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ಕರ್ನಾಟಕ ಪ್ರೌಢ ಶಿಕ್ಷಣ ಪರೀಕ್ಷಾ ಮಂಡಳಿ, ಮಲ್ಲೇಶ್ವರಂ, ಬೆಂಗಳೂರು – 560 003

**KARNATAKA SECONDARY EDUCATION EXAMINATION BOARD, MALLESWARAM,  
BANGALORE – 560 003**

ಎಸ್.ಎಸ್.ಎಲ್.ಸಿ. ಪರೀಕ್ಷೆ, ಜೂನ್ — 2019

**S. S. L. C. EXAMINATION, JUNE, 2019**

ಮಾದರಿ ಉತ್ತರಗಳು

**MODEL ANSWERS**

ದಿನಾಂಕ : 24. 06. 2019 ]

ಸಂಕೇತ ಸಂಖ್ಯೆ : **83-E (Chem.)**

Date : 24. 06. 2019 ]

CODE No. : **83-E (Chem.)**

ವಿಷಯ : ವಿಜ್ಞಾನ

**Subject : SCIENCE**

( ರಸಾಯನಶಾಸ್ತ್ರ / Chemistry )

( ಹೊಸ ಪಠ್ಯಕ್ರಮ / New Syllabus )

( ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ / Regular Repeater )

( ಇಂಗ್ಲಿಷ್ ಭಾಷಾಂತರ / English Version )

[ ಗರಿಷ್ಠ ಅಂಕಗಳು : 80

[ Max. Marks : 80

Qn. Nos.	Value Points	Total
1.	The number of groups and periods in the modern periodic table respectively, are (A) 7 and 9 (B) 18 and 7 (C) 7 and 18 (D) 9 and 7. Ans. : (B) — 18 and 7	1
6.	The possible chemical reaction among the following is (A) $\text{FeSO}_4 + \text{Pb} \rightarrow \text{PbSO}_4 + \text{Fe}$ (B) $\text{ZnSO}_4 + \text{Fe} \rightarrow \text{FeSO}_4 + \text{Zn}$ (C) $2 \text{AgNO}_3 + \text{Cu} \rightarrow \text{Cu}(\text{NO}_3)_2 + 2 \text{Ag}$ (D) $\text{PbCl}_2 + \text{Cu} \rightarrow \text{CuCl}_2 + \text{Pb}$ . Ans. : (C) — $2 \text{AgNO}_3 + \text{Cu} \rightarrow \text{Cu}(\text{NO}_3)_2 + 2 \text{Ag}$	1

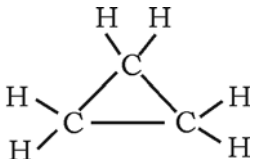
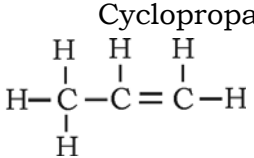
 **(24)511-RR(A) (CHE)**

