

## **CHEMISTRY**

## **BOOKS - VGS PUBLICATION-BRILLIANT**

# **ACIDS AND BASES**

Exercise

**1.** The sting of a wasp is basic. How can we treat the sting of a wasp?



**2.** Why are acids not stored in a metal container?



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**3.** Acidic, basic and neutral solutions are given in three test and you are given a strip of red litmus. How will you identify the three solutions?



**4.** When drops of lemon juice are put on blue litmus it turns red. What will happen if you put some drops of soap solution on the same position on litmus paper?



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**5.** What happens when nitric acid is added to egg shell?



**6.** Turmeric stains on white clothes, when washed with soap, turn red. Why?



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**7.** Ammonia is present in window cleaners. It turns red litmus blue. What is its nature?



**8.** What is the nature of urea? It is acdic/basic/netural? How can we verify it?



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**9.** Red litmus paper is dipped in a solution. It remains red. What is the nature of the solution? Explain your answer.



**10.** What is the effect of basic substances on turmeric paper?



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**11.** Can flowers and turmeric papers also be called as indicators. Why?



12. Correct the statement if it is wrong:

Indicators show different colours in acidic and basic solutions.



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13. Correct the statement if it is wrong:

Sodium hydroxide blue litmus red.



14. Correct the statement if it is wrong:

Tooth decay is caused by the presence of base.



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**15.** Take vinegar, lemon juice, soapy water, baking soda in different vessels. Pur beetroot pieces in the vessels. Predict what happens. Verify your prediction by observing the changes. After 10 minutes, 30 minutes, 60

minutes record your observations. What do you conclude?



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**16.** Visit a doctor. Find out the medicines she prescribes to treat acidity. Ask her how acidity can be naturally prevented. Prepare a report.



17. Prepare red cabbage juice by boiling a piece of red cabbage in water. Use it as an inidicator and test acidic and basic solutions with it.

Present your observations in the form of a table.



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**18.** Collect different flowers and prepare their natural indicators with the help of filter paper.



19. Test the nature of lemon juice and milk sample with the help of natural indicators prepared from different flowers. Explain their nature.



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20. How do you feel about nature? It is a big natural laboratory that contains innumerable indicators.



21. To protect tooth decay we are advised to brush our teeth regularly. The nature of the tooth paste commonly used is

A. Acidic

**B.** Neutral

C. Basic

D. Baking soda

**Answer:** 

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22. Which of the following is acidic in nature?

A. Lemon juice

B. Baking soda

C. Lime water

D. Soap water

#### **Answer:**



**23.** Why are industrial wastes neutralised before releasing into water?



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**24.** Write the names of food substances that you know in the appropriate column, based on their taste.



25. Take solutions of some juices of fruits, vegetables, cold drinks and various solutions in beakers test tubes and test them with blue and red litmus papers. List out results in the table, by marking (?) in the relevant column if the colour changes, put (?) if the colour is unchanged.



**26.** How are hydroxides prepared ? What is their nature ?



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**27.** Classify the substances given in the table into the fallowing categories. Acidic substances, Basic substances and Neutral substances.



**28.** When do you get a neutral solution from acids and bases?



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29. How are salts produced,? Give an example.



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**30.** Describe the uses of Acids, Bases and Salts.



31. Which are called chemical Indicators?



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32. What are indicators? How are they useful?



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**33.** Are there any acids apart from natural acids? What are they?



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**34.** You might have touched soap water or lime water. How do you feel ? What is your conclusion?



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**35.** Who discovered Hydrogen? What is its colour?



**36.** Write the properties of acids and bases from your observations with the experiments done by you.



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**37.** Are all neutral solutions salts? Give example.



**38.** How do you draw a red flower using indicators to get the desired colour?



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**39.** Turmeric paper is a natural indicator, along with turmeric indicator paper, we can also prepare other natural indicators mentioned in the table below. Carry on tests and record your observations on the given table.



