

## NALANDA V Nalanda Vidyalaya – Colombo 10 da vidyalaya

NALANDA VIDYALAY

**Unit Test Project** 

NALANDA VIDYALAYA

Grade 11

Science

Unit: 07 Acid, base, salts

## **MCQ Questions**

- (1) What is the response when litmus is introduced to vinegar.
  - i) red
- ii) blue
- iii) colourless
- iv) orange

- (2) The correct order of increasing the acidity.
  - i) CH<sub>3</sub>COOH, HCL, NH<sub>4</sub>OH
  - ii) NH<sub>4</sub>OH, HCL, CH<sub>3</sub>COOH
  - iii) NH<sub>4</sub>OH, CH<sub>3</sub>COOH, HCl
  - iv) NaOH, Mg(OH)2, NH4OH
- (3) Which of the above solutions give pH = 7
  - i) vinegar
- ii) soap
- iii) lime
- iv) distilled water

- (4) Which will make phenopthaline colourless.
  - i) HCl

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- ii) NaOH
- iii) H<sub>2</sub>CO<sub>3</sub>
- iv) NaCl

- (5) Choose the neutralisation reaction.
  - i) Mg(s) + 2HCl(aq)
- $\rightarrow$  MgCl<sub>2</sub>(aq) + H<sub>2</sub>(q)
- ii) 2NaOH(aq) + 2HCl(l) -
- $\rightarrow$  2NaCl + 2H<sub>2</sub>O(l)
- iii)  $CaCl_2(aq) + Na_2CO_3(aq) \longrightarrow CaCO_3(aq) + 2NaCl$
- iv)  $2H_2(q) + O_2(q)$  —
- $\rightarrow$  2H<sub>2</sub>O(l)
- - i) salt and water

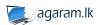
- ii) oxygen and water
- iii) alkaline metal and a salt
- iv) salt and H<sup>+</sup> ions.
- (7) The chemical compounds that release  $H^+$  ions in the aquous medium are,
  - i) acids
- ii) bases
- iii) Alkaline metals
- iv) salts

- (8) Which of the following is not a function of acetic acid?
  - i) Fermentation of rubber latex
    - ii) preparation of vinegar
    - iii) preparation of soap
    - iv) for the manufacture of papers.



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(9)	Select the solution which is not an acid i) lime juice			ii) vinagar					
		•	1	ii) vinegar iv) vitamin C					
	iii) milk of magnesia			iv) vitaiiiii C					
(10)	The chemical formulae for the acetic acid is?								
	i) H <sub>2</sub> CO <sub>3</sub> iii) H <sub>3</sub> PO <sub>4</sub>			ii) CH <sub>3</sub> COOH					
				iv) $C_6H_{12}O_6$					
			Structu	ired essay					
(1)	a) i) Some regent bottles in a laboratory are provided to you. so state whet base or neutral								
		• NaCl		• NH <sub>4</sub> OH -					
		• CH <sub>3</sub> COOH		• КОН					
		• NaOH		• HCl					
		• H <sub>2</sub> CO <sub>3</sub>		• H <sub>2</sub> SO					
	ii)	Select weak a	acids among the given	chemicals.					
			agar	am.lk					
	iii)	What is a wea	ak acid.						
	iv)	Name 3 stron	ig acids.						
	b) i)	What are alka	aline metals?						
	ii)	Write 2 exam	nples for them,						

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(2) 1)

solution	A	В	С	D	Е
pH value	24 - 3.2	12.1 – 13.4	7	3.5 - 6.8	8.5 -9.8

- a) i) What is the most acidic solution from the given solutions. .....
  - ii) What is the most basic solution.
- b) What are the solution that make red litmus to blue.
- c) To which solutions does phenepthelin solution turns pink.
- d) Which contains distilled water from the given solutions.
- 2) When the two litmus papers, blue and red are dipped in vinegar solution, write the colour change in litmus papers

i) Red litm	ıs :		
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ii) Blue litmus	:	
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## **Essay questions**

- (1) A person who is suffering from gastritis took milk of magnesia for his treatments. After sometimes he felt well. By telling his experience with some Grade 11 science students they tried to relate this with their studies.
  - a) i) What is the reason for taking milk of magnesia to the above mentioned situation.
    - ii) What is the type of reaction formed here.
    - iii) When the two compounds to which gastric juice and milk of magnesia are reacted, two compounds with formed name them.

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- b) i) Write the balanced chemical reaction for the reactions with HCl(aq) and NaOH(aq)
  - ii) The salt X is formed in the above reaction. Name it and write down the 2 usages of that salt.
- (2) Given below are some instances of preparations in the laboratory.
  - a) i) How do we prepare a dilute acid.
  - b) i) How do we prepare a salt in the laboratory.
    - ii) How do we prepare NaCl.
    - iii) Write 2 uses of the salt, NaCl
  - c) i) Write the meaning of neutralization.
  - d) i) What is a base.
  - ii) Name 2 bases and write their chemical formulae.
  - iii) Then write down the ionization reaction for one of the above mentioned base.

