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UNREVISED**

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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, ಸೆಪ್ಟೆಂಬರ್, 2020

S.S.L.C. EXAMINATION, SEPTEMBER, 2020

ಮಾದರಿ ಉತ್ತರಗಳು

MODEL ANSWERS

ದಿನಾಂಕ : 28. 09. 2020]

ಸಂಕೇತ ಸಂಖ್ಯೆ : **83-E (Chem.)**

Date : 28. 09. 2020]

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

ವಿಷಯ : ವಿಜ್ಞಾನ

Subject : SCIENCE

(ರಸಾಯನಶಾಸ್ತ್ರ / Chemistry)

(ಹಳೆ ಪಠ್ಯಕ್ರಮ / Old Syllabus)

(ಪುನರಾವರ್ತಿತ ಶಾಲಾ ಅಭ್ಯರ್ಥಿ / Regular Repeater)

(ಇಂಗ್ಲಿಷ್ ಭಾಷಾಂತರ / English Version)

[ಗರಿಷ್ಠ ಅಂಕಗಳು : 80

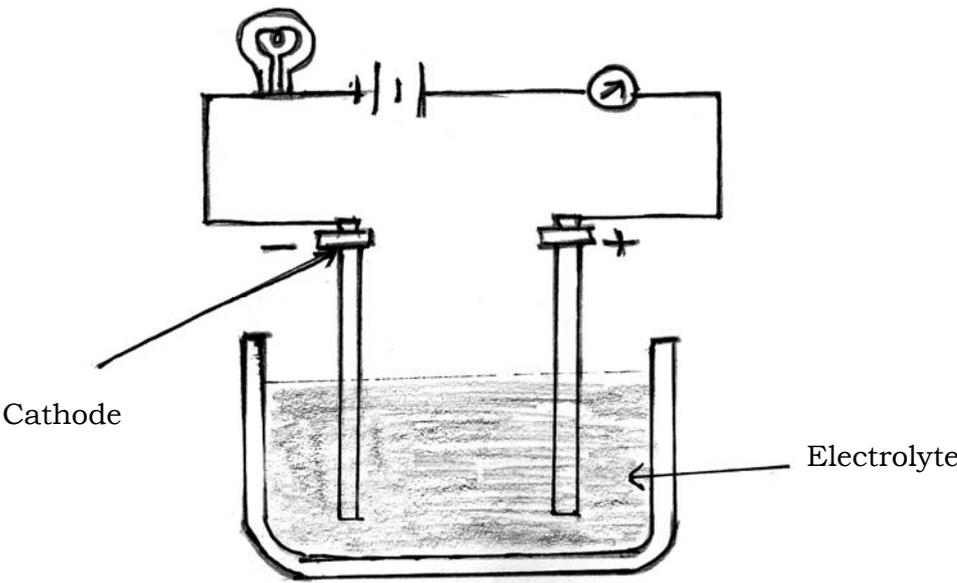
[Max. Marks : 80

Qn. Nos.	Value Points	Total
1.	Electronic configuration of an element is $1s^2 2s^2 2p^6 3s^1$. In modern periodic table this element belongs to (A) 1st period (B) 2nd period (C) 3rd period (D) 6th period. Ans. : (C) 3rd period	1
4.	At constant temperature if 'V' is the volume of certain mass of a gas under pressure P then the relation between them is (A) $V \propto \frac{1}{P}$ (B) $P \propto \frac{1}{\sqrt{V}}$ (C) $V = P$ (D) $V \propto P$.	

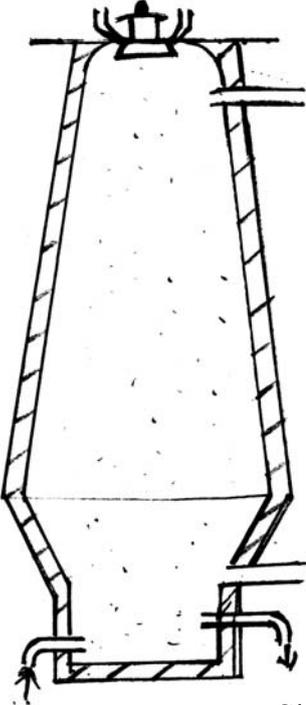
RR (B)-1550 ★ (MA) (CHE)

[Turn over

Qn. Nos.	Value Points	Total
	Ans. : (A) $V \propto \frac{1}{P}$	1
7.	The electrolyte which dissociates partially in aqueous solution is (A) Hydrochloric acid (B) Copper sulphate (C) Sodium chloride (D) Acetic acid.	
	Ans. : (D) Acetic acid	1
10.	The silicon compound used in the removal of hardness of water is (A) silicone (B) silicon carbide (C) zeolite (D) quartz.	
	Ans. : (C) Zeolite	1
13.	What is an alloy ?	
	Ans. : i) Homogeneous mixture of two or more metals ii) Homogeneous mixture of metal and non-metal. (Any one)	1
16.	What is rate of diffusion ?	
	Ans. : Volume of a gas diffusing per unit time	1
18.	Workers should wear gas masks in glass industries. Why ?	
	Ans. : i) To avoid silicosis $\frac{1}{2}$ ii) To avoid entry of silica particles in to lungs. $\frac{1}{2}$	1
20.	A telecommunication company A uses metallic wires and B uses optical fibres for their network. Which company has best communication network system ? Why ?	
	Ans. : B company has best communication system. 1	
	Reasons : i) Flexible	