**40.** How can you prepare a base by doing a simple experiment?



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41. Take the following substances and test them with Phenolphthalein and Methyl orange solutions. Draw a table and record your observations. Substances Orange, Tomatoes, Baking soda, Mineral water, Vinegar, Salt water, Shampoo, Washing soda.



**42.** What changes in colour take place in the indicators Phenolphthalein and Methyl Orange when you test with the following substances. Spirit, Saliva, Cucumber, Ridgegourd, Kheerd, Butter milk, Milk.



**43.** Record your observations when you test the following substances with the indicators Phenolphthalein and Methyl Orange. Substances: Cold drink, Lemon Juice, Grape Juice, Bathing soap, detergent soap, Lime water and Sugar.



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**44.** How can you prepare Hydrogen in the laboratory by a simple experiment? With

which test do you confirm the presence of Hydrogen?



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**45.** How do you prepare carbondioxide? What substances do you need for its preparation? How is it tested?



**46.** When is the solution made by mixing an acid and a base, a neutral solution? Describe a small activity.



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**47.** What are your conclusions from the experiment done in the above question no. 9?



**48.** Test the following salt substances with red litmus and blue litmus papers. Record your observations in the table.



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**49.** Collect some salt substances with the help of your teacher. Make their salt solutions. Test the salt solutions with blue litmus and red litmus papers. Classify these salts and record your observations in the table.



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**50.** What acids are present in the following substances? Collect the information and write: Substances: Vinegar, Lemon or orange, State cheese Buttered milk or curd, Spinach or Tomato.



**51.** You are asked to find out the acids present in the substances? placed in front of you.

Write the names of the acids present in them by collecting information from any source available to you. Substances placed in front of you: Apples, Tea, Olive oil and fats.



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**52.** Grapes, Palm oil, Amla (emblica fruit) and Urine are put before you. You are asked to give the information about the acids that are present in those substances. Collect the information and record in a table.

**53.** Write the names of some substances that contain bases that we use in our daily life.



**54.** Methyl orange and Phenolphthalein are indicators. Collect the information about their colour change in Acid and Basic solutions.



**55.** What sort of food do we eat?



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**56.** What kind of tastes do food substances we eat have?



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**57.** Do you find any difference in the taste of a raw and a ripe fruit?



**58.** Do substances change their taste when cooked?



**59.** Add sugar to lemon juice. What change do you notice in the taste?



60. Is there any difference in the taste of lemon juice without sugar?



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**61.** Do substances change colour when added to other substances?



**62.** Have you observed any change when lime water is added to turmeric?



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**63.** How do you prepare lime water? In what way is this useful to you in day to day life?



**64.** You are given a substance. What do you do to identify it as an acid, base or neutral in nature.



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**65.** Take things which are sour in taste and used as food. Eg. Curd, lemon juice. If you check these substances with blue and red litmus what happens?



**66.** Burning sensation of ant bite is caused by.....



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**67.** How is it possible to make believe Blood comes out of a lemon ?



**68.** Why are the inner sides of vessels made up of brass and copper coated ?



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**69.** Why are pickles, jams, jellies preserved in glass, porcelein and plastic containers?



**70.** Ravi said that acid rains are causing damage. Do you agree with his statement? What are acid rains? Where do you witness such rains in our state?



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**71.** You are given Hydrochloric acid. How can you make it into a solution which is neither acidic nor basic?



**72.** You are asked to make the given caustic soda solution into neither acidic nor basic. What would you do?



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**73.** Why is the use of natural organic manure becoming more preferred ?



**74.** Why is our sweat salty?



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**75.** Which of the following is not a natural acid ?

