



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_3COOH , HCL , NH_4OH
 ii) NH_4OH , HCL , CH_3COOH
 iii) NH_4OH , CH_3COOH , HCL
 iv) NaOH , $\text{Mg}(\text{OH})_2$, NH_4OH
- (3) Which of the above solutions give pH = 7
 i) vinegar ii) soap iii) lime iv) distilled water
- (4) Which will make phenolphthaline colourless.
 i) HCL ii) NaOH iii) H_2CO_3 iv) NaCl
- (5) Choose the neutralisation reaction.
 i) $\text{Mg}(\text{s}) + 2\text{HCl}(\text{aq}) \longrightarrow \text{MgCl}_2(\text{aq}) + \text{H}_2(\text{g})$
 ii) $2\text{NaOH}(\text{aq}) + 2\text{HCl}(\text{l}) \longrightarrow 2\text{NaCl} + 2\text{H}_2\text{O}(\text{l})$
 iii) $\text{CaCl}_2(\text{aq}) + \text{Na}_2\text{CO}_3(\text{aq}) \longrightarrow \text{CaCO}_3(\text{aq}) + 2\text{NaCl}$
 iv) $2\text{H}_2(\text{g}) + \text{O}_2(\text{g}) \longrightarrow 2\text{H}_2\text{O}(\text{l})$
- (6) Write the reaction of an acid and a base and are formed.
 i) salt and water ii) oxygen and water
 iii) alkaline metal and a salt iv) salt and H^+ ions.
- (7) The chemical compounds that release H^+ ions in the aqueous 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.

(9) Select the solution which is not an acid

- i) lime juice
- ii) vinegar
- iii) milk of magnesia
- iv) vitamin C

(10) The chemical formulae for the acetic acid is?

- i) H_2CO_3
- ii) CH_3COOH
- iii) H_3PO_4
- iv) $C_6H_{12}O_6$

Structured essay

(1) a) i) Some reagent bottles in a laboratory are provided to you. so state whether they are acid, base or neutral

- | | | | |
|--------------|---------|-------------|---------|
| • NaCl | - | • NH_4OH | - |
| • CH_3COOH | - | • KOH | - |
| • NaOH | - | • HCl | - |
| • H_2CO_3 | - | • H_2SO_4 | - |

ii) Select weak acids among the given chemicals.

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iii) What is a weak acid.

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iv) Name 3 strong acids.

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b) i) What are alkaline metals?

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ii) Write 2 examples for them,

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(2) 1)

solution	A	B	C	D	E
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 phenephtelin 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 litmus :

ii) Blue litmus :

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.

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.