Qn. Nos.	Value Points	Total
	 <p style="text-align: right;">Diagram — 1 Labelling — $\frac{1}{2} + \frac{1}{2}$</p>	2
28.	<p>Give scientific reason :</p> <p>i) Sodium metal is preserved under kerosene</p> <p>ii) Aluminium oxide cannot be reduced by coke.</p> <p style="text-align: center;">OR</p> <p>Explain the method of concentration of haematite ore.</p> <p>Ans. :</p> <p>i) ★ Sodium reacts vigorously with water and air ★ Kerosene does not react with sodium. (Any one) 1</p> <p>ii) Oxygen in aluminium oxide has greater affinity towards aluminium than coke. 1</p> <p style="text-align: center;">OR</p> <p>i) The ore is concentrated by hydraulic washing $\frac{1}{2}$</p> <p>ii) The crushed ore is washed with stream of water $\frac{1}{2}$</p> <p>iii) Lighter impurities will be washed away $\frac{1}{2}$</p> <p>iv) Heavy iron particles settle down. $\frac{1}{2}$</p>	2

Qn. Nos.	Value Points	Total
31.	<p>Define modern periodic law. How many periods and groups are there in modern periodic table ?</p> <p style="text-align: center;">OR</p> <p>Write any two advantages of modern periodic table.</p> <p><i>Ans. :</i></p> <p>i) The properties of elements are periodic functions of their atomic numbers. 1</p> <p>ii) In modern periodic table there are</p> <p style="padding-left: 20px;">★ 7 periods $\frac{1}{2}$</p> <p style="padding-left: 20px;">★ 18 groups $\frac{1}{2}$</p> <p style="text-align: center;">OR</p> <p>i) Easy access of the data of the elements</p> <p>ii) Study of chemistry is simplified</p> <p>iii) Possible to predict the atomic mass and properties of elements</p> <p>iv) Possible to predict the properties of elements by considering the position in periodic table. (Any two) 1 + 1</p>	2
35.	<p>Draw the diagram of blast furnace used in the extraction of iron. Label the following :</p> <p>i) Molten iron</p> <p>ii) Slag.</p> <p><i>Ans. :</i></p>	2

Qn. Nos.	Value Points	Total
	 <p data-bbox="411 1059 579 1088">Molten iron</p> <p data-bbox="770 1021 834 1050">Slag</p> <p data-bbox="1010 1055 1313 1084">Diagram — 2</p> <p data-bbox="1010 1099 1313 1151">Parts — $\frac{1}{2} + \frac{1}{2}$</p>	3
38.	<p data-bbox="261 1189 1145 1218">Explain the process of manufacture of sugar from sugarcane.</p> <p data-bbox="770 1245 818 1274">OR</p> <p data-bbox="261 1301 1321 1375">Explain the first step in the preparation of ethanol from molasses. Write the balanced chemical equations when sucrose is converted into ethanol.</p> <p data-bbox="261 1402 347 1431">Ans. :</p> <ol data-bbox="261 1464 1321 1921" style="list-style-type: none"> <li data-bbox="261 1464 1321 1554">i) Sugarcane is cut in to pieces and crushed in a series of roller mill to get juice. $\frac{1}{2}$ <li data-bbox="261 1576 1321 1628">ii) The juice is warmed and ran in to settling tanks. $\frac{1}{2}$ <li data-bbox="261 1650 1321 1702">iii) Then decanted and made alkaline with calcium hydroxide. $\frac{1}{2}$ <li data-bbox="261 1724 1321 1814">iv) The clear juice is concentrated in to a syrup by evaporation under reduced pressure and crystalise. $\frac{1}{2}$ <li data-bbox="261 1836 1321 1926">v) The crystals are dissolved in hot water and decolourised with animal charcoal or norit and filtered. $\frac{1}{2}$ 	3

Qn. Nos.	Value Points	Total
	vi) The filtrate is concentrated and evaporated under reduced pressure to get a syrup which is crystallised to get white crystals of sugar.	$\frac{1}{2}$
	OR	
	i) Mollasses is diluted with water and acidified by adding dilute sulphuric acid.	1
	ii) $C_{12}H_{22}O_{11} + H_2O \longrightarrow C_6H_{12}O_6 + C_6H_{12}O_6$	1
	iii) $C_6H_{12}O_6 \longrightarrow 2C_2H_5OH + 2CO_2$.	1
41.	a) Explain the properties of carbon due to which it forms more number of compounds.	3
	b) Write the balanced chemical equation of the reaction that takes place in the preparation of methane by laboratory method.	
	<i>Ans. :</i>	
	a) ★ Catenation	$\frac{1}{2}$
	★ Inter connecting C — C bonds to give rise large molecules.	1
	★ Tetravalency	$\frac{1}{2}$
	★ Carbon has 4 unpaired electrons in the excited state. These four electrons shared with atoms of different elements to form covalent compounds.	1
	b) $CH_3COONa + NaOH \longrightarrow Na_2CO_3 + CH_4$.	1
		4