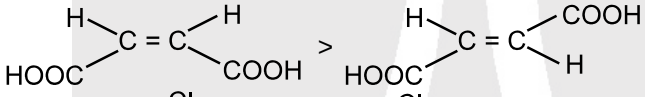
(1) vacuum distillation (2) fractional distillation (3) steam distillation (4) redistillation

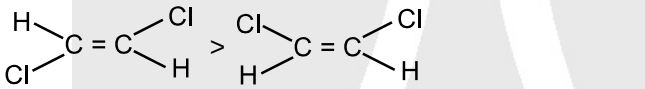
19. Which will have higher dipole moment than  ?

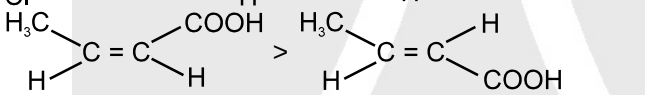
(1)  (2)  (3)  (4) 

20. The correct order for the given pair of isomers is :

(1)  (Melting point)

(2)  (Dipole moment)

(3)  (Boiling point)

(4)  (Water solubility)

21. The enzyme which hydrolyses cellulose into glucose is :

(1) Invertase (2) Maltase (3) Emulsin (4) Lactase

22. Which of the following sets of bases is present both in DNA and RNA ?

(1) Adenine, uracil, thymine (2) Adenine, guanine, cytosine

(3) Adenine, guanine, uracil (4) Adenine, guanine, thymine

23. The vitamin which is water soluble and antioxidant is :

(1) Vitamin E (2) Vitamin D (3) Vitamin C (4) Vitamin B_1

24. Which base is found only in the nucleotides of RNA ?

(1) Adenine (2) Uracil (3) Guanine (4) Cytosine

25. The couplings between base units of DNA is through :

(1) Hydrogen bonding (2) Electrostatic bonding

(3) Covalent bonding (4) Vander Waals forces

26. Mixture of chloroxylenol and terpineol acts as :

(1) Analgesic (2) Antiseptic (3) Antipyretic (4) Antibiotic

27. In a protein molecule various amino acids are linked together by :

(1) dative bond (2) α-glycosidic bond (3) β-glycosidic bond (4) peptide bond

28. Which of the following in an analgesic?

(1) Chloromycetin (2) Novalgin (3) Penicillin (4) Streptomycin

29. Artificial sweetner which is stable under cold conditions only is :

(1) Saccharine (2) Sucralose (3) Aspartame (4) Alitame

30. Which of the following hormones is produced under the condition of stress which stimulates glycogenolysis in the liver of human being ?

(1) Thyroxin (2) Insulin (3) Adrenaline (4) Estradiol

Practice Test-1 (IIT-JEE (Main Pattern))

OBJECTIVE RESPONSE SHEET (ORS)

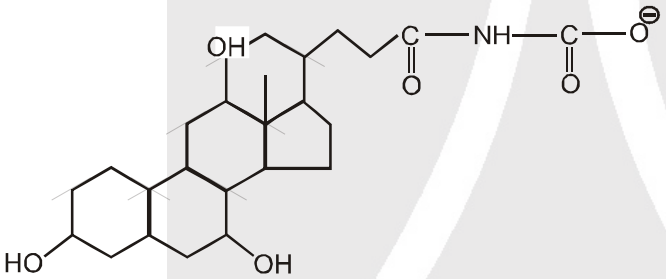
Que.	1	2	3	4	5	6	7	8	9	10
Ans.										
Que.	11	12	13	14	15	16	17	18	19	20
Ans.										
Que.	21	22	23	24	25	26	27	28	29	30
Ans.										

PART-II : NATIONAL STANDARD EXAMINATION IN CHEMISTRY (NSEC) STAGE-I

1. Drug which helps to reduce anxiety and brings about calmness is called as : **[NSEC-2001]**
(A) analgesic (B) diuretioc (C) tranquilizer (D) antihistamine

2. Which of the following vitamins are in water soluble ? **[NSEC-2001]**
(A) A and E (B) A and E (C) B and C (D) D and E

3.



