

CCE RR**A**

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

**KARNATAKA SECONDARY EDUCATION EXAMINATION BOARD, MALLESHWARAM,
BENGALURU, 560 003**

ಎಸ್.ಎಸ್.ಎಲ್.ಸಿ. ಪರೀಕ್ಷೆ, ಜೂನ್ / ಜುಲೈ, 2022

S.S.L.C. EXAMINATION, JUNE / JULY, 2022

ಮಾದರಿ ಉತ್ತರಗಳು

MODEL ANSWERS

ದಿನಾಂಕ : 27. 06. 2022]

ಸಂಕೇತ ಸಂಖ್ಯೆ : **83-E (Chem.)**

Date : 27. 06. 2022]

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

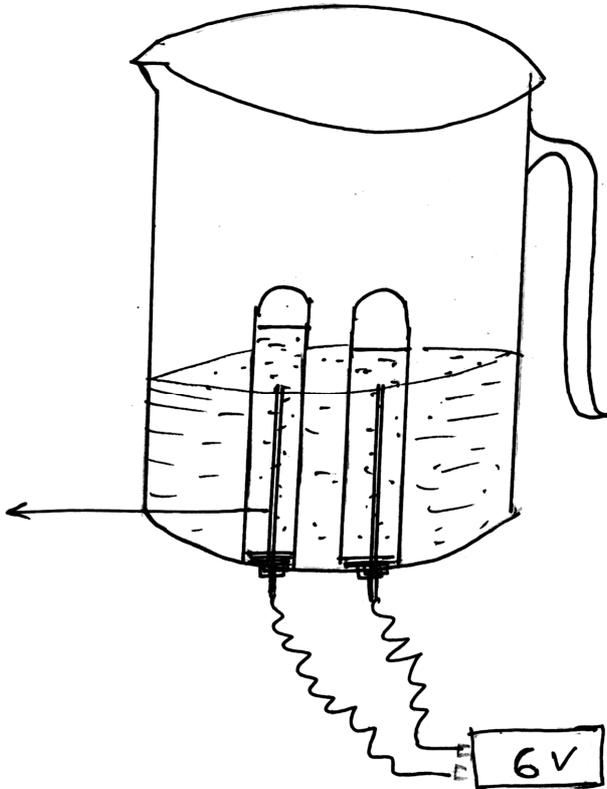
ವಿಷಯ : ವಿಜ್ಞಾನ

Subject : SCIENCE(ಭೌತ ವಿಜ್ಞಾನ, ರಸಾಯನ ವಿಜ್ಞಾನ ಮತ್ತು ಜೀವ ವಿಜ್ಞಾನ / **Physics, Chemistry & Biology**)(ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ / **Regular Repeater**)(ರಸಾಯನಶಾಸ್ತ್ರ / **Chemistry**)(ಇಂಗ್ಲಿಷ್ ಮಾಧ್ಯಮ / **English Medium**)[ಗರಿಷ್ಠ ಅಂಕಗಳು : **80**[**Max. Marks : 80**

