## **AIPMT 2006**

- 1. Which of the following is more basic than aniline
  - (1) Diphenyl amine
- (2) Triphenyl amine
- (3) p-nitro aniline
- (4) Benzyl amine

### **AIPMT 2007**

- **2.** Which of the following presents the correct order of the acidity in the given compounds:
  - (1) FCH<sub>2</sub>COOH > CH<sub>3</sub>COOH > BrCH<sub>2</sub>COOH > CICH<sub>3</sub>COOH
  - (2) BrCH<sub>2</sub>COOH > ClCH<sub>2</sub>COOH > FCH<sub>2</sub>COOH > CH<sub>3</sub>COOH
  - (3) FCH<sub>2</sub>COOH > ClCH<sub>2</sub>COOH > BrCH<sub>2</sub>COOH > CH<sub>3</sub>COOH
  - (4) CH<sub>3</sub>COOH > BrCH<sub>2</sub>COOH > ClCH<sub>2</sub>COOH > FCH<sub>2</sub>COOH

# **AIPMT 2008**

- **3.** The stability of carbanions in the following:-
  - (a)  $RC \equiv \overset{\circ}{C}$
- (b)
- (c)  $R_2C = \overset{\Theta}{C}H$
- (d)  $R_3C \overset{\Theta}{C}H_2$

is in the order of:-

- (1) (d) > (b) > (c) >(a)
- (2) (a) >(c) >(b) >(d)
- (3) (a) > (b) > (c) > (d)
- (4) (b) > (c) > (d) >(a)
- **4.** Basic strength of:-
  - (a)  $H_3C \overset{\Theta}{C}H_2$
  - (b)  $H_2C = \overset{\circ}{C}H$  and
  - (c)  $HC \equiv \overset{\Theta}{C}$

is in the order of:-

- (1) (a) > (c) > (b)
- (2) (a) > (b) > (c)
- (3) (b) > (a) > (c)
- (4) (c) > (b) > (a)

#### **AIPMT 2010**

**5.** Which one of the following compounds has the most acidic nature?

$$(1) \bigcirc CH \bigcirc CH_2OF$$

- (3) OH
- (4) OH
- **6.** Given are cyclohexanol (I), acetic acid (II), 2, 4, 6-trinitrophenol (III) and phenol (IV). In these the order of decreasing acidic character will be :-
  - (1) III > IV > II > I
- (2) III > II > IV > I
- (3) II > III > I > IV
- (4) II > III > IV > I

### **AIPMT Mains-2010**

- **7.** Among the following four compounds :-
  - (a) phenol
  - (b) methyl phenol
  - (c) metanitrophenol
  - (d) paranitrophenol.

The acidity order is:

- (1) c > d > a > b
- (2) c > d > c > b
- (3) b > a > c > d
- (4) d > c > a > b
- **8.** Which of the following species is not electrophilic in nature :-
  - (1) BH<sub>3</sub>
- (2) H<sub>3</sub>O
- (3) NO<sub>2</sub>
- 4) Čl

#### AIPMT Mains-2011

- **9.** Which of the following compounds is most basic?
  - (1)  $NH_2$
- (2)  $O_2N$   $\longrightarrow$   $NH_2$
- (4) N-COCH<sub>3</sub>

## AIPMT Pre.-2012

- The correct order of decreasing acid strength of trichloroacetic acid (A), trifluoroacetic acid (B), acetic acid (C) and formic acid (D) is:
  - (1) A > B > C > D
- (2) A > C > B > D
- (3) B > A > D > C
- (4) B > D > C > A

# **NEET-UG 2013**

- $-\mathring{\mathrm{C}}\mathrm{H}_{\scriptscriptstyle{2}}$  is aromatic because it The radical, has :-
  - (1) 6p-orbitals and 7 unpaired electrons
  - (2) 6p-orbitals and 6 unpaired electrons
  - (3) 7p-orbitals and 6 unpaired electrons
  - (4) 7p-orbitals and 7 unpaired electrons
- **12**. The order of stability of the following tautomeric compounds is :-

$$\begin{array}{ccc}
O & O \\
\parallel & \parallel \\
CH_3-C-CH_2-C-CH_3 & & \longrightarrow \\
\end{array}$$
(II)