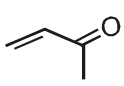
The compound shown above is : **[NSEC-2001]**
(A) a bile salt (B) a cholesterol
(C) vitamin D_3 (D) a steroid hormone

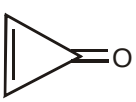
4. The molecule that will have dipole moment is : **[NSEC-2001]**
(A) trans 3-hexene (B) trans-2-pentene
(C) 2,2-dimethyl propane (D) 2,2,3,3-tetramethyl butane

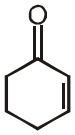
5. Which of the following is an unsaturated fatty acid ? **[NSEC-2001]**
(A) Stearic acid (B) Linolic acid (C) Lauric acid (D) Palmatic acid.

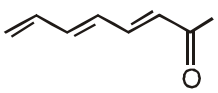
6. A person suffered from injury and there was considerable delay in clotting of blood. It may be due to the deficiency of **[NSEC-2002]**
(A) vitamin A (B) vitamin B (C) vitamin C (D) vitamin K

7. The compound having the highest dipole moment is **[NSEC-2003]**

(A) 

(B) 

(C) 

(D) 

8. Transport of oxygen is an important function of blood. Partial pressure of O_2 is highest and lowest, respectively in **[NSEC-2003]**
(A) muscles and heart (B) lungs and muscles
(C) heart and lungs (D) muscles and lungs.

9. Milk of magnesia used as a medicine for treating indigestion is a substance that : **[NSEC-2003]**
(A) helps in disintegration of food products leading to their facile metabolism
(B) combines with gastric hydrochloric acid thereby enhancing the latter`s efficiency
(C) improves the enzymatic activities inside the stomach
(D) neutralises excess acidity, providing a buffered medium inside the stomach.

10. Calcium gluconate syrup and calcium phosphate tablets are calcium supplements used to treat calcium deficiency. However, calcium gluconate is preferred over the latter because it is **[NSEC-2003]**
(A) more easily absorbed into the blood (B) released slowly in the body
(C) less toxic (D) more tasty

11. The fuel that is considered most polluting is : **[NSEC-2004]**
(A) petrol (B) coke (C) furnace oil (D) CNG.

12. The radioisotope used in the treatment of hyperthyroidism is : **[NSEC-2004]**
(A) Co-60 (B) Na-24 (C) I-131 (D) I-123

13. The haeme group found in haemoglobin **[NSEC-2005]**
(A) co-ordinates the iron atom in the plane of the haeme only when oxygen is bound
(B) contains centrally bound Fe(III) atom
(C) is covalently bound to the haemoglobin
(D) is held within the central cavity formed between the four haemoglobin subunits.

14. Proteins present inside the cell membrane are stabilized by **[NSEC-2007]**
(A) hydrogen bond (B) disulfide bond (C) hydrophobic force (D) phospho-diester bond

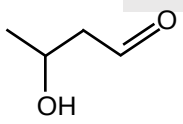
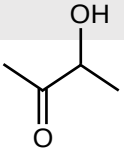
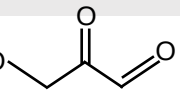
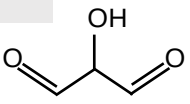
15. Reversible binding of oxygen occurs through **[NSEC-2008]**
(A) Fe (B) Cu (C) Mg (D) Ca

16. Essential vitamin required for the production of RBCs is **[NSEC-2012]**
(A) Folic acid (B) Nicotinic acid (C) Pantothenic acid (D) None of the above

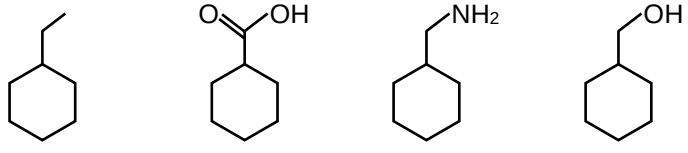
17. When a person suffers from typhoid, the metabolic process stimulates in the body to fight against this disease is synthesis of **[NSEC-2014]**
(A) Lipid (B) carbohydrate (C) protein (D) DNA

18. Wood or cattle dung ash is used for cleaning cooking utensils in many parts of India. The statement that is **not true** for this ash is : **[NSEC-2015]**
(A) It largely consists of metal oxides and silicates because non-metals are removed as gaseous compounds during buring of the wood/dung cakes.
(B) when added to water, it forms alkaline solution with pH~8 and above, which helps to remove oily substances from the utensils.
(C) several chemical components of ash remain undissolved as solids in water and these solids help in cleaning by providing scrubbing action.
(D) if left moist for a few hours in air, it slowly turns acidic because of oxidative decomposition.