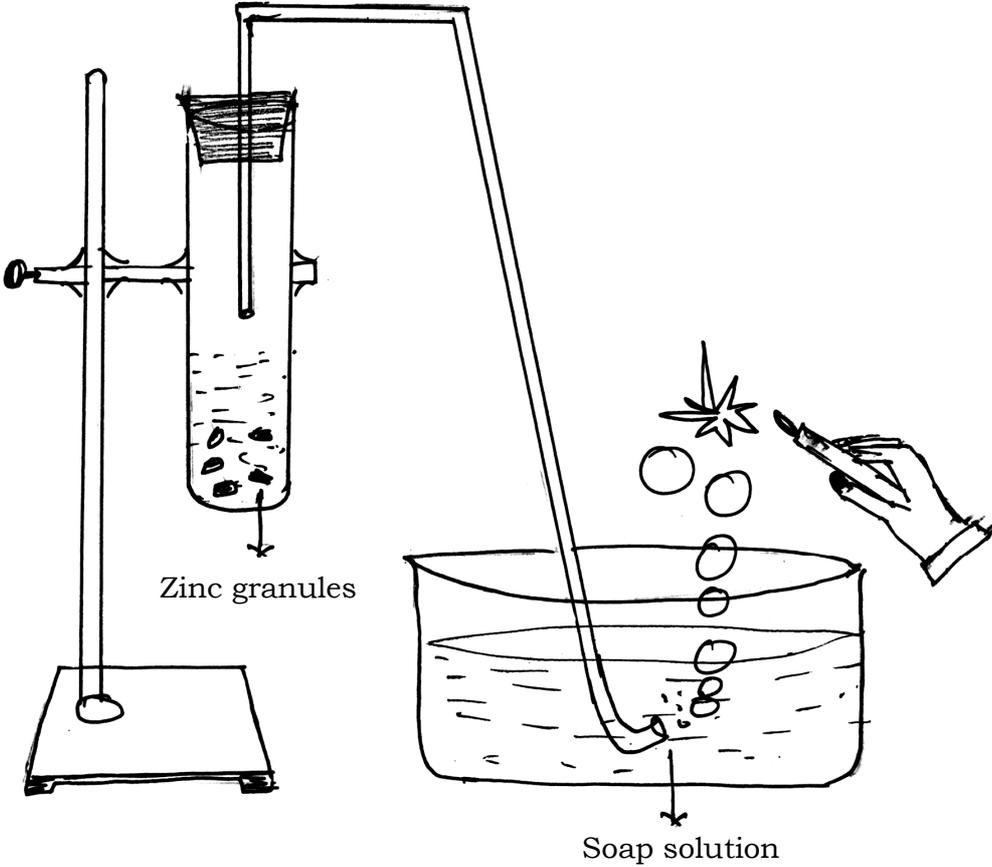
Qn. Nos.	Value Points	Total
PART - B (CHEMISTRY)		
VI.	Multiple choice :	2 × 1 = 2
14.	The metal that displaces copper from copper sulphate solution is (A) mercury (B) gold (C) iron (D) silver Ans. : (C) iron	1

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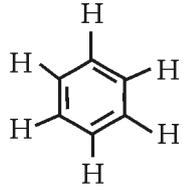
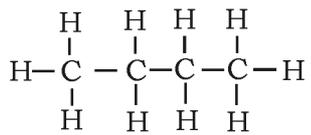
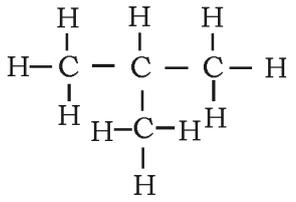
[Turn over

Qn. Nos.	Value Points	Total
15.	Number of single bonds found in the molecular structure of propanal is (A) 8 (B) 6 (C) 7 (D) 5 Ans. : (A) 8	1
VII.	Answer the following question :	$1 \times 1 = 1$
16.	State the modern periodic law. Ans. : 'The properties of elements are periodic functions of their atomic numbers.'	1
VIII.	Answer the following questions :	$2 \times 2 = 4$
17.	Draw the diagram of the arrangement of apparatus used to show the electrolysis of water and label the 'graphite rod'. Ans. : Electrolysis of water : <div style="text-align: center;">  </div>	$1 \frac{1}{2} + \frac{1}{2}$ 2

Qn. Nos.	Value Points	Total
18.	<p>The chemical reaction that takes place between sodium sulphate and barium chloride is called double displacement reaction. Why ? Write the balanced chemical equation for this reaction.</p> <p style="text-align: center;">OR</p> <p>What is the type of chemical reaction in which quicklime is obtained by lime stone (calcium carbonate) ? Write a chemical equation for this reaction.</p> <p><i>Ans. :</i></p> <p>There is an exchange of ions between the reactants sodium sulphate and barium chloride. 1</p> $\text{Na}_2\text{SO}_4 + \text{BaCl}_2 \longrightarrow \text{BaSO}_4 + 2\text{NaCl}.$ 1 <p style="text-align: center;">OR</p> <p>Decomposition reaction or thermal decomposition reaction / endothermic reaction. 1</p> $\text{CaCO}_3 \xrightarrow{\text{Heat}} \text{CaO} + \text{CO}_2$ 1 <p>(lime stone) (quicklime) 2</p>	2
IX.	Answer the following questions : 3 × 3 = 9	
19.	<p>Draw the diagram of arrangement of the apparatus to show the reaction of zinc granules with dilute sulphuric acid and testing hydrogen gas by burning. Label the following parts :</p> <p>i) Zinc granules</p> <p>ii) Soap solution.</p> <p><i>Ans. :</i></p>	