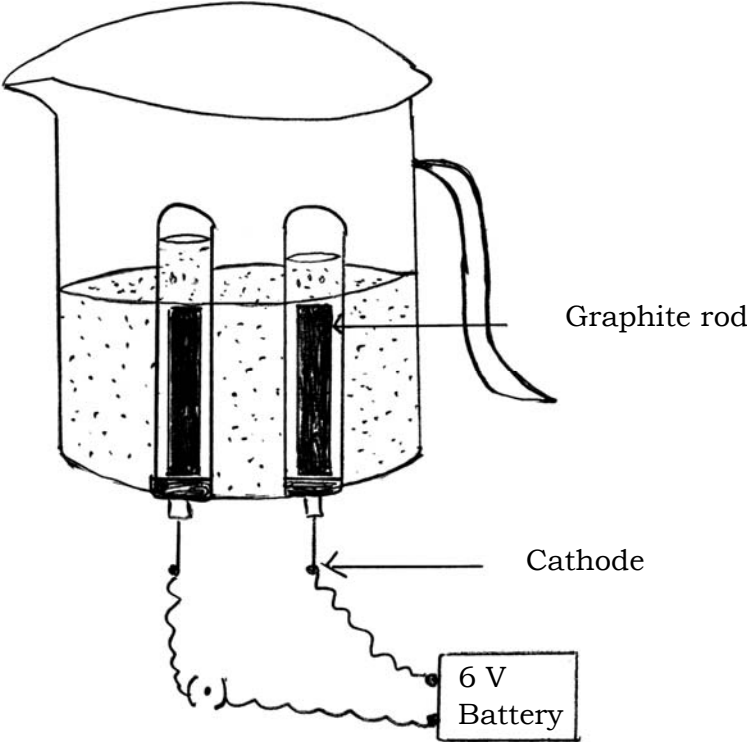
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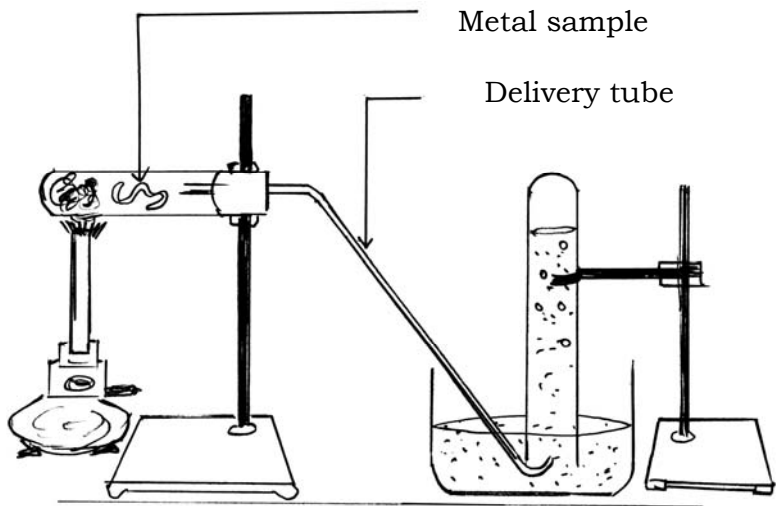
Qn. Nos.	Value Points	Total
8.	$\text{Fe}_2\text{O}_3 + 2\text{Al} \rightarrow \text{Al}_2\text{O}_3 + 2\text{Fe}$ <p>The type of above chemical reaction is</p> <p>(A) combination reaction            (B) double displacement reaction            (C) decomposition reaction            (D) displacement reaction.</p> <p>Ans. :</p> <p>(D) — displacement reaction</p>	1
14.	<p>What is a covalent bond ?</p> <p>Ans. :</p> <p>Chemical bond which is formed by the sharing of electrons between two atoms is known as covalent bond.</p>	1
17.	<p>Name the first member of alkynes and write its molecular formula.</p> <p>Ans. :</p> <p>Ethyne ( or Acetylene )</p> $\text{C}_2\text{H}_2 \qquad \qquad \qquad 2 \times \frac{1}{2}$	1
20.	<p>Name the gas liberated when an acid reacts with metallic carbonate. Write the chemical equation of the reaction when this gas is passed through lime water. What is the colour of the precipitate obtained in this reaction ?</p> <p style="text-align: center;">OR</p> <p>Give scientific reason :</p> <p>(i) While diluting an acid, the acid should be added to water.            (ii) Plaster of Paris should be stored in a moisture-proof container.</p> <p>Ans. :</p>	

Qn. Nos.	Value Points	Total
	Carbon dioxide ( or $\text{CO}_2$ )	$\frac{1}{2}$
	$\text{Ca}(\text{OH})_2(\text{aq}) + \text{CO}_2(\text{g}) \rightarrow \text{CaCO}_3(\text{s}) + \text{H}_2\text{O}(\text{l})$	1
	White precipitate.	$\frac{1}{2}$
	OR	
	(i) If water is added to concentrated acid the heat generated may cause the mixture to splash out and cause burns.  The glass container may also break due to excessive local heating.  ( Any one )	1
	(ii) Otherwise, it reacts with moisture and changes to gypsum which is a solid mass.	1
24.	(i) Write the balanced chemical equation for the reaction taking place when aluminium reacts with dilute hydrochloric acid.	
	(ii) Hydrogen gas is not liberated when a metal reacts with concentrated nitric acid. Give reason.  OR  Show the formation of $\text{NaCl}$ and $\text{MgCl}_2$ with the help of electron dot structure.	2
	Ans. :	