19. Compound 'Y' (molar mass = 88.12 g mol^{-1}) containing 54.52% carbon, 9.17% hydrogen and 36.31% oxygen gives a reddish-brown precipitate in Fehling's test. 'Y' is **[NSEC-2018]**

(A) 
(B) 
(C) 
(D) 

20. The correct order of boiling points of the following compounds is **[NSEC-2018]**



(I) (II) (III) (IV)

(A) III < IV < II < I (B) I < III < IV < II (C) I < II < III < IV (D) IV < III < I < II

21. Among the following, the compound that has the highest dipole moment is **[NSEC-2018]**
(A) CH_3COOCH_3 (B) CH_3CONH_2 (C) $CH_3COC_2H_5$ (D) CH_3COCl

PART - III : PRACTICE TEST-2 (IIT-JEE (ADVANCED Pattern))

Max. Time : 1 Hr. **Max. Marks : 63**

Important Instructions

A. General :

1. The test is of 1 hour duration.
2. The Test Booklet consists of 21 questions. The maximum marks are 63.

B. Question Paper Format

3. Each part consists of five sections.
4. Section 1 contains 7 multiple choice questions. Each question has four choices (A), (B), (C) and (D) out of which ONE is correct.
5. Section 2 contains 7 multiple choice questions. Each question has four choices (A), (B), (C) and (D) out of which ONE OR MORE THAN ONE are correct.
6. Section 3 contains 3 questions. The answer to each of the questions is a single-digit integer, ranging from 0 to 9 (both inclusive).
7. Section 4 contains 1 paragraphs each describing theory, experiment and data etc. 3 questions relate to paragraph. Each question pertaining to a partcular passage should have only one correct answer among the four given choices (A), (B), (C) and (D).
8. Section 5 contains 1 multiple choice questions. Question has two lists (list-1 : P, Q, R and S; List-2 : 1, 2, 3 and 4). The options for the correct match are provided as (A), (B), (C) and (D) out of which ONLY ONE is correct.

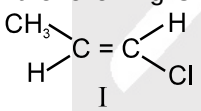
C. Marking Scheme

9. For each question in Section 1, 4 and 5 you will be awarded 3 marks if you darken the bubble corresponding to the correct answer and zero mark if no bubble is darkened. In all other cases, minus one (– 1) mark will be awarded.
10. For each question in Section 2, you will be awarded 3 marks. If you darken all the bubble(s) corresponding to the correct answer(s) and zero mark. If no bubbles are darkened. No negative marks will be answered for incorrect answer in this section.
11. For each question in Section 3, you will be awarded 3 marks if you darken only the bubble corresponding to the correct answer and zero mark if no bubble is darkened. No negative marks will be awarded for incorrect answer in this section.

SECTION-1 : (Only One option correct Type)

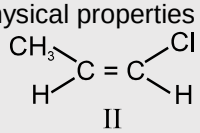
This section contains 7 multiple choice questions. Each questions has four choices (A), (B), (C) and (D) out of which Only ONE option is correct.

1. Which of the following is correct set of physical properties of the geometrical isomers ?



I

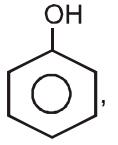
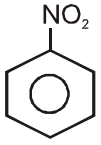
&

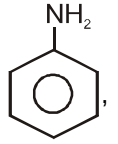
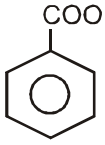


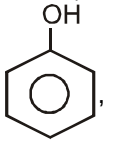
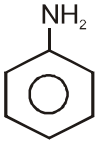
II

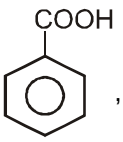
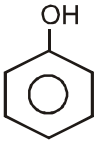
	Dipole moment	Boiling point	Melting point	Stability
(A)	I > II	I > II	II > I	I > II
(B)	II > I	II > I	II > I	II > I
(C)	I > II	I > II	I > II	I > II
(D)	II > I	II > I	I > II	I > II

2. A mixture of organic compounds A & B when dissolve in NaOH, A is soluble and its residue B gives positive test with Zn/ NH_4Cl followed by $AgNO_3$ + NH_4OH, (mulliken's barker test). Identify A & B

(A)  , 

(C)  , 

(B)  , 

(D)  , 

3. Which is/are the correct method for separating a mixture of benzoic acid, p-methylaniline & phenol ?

(A) $\xrightarrow{\text{aq. } NaHCO_3}$ $\xrightarrow{\text{aq. NaOH}}$ (B) $\xrightarrow{\text{aq. HCl}}$ $\xrightarrow{H_2O}$