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

## **AIPMT 2015**

In which of the following compounds, C-Cl bond ionisation shall give most stable carbonium ion?

$$H_{3}C$$
(1)
 $H_{3}C$ 
 $C-Cl$ 
 $CH_{3}$ 

$$(4) \xrightarrow{H_3C} \xrightarrow{H} C-C$$

Consider the following compounds 14.

Hyperconjugation occurs In:-

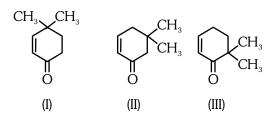
- (1) II only (2) III only
- (3) I and III (4) I only

**15**. Given:-

$$H_3C$$
 $CH_3$ 
 $CH_3$ 

The enthalpy of the hydrogenation of these compounds will be in the order as :-

- (1) III > II > I
- (2) II > III > I
- (3) II > I > III
- (4) I > II > III
- Which of the given compounds can exhibit **16**. tautomerism?

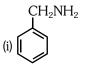


- (1) I and III
- (2) II and III
- (3) I, II and III
- (4) I and II

#### Re-AIPMT 2015

- Which of the following statements is not correct **17**. for a nucleophile?
  - (1) Nucleophiles attack low e<sup>-</sup> density sites
  - (2) Nucleophiles are not electron seeking
  - (3) Nucleophile is a Lewis acid
  - (4) Ammonia is a nucleophile

**18**. Correct order of  $K_b$  is



(iii) CH<sub>3</sub>CH<sub>2</sub>-NH<sub>2</sub>

(1) iv > iii > ii > i

(2) 
$$iii > i > ii > iv$$

(3) i > ii > iii > iv

(4) 
$$ii > iii > iv > i$$

## **NEET-I 2016**

- **19.** The correct statement regarding a carbonyl compound with a hydrogen atom on its alpha carbon, is:-
  - a carbonyl compound with a hydrogen atom on its alpha-carbon never equilibrates with its corresponding enol.
  - (2) a carbonyl compound with a hydrogen atom on its alpha-carbon rapidly equilibrates with its corresponding enol and this process is known as aldehyde-ketone equilibration.
  - (3) a carbonyl compound with a hydrogen atom on its alpha-carbon rapidly equilibrates with its corresponding enol and this process is known as carbonylation.
  - (4) a carbonyl compound with a hydrogen atom on its alpha-carbon rapidly equilibrates with its corresponding enol and this process is known as keto-enol tautomerism.
- **20.** The **correct** statement regarding the basicity of arylamines is :-
  - (1) Arylamines are generally less basic than alkylamines because the nitrogen lone-pair electrons are delocalized by interaction with the aromatic ring  $\pi$  electron system.
  - (2) Arylamines are generally more basic than alkylamines because the nitrogen lone-pair electrons are not delocalized by interaction with the aromatic ring  $\pi$  electron system.
  - (3) Arylamines are generally more basic than alkylamines because of aryl group.
  - (4) Arylamines are generally more basic than alkylamines, because the nitrongen atom in arylamines is sp-hybridized.