A. Citric acid

B. Hydrochloric acid

C. Oxalic acid

D. Acetic acid



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76. A blue litmus turns red when it reacts with

A. Salt

B. Base

C. Acid

D. None of these

**Answer:** 

# 77. Name the acid present in lemon juice

- A. Acetic acid
- B. Citric acid
- C. Propanic acid
- D. Hydrochloric acid

#### **Answer:**



78. Ant releases this acid.

- A. Citric acid
- B. Formic acid
- C. Lactic acid
- D. Oxalic acid

#### **Answer:**

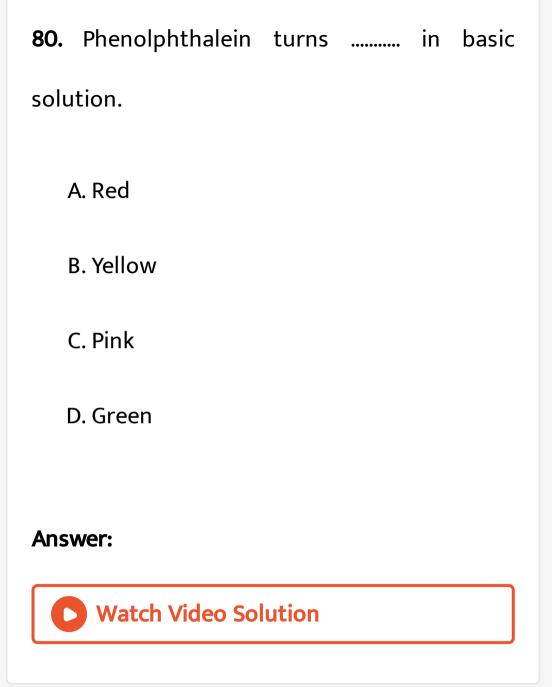


**79.** When methyl orange is mixed with citric acid it turns

- A. Red
- B. Pink
- C. Yellow
- D. Colourless

#### **Answer:**





**81.** Lemon Juice + Marble = ......

A. Hydrogen

B. Carbon dioxide

C. Oxygen

D. Sulphur dioxide

#### **Answer:**



**82.** Neutralization of Hydrochloric acid solution with Caustic soda solution gives

- A. Sodium chloride
- B. Sodium carbonate
- C. Copper sulphate
- D. None of the above

#### **Answer:**



83. The substance that turns blue litmus to red
arein nature.
A. Acidic
B. Basic
C. Neutral

D. All the above

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**Answer:** 

0.4	T			I
84.	Turmeric	paper is	natura	<b> </b>

- A. Salt
- B. Acid
- C. Base
- D. Indicator



85.	The	substance	that	turns	red	litmus	to
blu	e are	in na	ture.				

- A. Acidic
- B. Basic
- C. Neutral
- D. All the above



<b>86.</b> Burning sensat	ion of ant	bite is	s caused
by			
A. Acetic Acid			
B. Formic Acid			
C. Uric Acid			

D. Toxin

## **Answer:**



<b>87.</b> Vinegar consists ofacid.
A. Acetic
B. Citric
C. Lactic
D. Oxalic
Answer:

<b>88.</b> Mal	ic acid	is	present	in
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- A. Orange
- B. Amla
- C. Apples
- D. Tea



<b>89.</b> The sub	stances	which	are	soapy	to	touch
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- A. Acids
- B. Bases
- C. Salts
- D. Minerals



<b>90.</b> Ammonium	Hydroxide is used in	
cleaning.		

- A. Glass
- B. Tiles
- C. Granites
- D. All the above



91.	Methyl	Orange	gives	red	colour	with
	•					
	A. Acids					
	B. Bases					
	C. Salts					
	D. All the	e above				
Ans	swer:					
	Watch	n Video So	olution			