(C) $\xrightarrow{\text{aq. NaOH}}$ $\xrightarrow{\text{aq. } NaHCO_3}$ (D) $\xrightarrow{\text{aq. NaOH}}$ $\xrightarrow{\text{aq. HCl}}$

4. Which of the following is not an antiseptic drug ?
(A) Iodoform (B) Dettol (C) Gammexane (D) Gentian violet

5. Which of the following represents a double base propellant ?
(A) Nitromethane
(B) Nitrocellulose + nitroglycerine
(C) N_2O_4 + monomethylhydrazine
(D) Liquid H_2 + liquid O_2

6. Which alcohol has least solubility in water ?
(A) Ethanol (B) Propan-1-ol (C) Butan-1-ol (D) Pentan-1-ol

7. Anthracene is purified by :
(A) filtration (B) distillation (C) crystallisation (D) sublimation

Section-2 : (One or More than one options correct Type)

This section contains 7 multipole choice questions. Each questions has four choices (A), (B), (C) and (D) out of which ONE or MORE THAN ONE are correct.

8. Which of the following are not used as food preservatives?
(A) Table salt
(B) Sodium hydrogencarbonate
(C) Cane sugar
(D) Benzoic acid

9. Compounds with antiseptic properties are _____.
(A) $CHCl_3$
(B) CHI_3
(C) Boric acid
(D) 0.3 ppm aqueous solution of Cl_2

10. Which of the following statements are correct about barbiturates?
(A) Hypnotics or sleep producing agents.
(B) These are tranquilizers.
(C) Non-narcotic analgesics.
(D) Pain reducing without disturbing the nervous system.

11. Which of the following compounds are administered as antacids?
(A) Sodium carbonate
(B) Sodium hydrogencarbonate
(C) Aluminium carbonate
(D) Magnesium hydroxide

12. Amongst the following antihistamines, which are antacids?
(A) Ranitidine (B) Brompheniramine (C) Terfenadine (D) Cimetidine

13. Which of the following are anionic detergents?
(A) Sodium salts of sulphonated long chain alcohol.
(B) Ester of stearic acid and polyethylene glycol.
(C) Quarternary ammonium salt of amine with acetate ion.
(D) Sodium salts of sulphonated long chain hydrocarbons.

14. Which of the following statements are correct?
(A) Cationic detergents have germicidal properties
(B) Bacteria can degrade the detergents containing highly branched chains.
(C) Some synthetic detergents can give foam even in ice cold water.
(D) Synthetic detergents are not soaps.

Section-3 : (One Integer Value Correct Type.)

This section contains 3 questions. Each question, when worked out will result in one integer from 0 to 9 (both inclusive)

15. How many of the following are antifical sweeteners,
(i) Aspartame (ii) Saccharin (iii) Sucralose
(iv) Bithionol (v) Terpineol (vi) Chloroxylenol
(vii) Alitame (viii) Sodium Benzoate (ix) Sorbic acid

16. In how many of the following drugs, S is present.

(i) Histamine	(ii) Cimetidine	(iii) Ranitidine
(iv) Terfenadine	(v) Phenelzine	(vi) Veronal
(vii) Valium	(viii) Sulphonamide	(ix) Sulphapyridine

17. From the given set of drugs, how many of them can be used as antibiotics.

(i) Penicillin	(ii) Erythromycin	(iii) Ofloxacin.
(iv) Tetracycline	(v) Chloramphenicol	(vi) Salvarsan
(vii) Prontosil	(viii) Bithional	(ix) Chloroxylenol

SECTION-4 : Comprehension Type (Only One options correct)

This section contains 1 paragraphs, each describing theory, experiments, data etc. 3 questions relate to the paragraph. Each question has only one correct answer among the four given options (A), (B), (C) and (D)