### **NEET-II 2016**

**21.** Which among the given molecules can exhibit tautomerism?

- (1) Both I and II
- (2) Both II and III
- (3) III only
- (4) Both I and III

**22.** The **correct** order of strengths of the carboxylic acids

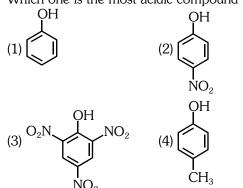
is

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

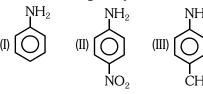
# **NEET(UG) 2017**

- **23.** Which one is the correct order of acidity?
  - (1) CH=CH>CH<sub>3</sub>-C=CH>CH<sub>2</sub>=CH<sub>3</sub>>CH<sub>3</sub>-CH<sub>3</sub>
  - (2) CH=CH>CH<sub>2</sub>=CH<sub>2</sub>>CH<sub>3</sub>-C=CH>CH<sub>3</sub>-CH<sub>3</sub>
  - (3) CH<sub>3</sub>-CH<sub>3</sub>>CH<sub>9</sub>=CH<sub>9</sub>>CH<sub>3</sub>-C=CH>CH=CH
  - (4) CH<sub>2</sub>=CH<sub>2</sub>>CH<sub>3</sub>-CH=CH<sub>2</sub>>CH<sub>3</sub>-C=CH>CH=CH

**24.** Which one is the most acidic compound?



**25.** The **correct** increasing order of basic strength for the following compounds is :



- (1) III < I < II
- (2) III < II < I
- (3) II < I < III
- (4) II < III < I

# GC0096

- **26.** The **correct** statement regarding electrophile is:-
  - (1) Electrophile is a negatively charged species and can form a bond by accepting a pair of electrons from another electrophile
  - (2) Electrophiles are generally neutral species and can form a bond by accepting a pair of electrons from a nucleophile
  - (3) Electrophile can be either neutral or positively charged species and can form a bond by accepting a pair of electrons from a nucleophile
  - (4) Electrophile is a negatively charged species and can form a bond by accepting a pair of electrons from a nucleophile

## **NEET(UG) 2018**

**27.** Which of the following is correct with respect to –I effect of the substituents ? (R = alkyl)

(1) 
$$-NH_{2} < -OR < -F$$

$$(2) -NR_{2} < -OR < -F$$

$$(3) - NH_2 > - OR > - F$$

$$(4) - NR2 > - OR > - F$$

### **NEET(UG) 2019**

- **28.** The **correct** order of the basic strength of methyl substituted amines in aqueous solution is:-
  - (1)  $(CH_3)_2NH > CH_3NH_2 > (CH_3)_3N$
  - (2)  $(CH_3)_3N>CH_3NH_2>(CH_3)_2NH$
  - (3) (CH<sub>3</sub>)<sub>3</sub>N>(CH<sub>3</sub>)<sub>9</sub>NH>CH<sub>3</sub>NH<sub>9</sub>
  - (4)  $CH_3NH_2>(CH_3)_2NH>(CH_3)_3N$

- **29.** The compound that is most difficult to protonate is:-
  - ) H O H (2) H<sub>3</sub>C O H
  - $H_3C$   $CH_3$  (4) Ph O H

# NEET(UG) 2019 (ODISHA)

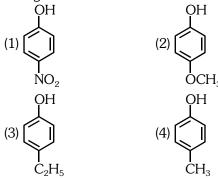
- **30.** The most stable carbocation, among the following is:-
  - (1)  $(CH_3)_3 C \overset{\oplus}{C}H CH_3$
  - (2)  $CH_3 CH_2 \overset{\oplus}{C}H CH_2 CH_3$
  - (3)  $CH_3 \overset{\oplus}{C}H CH_2 CH_2 CH_3$
  - (4)  $CH_3 CH_2 \overset{\oplus}{C}H_2$

## **NEET(UG) 2020**

- **31.** A tertiary butyl carbocation is more stable than a secondary butyl carbocation because of which of the following?
  - (1) Hyperconjugation
  - (2) –I effect of –CH<sub>3</sub> groups
  - (3) +R effect of -CH<sub>3</sub> groups
  - (4) -R effect of -CH<sub>3</sub> groups

## **NEET(UG) 2020 (COVID-19)**

**32.** Which of the following substituted phenols is the strongest acid?



Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	4	3	3	2	3	2	4	2	3	3	2	3	2	2	1
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	3	3	2	4	1	3	4	1	3	3	3	1	1	4	3
Que.	31	32													
Ans.	1	1													