92.	Methyl	orange	gives	yellow	colour
with	l				

- A. Acids
- B. Bases
- C. Salts
- D. All the above



93.	Pickles,	jams,	jellies	are	not	preserved
in	cor	ntainer.				
	A. Metall	ic				
	B. Glass					
	C. Porcel	ain				

D. Plastic

**Answer:** 



**94.** Copper reacts with \_\_\_\_\_and forms blue green layer.

- A. Acids
- B. Bases
- C. Salts
- D. Neutrals

#### **Answer:**



95. Henry cavendish, an italian discovered......

A. Oxygen

B. Nitrogen

C. Copper

D. Hydrogen

## **Answer:**

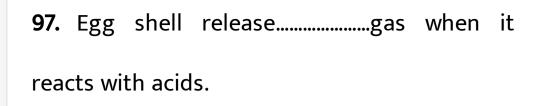


**96.** Acid rains are the combination of.....acids.

- A. Sulphuric
- B. Nitric
- C. Carbonic
- D. All the above

#### **Answer:**





- A. Oxygen
- B. Carbon dioxide
- C. Hydrogen
- D. Helium



**98.** One of the following manures increases salinity of the soil.

- A. Organic
- **B.** Chemical
- C. Bio
- D. All of these

#### **Answer:**



99. Ammonium Hydroxide is useful to remove
stains of
A. Grease
B. Blood
C. Tea
D. Ink
Answer:

# 100. Aluminum hydroxide is use fut to stop

- A. Rains
- B. Floods
- C. Fire
- D. Pollution

#### **Answer:**



<b>101.</b> We	lose some	salts	through
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- A. Digestion
- B. Reproduction
- C. Excretion
- D. Respiration



# 102. Carbonic acids are present in

- A. Eggs
- B. Cool drinks
- C. Cakes
- D. Meat

#### **Answer:**



**103.** When lime water is sprayed on turmeric paper, its colour is

- A. Yellow
- B. Blue
- C. Green
- D. Red

#### **Answer:**



A. Turmeric			
B. Methyl			
C. Phenolphthalein			
D. Methyl orange			
Answer:			
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**105.** The substances that are soapy to touch

**104.** Which one is a natural indicator?

- A. Acids
- B. Basics
- C. Neutrals
- D. Minerals



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**106.** Which litmus paper do you use to test acids?

- A. Red
- B. Blue
- C. Orange
- D. Green



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**107.** Which of the above substances changed red litmus to blue ?

B. Basic			
C. Neutral			
D. All			
Answer:			
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108acid present in apples.			
A. Citric acid			

A. Acid

- B. Lactic acid
- C. Malic acid
- D. Tannic acid



- **109.** Ascorbic acid is present in
  - A. Palm oil
  - B. Amla

C. Tea

D. Grapes

## **Answer:**



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# **110.** Which one is used as an anti acid?

A.  $Mg(OH)_2$ 

B.  $CuSO_4$ 

 $\mathsf{C}.\,AlSO_4$ 

D. HCl

### **Answer:**



- 111. Common name of Magnesium Hydroxide is
  - A. King of chemical
  - B. Milk of Magnesium
  - C. Soap maker
  - D. Glass cleaner



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112. Chemical name of lime water is......

- A. Calcium Hydroxide
- B. Ammonium Hydroxide
- C. Sodium Hydroxide
- D. Magnesium Hydroxide

#### **Answer:**

# 113. Base present in the soaps is

- A. Calcium Hydroxide
- B. Ammonium Hydroxide
- C. Sodium Hydroxide
- D. Magnesium Hydroxide

#### **Answer:**



114. What is the indicator used in this activity?

A. Lemon leaves

B. Methyl orange

C. Lemon juice

D. Blood

#### **Answer:**



115.	Reaction	colour	of	Methyl	orange	with
acid	s is	•				

- A. Red
- B. Yellow
- C. Pink
- D. Black



116.	Reaction	colour	of	Mythyl	orange	with
base	e is					
,	A. Yellow					
I	B. Pink					
(	C. Orange					
I	O. Blue					
Answer:						
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## 117. Which indicator is colourless in acids?