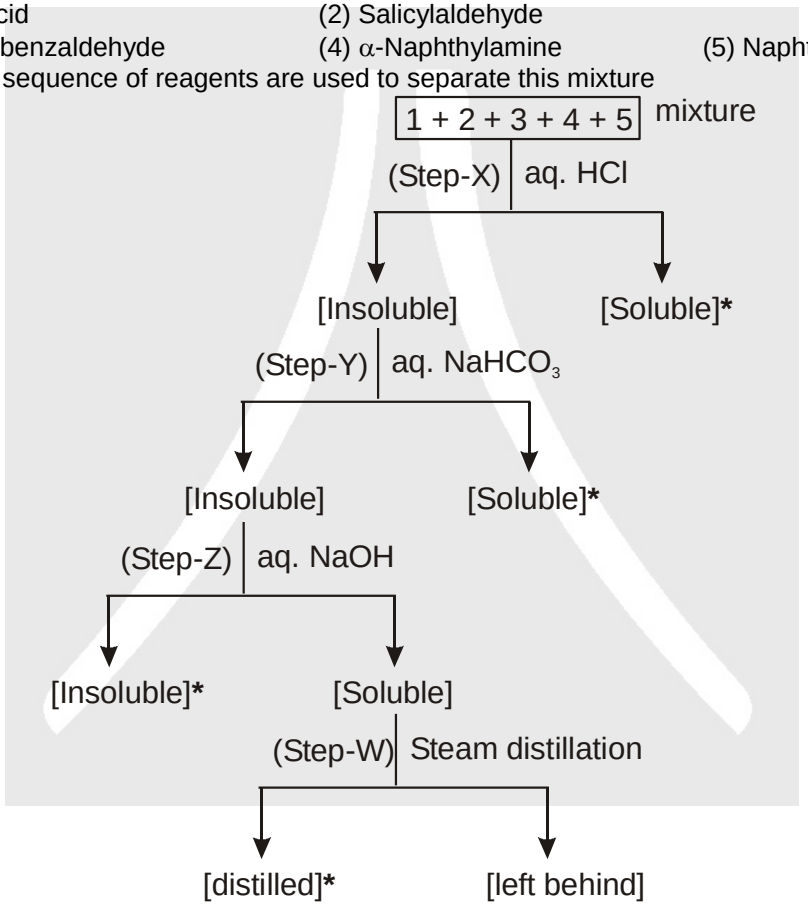
Paragraph for Questions 18 to 20

A water insoluble organic mixture contained following compounds

(1) Benzoic acid (2) Salicylaldehyde

(3) p-Hydroxybenzaldehyde (4) α-Naphthylamine (5) Naphthalene

The following sequence of reagents are used to separate this mixture



18. Soluble compound at step X is formed by compound :

(A) Benzoic acid (B) p-Hydroxybenzaldehyde

(C) α-Naphthylamine (D) Naphthalene

19. Soluble compound at step Y is formed by compound.

(A) Benzoic acid (B) p-Hydroxybenzaldehyde

(C) α-Naphthylamine (D) Naphthalene

20. Insoluble compound at step Z is formed by compound.

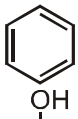
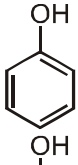
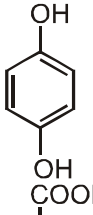
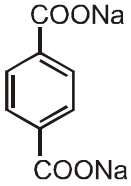
(A) p-Hydroxybenzaldehyde (B) Salicylaldehyde

(C) α-Naphthylamine (D) Naphthalene

SECTION-5 : Matching List Type (Only One options correct)

This section contains 1 questions, each having two matching lists. Choices for the correct combination of elements from List-I and List-II are given as options (A), (B), (C) and (D) out of which one is correct

21

Column-I		**Column-II**	
P		**1**	insoluble in water with $\mu = 0$.
Q		**2**	more soluble in water with $\mu \neq 0$.
R		**3**	most soluble in water with $\mu = 0$.
S		**4**	slightly soluble in water with $\mu \neq 0$.

Codes :

	P	Q	R	S		P	Q	R	S
(A)	1	2	3	4	(B)	1	4	2	3
(C)	3	4	1	2	(D)	4	3	2	1

Practice Test-2 (IIT-JEE (ADVANCED Pattern)

OBJECTIVE RESPONSE SHEET (ORS)

Que.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Ans.										
Que.	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Ans.										
Que.	**21**									
Ans.										