Qn. Nos.	Value Points	Total									
30.	<p>The general formula of two specific groups of saturated and unsaturated hydrocarbons is <math>C_n H_{2n}</math>. Write the structures of the member of each group when <math>n = 3</math>.</p> <p>Ans. :</p> <div style="text-align: center;">  <p>Cyclopropane</p> </div> <div style="text-align: center;">  <p>Propene</p> </div>	<p>1</p> <p>1</p> <p>2</p>									
32.	<p>The position of elements <math>A</math>, <math>B</math>, <math>C</math>, <math>D</math> in the modern periodic table is given in the following table. Answer the following questions by observing the table :</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tbody> <tr> <td></td> <td style="text-align: center;"><i>Group 1</i></td> <td style="text-align: center;"><i>Group 2</i></td> </tr> <tr> <td style="text-align: center;"><i>Period 3</i></td> <td style="text-align: center;"><i>A</i></td> <td style="text-align: center;"><i>B</i></td> </tr> <tr> <td style="text-align: center;"><i>Period 4</i></td> <td style="text-align: center;"><i>C</i></td> <td style="text-align: center;"><i>D</i></td> </tr> </tbody> </table> <p>(i) Which element has the highest atomic size ? Why ?</p> <p>(ii) Which element has the least metallic property ? Why ?</p> <p>Ans. :</p> <p>(i) <math>C</math> : New shells are added down the group ( OR down the group, electrons enter the new shell )</p> <p>(ii) <math>B</math> : Across the period, the tendency to lose electrons decreases ( OR Electrons remain in the same shell )</p>		<i>Group 1</i>	<i>Group 2</i>	<i>Period 3</i>	<i>A</i>	<i>B</i>	<i>Period 4</i>	<i>C</i>	<i>D</i>	<p>1</p> <p>1</p> <p>2</p>
	<i>Group 1</i>	<i>Group 2</i>									
<i>Period 3</i>	<i>A</i>	<i>B</i>									
<i>Period 4</i>	<i>C</i>	<i>D</i>									

Qn. Nos.	Value Points	Total
35.	<p>Draw the diagram of the apparatus used in electrolysis of water. Label the following parts :</p> <p>(i) Cathode</p> <p>(ii) Graphite rod.</p> <p>Ans. :</p> <p>Apparatus showing electrolysis of water :</p>  <p style="text-align: right;"><math>2 + \frac{1}{2} + \frac{1}{2}</math></p>	3
38.	<p>Draw the diagram of the arrangement of apparatus to show the action of steam on a metal. Label the following parts :</p> <p>(i) Metal sample</p> <p>(ii) Delivery tube.</p> <p>Ans. :</p>	

Qn. Nos.	Value Points	Total
	<p>Apparatus showing action of steam on metals.</p>  <p style="text-align: right;"><math>2 + \frac{1}{2} + \frac{1}{2}</math></p>	3
41.	<p>(i) What is neutralisation reaction ?</p> <p>(ii) Name the products of chlor-alkali process. Write one use of each.</p> <p>Ans. :</p> <p>(i) The reaction between an acid and a base to give a salt and water is known as a neutralisation reaction. <span style="float: right;">1</span></p> <p>(ii) The products of chlor-alkali process are :</p> <ul style="list-style-type: none"> <li>★ hydrogen <span style="float: right;"><math>\frac{1}{2}</math></span></li> <li>★ chlorine <span style="float: right;"><math>\frac{1}{2}</math></span></li> <li>★ brine containing NaOH. <span style="float: right;"><math>\frac{1}{2}</math></span></li> </ul> <p>Uses of hydrogen : used as</p> <ul style="list-style-type: none"> <li>★ a fuel</li> <li>★ margarine</li> <li>★ ammonia for fertilisers <span style="float: right;">( Any one ) <math>\frac{1}{2}</math></span></li> </ul>	

Qn. Nos.	Value Points	Total
	<p>Uses of chlorine :</p> <ul style="list-style-type: none"><li>★ used in water treatment</li><li>★ used as a cleaning agent in swimming pools</li><li>★ used in making PVC, CFCs</li><li>★ used as a disinfectant</li><li>★ used as a pesticide. ( Any one )</li></ul> <p>Uses of NaOH :</p> <ul style="list-style-type: none"><li>★ used for degreasing metals</li><li>★ used for making paper</li><li>★ used for making soaps and detergents</li><li>★ used for making artificial fibres. ( Any one )</li></ul>	<p><math>\frac{1}{2}</math></p> <p><math>\frac{1}{2}</math></p> <p>4</p>