- A. Methyl orange
- B. Phenolphthalein
- C. Turmeric
- D. Lemon juice

#### **Answer:**



**118.** Which gas is discovered by Henry Cavendish?

- A.  $H_2$
- $B.O_2$
- $\mathsf{C}.\,Cl_2$
- D. Li

**Answer:** 



119. The copper is coated with
A. Iron
B. Ledoxide
C. Tin
D. Steel
Answer:
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<b>120.</b> Here the tested gas is

A.  $O_2$ 

 $\mathsf{B.}\,H_2$ 

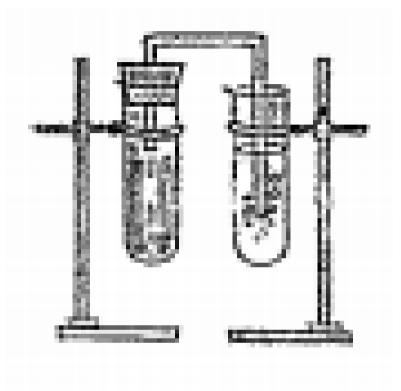
 $\mathsf{C}.\,H_2O$ 

D.  $Cl_2$ 

## **Answer:**



# **121.** In this experiment which gas is produced?



A.  $O_2$ 

B.  $H_2$ 

 $\mathsf{C}.\,CO_2$ 

D.  $H_2O$ 

#### **Answer:**



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**122.** Assertion (A): Turmeric is a neutral indicator. Reason (R): Turmeric acquires orange colour in alkaline solution.

A. Both 'A' and 'R' are true and 'R' is the correct explanation of 'A'.

B. Both 'A' and 'R' are true but 'R' is not the correct explanation of 'A'.

C. 'A' is true but 'R' is false.

D 'A' is false but 'R' is true.

## **Answer:**



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123. Read the following two statements carefully and choose the correct option.

Statement (i): Baking soda is a mild base that

is used in tooth pastes and mouth washes to neutralize acids, which can produce unpleasant odours. Statement (ii): An alkali is a water soluble acid.

A. Statement (i) is correct while statement (ii) is incorrect.

B. Statement (ii) is correct while statement

(i) is incorrect.

C. Both statements are correct.

D. Both statements are incorrect.



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124. In three test tubes 'A', 'B', 'C' with solutions of different substances were added a few drops of China rose indicator. The colours shows in these test-tubes were magenta, colourless and green respectively. Select the correct set indicating the substance whose solution are there in these test-tubes.

- A. Sugar solution Lime water Lime juice
- B. Sugar solution Lime juice Lime water
- C. Lime water Sugar solution Lime juice
- D. Lime juice Sugar solution Lime water



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125. When a magician cuts the lemon with the knife, it becomes red in colour. The material used on the knife may be

- A. Salt
- B. Methyl orange
- C. Red litmus
- D. Lime water



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**126.** Methyl orange converts acids into  $\underline{X}$  colour and bases to  $\underline{Y}$  colour. What are X and Y?

- A. red, violet
- B. violet, yellow
- C. yellow, violet
- D. red, yellow



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**127.** You find some stains on the mirror in your house. Which of these is used to remove the stains?

- A. Ammonia
- B. Ammonium Hydroxide
- C. Phenolphthalein
- D. Mythyl orange



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**128.** Basic solution converts red litmus into blue litmus. If you add the substance given below reverse happens

- A. Baking Soda
- B. Lime
- C. Hydrochloric acid
- D. Ammonium hydroxide



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**129.** Acid used in pulihora

A. Carbonic

- B. Acetic acid
- C. Citric acid
- D. Oxalic acid



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**130.** The scientist who discovered hydrogen gas is

A. Joseph Priestly

- B. Hendry Cavendish
- C. Charles Darwin
- D. Ernest Rutherford



- **131.** Which of the following is acidic in nature?
  - A. Grape juice
  - B. Bleaching powder solution

- C. Soap solution
- D. Lime water



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**132.** Identify the correct set of natural indicators.

- A. Cucumber & melon
- B. Turmeric & vinegar

C. Turmeric & rose petals

D. Hibiscus & melon

#### **Answer:**