APSP Answers

PART - I

1.	(4)	**2.**	(2)	**3.**	(3)	**4.**	(4)	**5.**	(2)
6.	(1)	**7.**	(4)	**8.**	(4)	**9.**	(4)	**10.**	(1)
11.	(1)	**12.**	(4)	**13.**	(2)	**14.**	(3)	**15.**	(4)
16.	(2)	**17.**	(1)	**18.**	(2)	**19.**	(2)	**20.**	(2)
21.	(3)	**22.**	(2)	**23.**	(3)	**24.**	(2)	**25.**	(1)
26.	(2)	**27.**	(4)	**28.**	(2)	**29.**	(3)	**30.**	(3)

PART-II

1.	(C)	**2.**	(C)	**3.**	(A)	**4.**	(B)	**5.**	(B)
6.	(D)	**7.**	(B)	**8.**	(B)	**9.**	(D)	**10.**	(A)
11.	(B)	**12.**	(C)	**13.**	(A)	**14.**	(D)	**15.**	(A)
16.	(A)	**17.**	(C)	**18.**	(D)	**19.**	(A)	**20.**	(B)
21.	(B)								

PART - III

1.	(C)	**2.**	(A)	**3.**	(A)	**4.**	(C)	**5.**	(B)
6.	(D)	**7.**	(D)	**8.**	(AC)	**9.**	(BC)	**10.**	(AB)
11.	(BD)	**12.**	(AD)	**13.**	(AD)	**14.**	(ACD)		
15.	4 (i, ii, iii and vii)	**16.**	4 (ii, iii, viii, ix)	**17.**	7 (i to vii only)	**18.**	(C)	**19.**	(A)
20.	(D)	**21.**	(B)						

APSP Solutions

PART - I

2. Melting point depends on symmetry of molecule.

5. Boiling point $\propto$ molecular weight.

7. Lighter phenol and aromatic carboxylic acid both reacts with sodium hydroxide, sodium sulphate and calcium chloride. While only aromatic carboxylic acid reacts with sodium bicarbonate. So, they can be seperated by sodium bicarbonate

$\therefore$ option (4) is correct.

8. Novalgin is a common analgesic and antipyretic.

9. This is informative question.

10. Salol is used as intestinal antiseptic.

11. Lower alcohol are soluble in water.

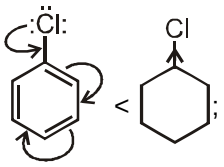
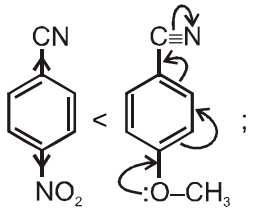
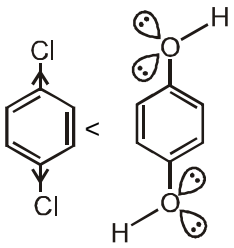
12. Ar–OH dissolve in NaOH and carbonyl group gives +ve test with 2,4-DNP so $Ph-\underset{\underset{O}{\|}}{C}-Ph$ gives +ve 2,4DNP test.

13. With conc. NaOH, amide gives smell of ammonia and aliphatic amides is soluble in H_2O.

14. Aromatic amines are soluble in aq. HCl due to salt formation.

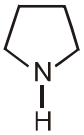
15. Correct orders are

B.P.	=	II > I	(pera > ortho)
H_2O (sol.)	=	II > I	(pera > ortho)
Acid strength	=	II > I	(pera > ortho)

16. (1)  ; (3)  ; (4) 

17. Anisol does not form salt with NaOH.

18. If boiling points are closer then best separation is done by fractional distillation.

19. Due to more electronegativity of oxygen than N,  has higher dipole moment than  .

20. Dipole moment of cis isomer > dipole moment of trans isomer and hence water solubility. (cis isomer is greater than trans isomer).

21. The enzyme which hydrolyses cellulose into glucose is emulsin.

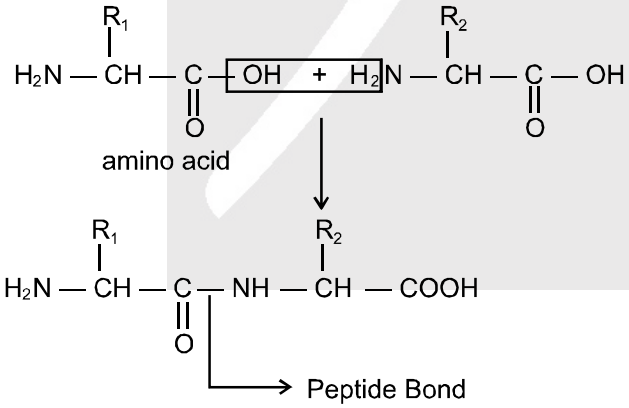
22. Adenine, guanine, cytosine sets of bases is present both in DNA and RNA.

