Vidyamandir Classes
Gurukul for IITJEE & Medical Preparation

| Date Planned : __ / __ / __ | Daily Tutorial Sheet-4 | Expected Duration : 45 Min |
| Actual Date of Attempt : __ / __ / __ | JEE Main Archive | Exact Duration :_____ |

46. The hydrocarbon with seven carbon atoms containing a neopentyl and a vinyl group is : **(2016)**

(A) 2, 2-dimethyl-4-pentene (B) Isopropyl-2-butene

(C) 4, 4-dimethylpentene (D) 2, 2-dimethyl-3-pentene

47. Sodium extract is heated with concentrated HNO_3 before testing for halogens because : ▶ **(2016)**

(A) Silver halides are totally insoluble in nitric acid

(B) Ag_2S and AgCN are soluble in acidic medium

(C) S^{2-} and CN^-, if present, are decomposed by conc. HNO_3 and hence do not interfere in the test

(D) Ag reacts faster with halides in acidic medium

48. Which of the following molecules is least resonance stabilized ? ▶ **(2017)**

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

49. In the following structure, the double bonds are marked as I, II, III and IV. Geometrical isomerism is not possible at site (s) : ▶ **(2017)**

(A) III

(B) I

(C) I and III

(D) III and IV
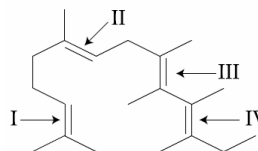
50. Which of the following statements is not true about partition chromatography ? **(2017)**

(A) Mobile phase can be a gas

(B) Stationary phase is a finely divided solid adsorbent

(C) Separation depends upon equilibration of solute between a mobile and a stationary phase

(D) Paper chromatography is an example of partition chromatography

**51.** Which of the following compounds will be suitable for Kjeldahl's method for nitrogen estimation ? **(2018)**

(A) (B) (C) (D) ▶
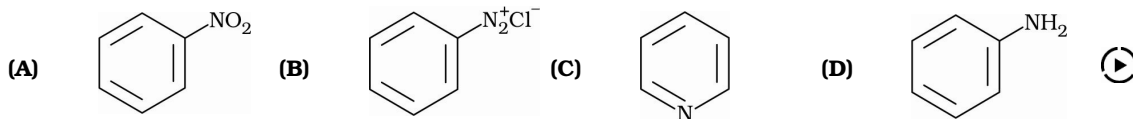
52. Two compounds I and II are eluted by column chromatography (adsorption of I > II). Which one of following is a correct statement ? **(2018)**

(A) I moves faster and has higher R_f value than II

(B) II moves faster and has higher R_f value than I

(C) I moves slower and has higher R_f value than II

(D) II moves slower and has higher R_f value than I

**53.** The correct match between items column I and column II : **(2019)**

	Column–I (Mixture)		**Column –II (Separation Method)**
(1)	H_2O : Sugar	**(P)**	Sublimation
(2)	H_2O : Aniline	**(Q)**	Recrystallization
(3)	H_2O : Toluene	**(R)**	Steam distillation
		(S)	Differential extraction

(A) $(1) \rightarrow Q ; (2) \rightarrow R ; (3) \rightarrow S$ **(B)** $(1) \rightarrow Q ; (2) \rightarrow R ; (3) \rightarrow P$

(C) $(1) \rightarrow S ; (2) \rightarrow R ; (3) \rightarrow P$ **(D)** $(1) \rightarrow R ; (2) \rightarrow P ; (3) \rightarrow S$

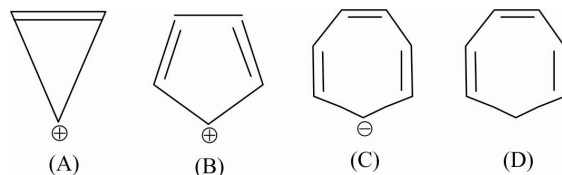**54.** Which of the following compounds is not aromatic ? **(2019)**

(A)   **(B)**   **(C)**   **(D)**
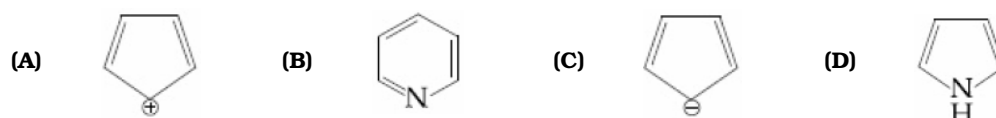
55. What is the IUPAC name of the following compound ? **(2019)**

(A) 3-Bromo-1, 2-dimethylbut-1-ene

(B) 2-Bromo-3-methylpent-3-ene

(C) 3-Bromo-3-methyl-1, 2-dimethylprop-1-ene

(D) 4-Bromo-3-methylpent-2-ene
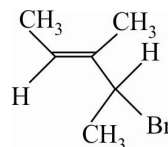
56. Which compound(s) out of the following is/are not aromatic ? **(2019)**

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

(A) (B), (C) and (D)   **(B)** (C) and (D)   **(C)** (A) and (C)   **(D)** (B)

57. The principle of column chromatography is : **(2019)**

(A) Differential absorption of the substances on the solid phase

(B) Gravitational force

(C) Capillary action

(D) Differential adsorption of the substance on the solid phase

58. Match the catalysts (column I) with products (Column II) **(2019)**

	Column I (Catalyst)		**Column II (Product)**
I.	V_2O_5	**(p)**	Polyethylene
II.	$TiCl_4 / Al(Me)_3$	**(q)**	Ethanal
III.	$PdCl_2$	**(r)**	H_2SO_4
IV.	Iron Oxide	**(s)**	NH_3

(A) (I)-(r) ; (II)-(s) ; (III)-(p) ; (IV)-(q)   **(B)** (I)-(s) ; (II)-(r) ; (III)-(q) ; (IV)-(p)

(C) (I)-(r) ; (II)-(p) ; (III)-(q); (IV)-(s)   **(D)** (I)-(q) ; (II)-(r) ; (III)-(p) ; (IV)-(s)

59. The correct IUPAC name of the following compound is : **(2019)**
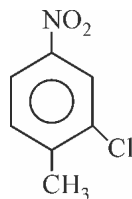
(A) 5-chloro-4-methyl-1-nitrobenze (B) 2-methy 1-5-nitro-1-chlorobenzene

(C) 3-chloro-4-methyl-1-nitrobenzene (D) 2-chloro-1-methyl-4-nitrobenzene

60. The organic compound that gives following qualitative analysis is : **(2019)**

	Test	Inference
(a)	Dil. HCl	Insoluble
(b)	NaOH solution	soluble
(c)	Br_2 / water	Decolourization

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