Qn. Nos.	Value Points	Total
	 <p>Reaction of zinc granules with dilute sulphuric acid and testing hydrogen gas by burning.</p>	2 + 1 3
20.	<p>a) What is neutralisation reaction ? Give an example.</p> <p>b) What is the common name of the compound that has molecular formula $\text{CaSO}_4 \cdot \frac{1}{2} \text{H}_2\text{O}$.</p> <p><i>Ans. :</i></p> <p>a) Reaction between acids and bases to form salt and water is called neutralisation reaction. 1</p> <p style="text-align: center;">OR</p> <p>Base + Acid \longrightarrow Salt + water.</p> <p><i>Ex :</i> $\text{NaOH} + \text{HCl} \longrightarrow \text{NaCl} + \text{H}_2\text{O}$. 1</p> <p>[Consider any suitable example]</p> <p>b) Calcium sulphate hemihydrate or Plaster of Paris. 1</p>	3

Qn. Nos.	Value Points	Total
21.	<p>Write the two reasons for placing oxygen and sulphur in a same group of modern periodic table. Which one of these elements has larger atomic size and why ?</p> <p>[Atomic number of oxygen = 8, Atomic number of sulphur = 16]</p> <p>OR</p> <p>Write the limitations of Mendeleev's periodic table. Why is silicon called metalloid ?</p> <p>Ans. :</p> <ul style="list-style-type: none"> ★ They have same chemical properties. 1 ★ They have same valence electrons / they have similar electronic configuration in outermost shell. 1 ★ Sulphur has larger atomic size because atomic size increases down the group / New shells are being added as we go down the group. This increases the distance between outermost electron and the nucleus. 1 <p>OR</p> <p>Limitations of Mendeleev's classification :</p> <ul style="list-style-type: none"> ★ No fixed position was given to hydrogen ★ No fixed position was given to isotopes of all elements ★ The atomic masses from one element to the other do not increase in a regular manner ★ It is not possible to predict how many elements could be discovered between two elements. 2 <p>Silicon is called metalloid because it exhibits some properties of both metals and non-metals. 1</p>	3

Qn. Nos.	Value Points	Total												
X.	Answer the following question : 1 × 4 = 4													
22.	<p>a) Write any two differences between saturated and unsaturated carbon compounds.</p> <p>b) Write the structural formula of the following carbon compounds :</p> <p>i) Benzene</p> <p>ii) Butane</p> <p>Ans. :</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">a) Saturated carbon compounds</th> <th style="width: 50%;">Unsaturated carbon compounds</th> </tr> </thead> <tbody> <tr> <td>i) Single bond exists between two consecutive carbon atoms</td> <td>i) Double and triple bond exists</td> </tr> <tr> <td>ii) Less reactive</td> <td>ii) More reactive</td> </tr> <tr> <td>iii) Give clean flame when they burnt</td> <td>iii) Give yellow / black flame</td> </tr> <tr> <td>iv) Subjected to substitution reaction</td> <td>iv) Subjected to both addition and substitution reactions</td> </tr> <tr> <td>v) Ex. : Alkanes, cycloalkanes etc.</td> <td>v) Ex. : Alkenes, alkynes, benzene etc.</td> </tr> </tbody> </table> <p style="text-align: right;">(Any two) — 1 + 1</p> <p>b)</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Benzene</p> </div> <div style="text-align: center;"> <p>1</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> <div style="text-align: center;">  <p>Butane</p> </div> <div style="text-align: center;"> <p>OR</p>  </div> <div style="text-align: center;"> <p>1</p> </div> </div>	a) Saturated carbon compounds	Unsaturated carbon compounds	i) Single bond exists between two consecutive carbon atoms	i) Double and triple bond exists	ii) Less reactive	ii) More reactive	iii) Give clean flame when they burnt	iii) Give yellow / black flame	iv) Subjected to substitution reaction	iv) Subjected to both addition and substitution reactions	v) Ex. : Alkanes, cycloalkanes etc.	v) Ex. : Alkenes, alkynes, benzene etc.	2
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Qn. Nos.	Value Points	Total
	<p>b) Properties of ionic compounds :</p> <ul style="list-style-type: none">i) Generally solidsii) Generally brittle and breaks into pieces when pressure is applied.iii) They have high melting and boiling points.iv) Soluble in water and not soluble in organic solvents.v) They do not conduct electricity in solid state / good conductors in molten or aqueous state. <p style="text-align: right;">(Any four) $4 \times \frac{1}{2} = 2$</p>	5