23. Vitamin C is water soluble and antioxidant.

24. Uracil base is found only in the nucleotides of RNA

25. The couplings between base units of DNA is through hydrogen bonding.

26. It is fact.

27. 

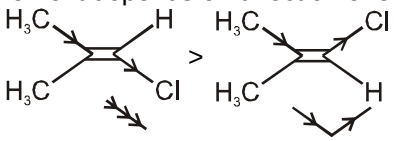
28. Novalgin is an analgesic it is a fact.

29. Aspartame is stable at cold conditions but unstable at cooking temperature.

30. Adrenaline hormone is produced by adrenal glands after receiving a massage from the brain that a stressfull situation has presented itself. It is commonly known as ***fight or flight*** hormone.

PART - III

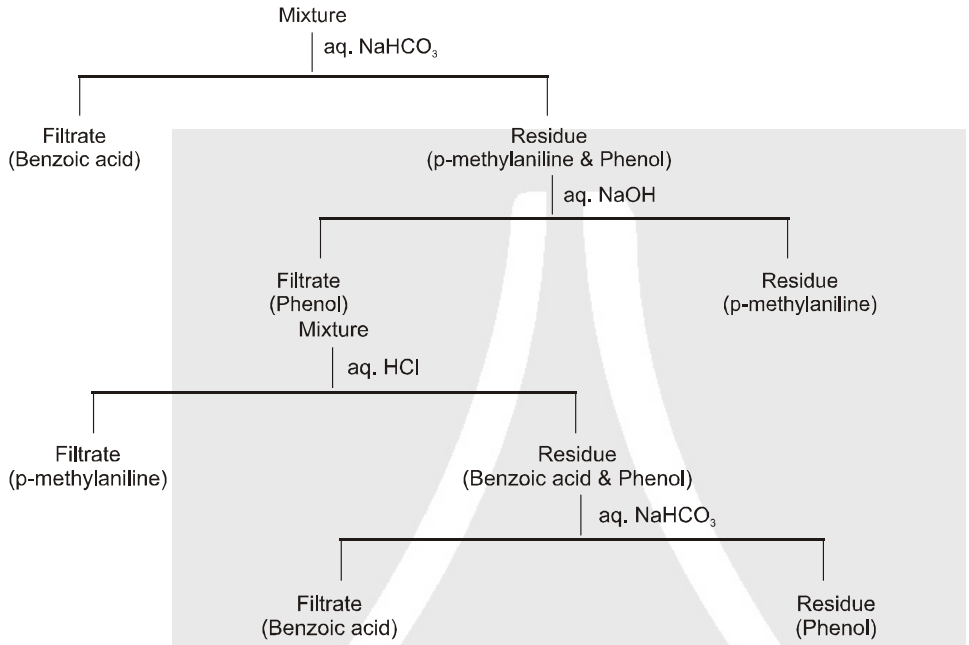
1. Dipole moment depends on direction of electron flow i.e.



melting point and boiling point also depends on dipole moment if H-bonding is absent. Greater the dipole moment, greater the melting point and boiling point.

2. $Ar–NO_2 \xrightarrow[\Delta]{Zn/NH_4Cl} ArNHOH \xrightarrow[NH_4OH]{AgNO_3^+} Ag\downarrow$

3.



4. Gammexane is insecticide.

6. Pentan-1-ol has larger alkyl group which decreases H-bonding so least soluble in water.

7. Anthracene (solid) $\underset{\text{cool}}{\overset{\text{heat}}{\rightleftharpoons}}$ vapours

15. 4 (i, ii, iii and vii) are antifical sweeteners.

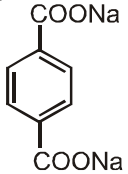
16. Cimetidine, Ranitidine, Sulphonamide and Sulphapyridine has "S" present in it.

17. Bithional and Chloroxylenol are antiseptics.

18. $–NH_2$ containing compound form salt with HCl.

19. –COOH group forms salt with $NaHCO_3$.

20. Naphthalene does not form salt with HCl, $NaHCO_3$ and NaOH.

21. Benzene is non-polar, phenol has –OH group so slightly soluble, p-hydroxyphenol has 2–OH group so more soluble on water,  is salt so is most soluble in water.