**Rubric Chemistry SSC-II (Hard Area) 1st Annual Exam 2022**

**Section B Final: 03-06-2022 Time 5:05PM**

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| **Q No. Part No** | **Criteria** | **Level 1 (Marks)** | **Level 2 (Marks)** | **Level 3 (Marks)** | **Level 4 (Marks)** | **Level 5 (Marks)** |
| **Q # 2 (i)** | Comparison of stratosphere and troposphere | Any three correct points of comparison  (03) | Any two correct points of comparison  (02) | Any one correct point of comparison  (01) | Wrong Answer  (0) |  |
| **2(ii)** | Explanation/description of reversible chemical reaction and its example | Explaining any two points of reversible chemical reaction  (02) | Explaining one point of reversible chemical reaction  (01) | Partially correct response (0.5) | Wrong Answer  (0) |  |
| Correct example of reversible reaction  (01) | Partially correct example  (0.5) | Wrong Answer  (0) |  |  |
| **2(iii)** | Explanation of Lewis concept of acids and bases with examples | Correct explanation of Lewis concept of acids with example  (1.5) | Correct explanation of Lewis concept of acids without example (1) | Any relevant information (0.5) | Wrong Answer  (0) |  |
| Correct explanation of Lewis concept of bases with example (1.5) | Correct explanation of Lewis concept of bases without example (1) | Any relevant information (0.5) | Wrong Answer  (0) |  |
| **2(iv)** | Completing and balancing the given neutralization | Correct completion and balancing of given three neutralization reactions  (03) | Correct completion of any two equations of neutralization reactions  (02) | Correct completion of any one equation of neutralization reaction  (01) | Wrong Answer  (0) |  |
| **2(v)** | Justification of water as weak electrolyte with the help of self ionization reaction | Correct justification with derivation of self ionization of water as weak electrolyte  (03) | Partially correct justification with derivation of self ionization of water as weak electrolyte  (02) | Any relevant information (1) | Wrong Answer  (0) |  |
| **2(vi)** | Differentiation between n-propyl and iso-propyl radicals with their structures | Correct differentiation between n-propyl and iso-propyl radicals with structures  (03) | Partially correct differentiation between n-propyl and iso-propyl radicals with structures  (02) | Any relevant information (1) | Wrong Answer  (0) |  |
| **2(vii)** | Writing importance of water briefly | Correctly writing three points of importance of water  (03) | Correctly writing two points of importance of water  (02) | Correctly writing any one point of importance of water  (01) | Wrong Answer  (0) |  |
| **2(viii)** | Writing names of products in given chemical reactions | Writing correct names of products of all three chemical reactions  (03) | Writing correct names of products of any two chemical reactions  (02) | Writing correct names of products of any one chemical reaction  (01) | Wrong Answer  (0) |  |
| **2(ix)** | Description of magnetic separation or floatation process | Correctly described either magnetic separation or floatation process  (03) | Partially correct description of the attempted one  (02) | Any relevant information  (01) | Wrong Answer  (0) |  |
| **2(x)** | Description of origin of petroleum and natural gas | Correctly described origin of petroleum and natural gas  (03) | Partial description of origin of petroleum and natural gas  (02) | Any relevant information (01) | Wrong Answer  (0) |  |
| **2(xi)** | Brief explanation of monosaccharides with two examples | Correct explanation of monosaccharides  (02) | Partially correct explanation of monosaccharides  (01) | Any relevant information (0.5) | Wrong Answer  (0) |  |
| Any two correct examples  (01) | Any one correct example  (0.5) | Wrong Answer  (0) |  |  |
| **2(xii)** | Damages of soil and plants due to acid rain | Any three correctly described reasons of acid rain destroying plants and soil  (03) | Any two correctly described reasons of acid rain destroying plants and soil  (02) | Any one correctly described reason of acid rain destroying plants and soil  (01) | Wrong Answer  (0) |  |
| **2(xiii)** | Listing causes of hardness of water | Any three correct causes of hardness of water  (03) | Any two correct causes of hardness of water  (02) | Any one correct cause of hardness of water  (01) | Wrong Answer  (0) |  |
| **2(xiv)** | What happens when ammonical brine is passed through carbonation tower? (Solvay process) | Correct explanation with equation  (03) | Partially correct explanation  (02) | Any relevant information  (01) | Wrong Answer  (0) |  |
| **2(xv)** | Composition of urea | Correctly described i.e composition/ preparation  (03) | Partially correctly described i.e. composition  (02) | Any relevant information  (01) | Wrong Answer  (0) |  |

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| **Q No.**  **Part No** | **Criteria** | **Level 1 (Marks)** | **Level 2 (Marks)** | **Level 3 (Marks)** | **Level 4 (Marks)** | **Level 5 (Marks)** |
| **3(a)** | Statement of law of mass action. Derivation of Kc expression and units of given equation | Writing correct statement of law of mass action (02) | Partially correct statement (01) | Wrong answer (0) |  |  |
| Correct derivation of expression (04) | Partially correct derivation of expression (03) | Any relevant information (02) | Only expression (01) | Wrong (0) |
| **3(b)** | Description of any two water borne diseases | Correct description/ explanation of the 1st disease (2) | Partially correct description/ explanation of the 1st disease (1) | Any relevant information (0.5) | Wrong answer  (0) |  |
| Correct description/ explanation of the 2nd disease (2) | Partially correct description/ explanation of the 2nd disease (1) | Any relevant information (0.5) | Wrong answer  (0) |  |
| **4(a)** | Water pollution and its effects | Correct explanation/description of water pollution (2) | Partially correct explanation/description of water pollution (1) | Any relevant information (0.5) | Wrong answer  (0) |  |
| Any three correct effects of using polluted water (3) | Any two correct effects of using polluted water (2) | Any one correct effect of using polluted water (1) | Wrong answer (0) |  |

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| **4(b)** | Defining vitamins and description of their importance | Correct statement/explanation of vitamins (2) | Partially correct statement/explanation of vitamins (1) | Any relevant information (0.5) | Wrong answer  (0) |  |
| Any three correct points of importance of vitamins (3) | Any two correct points of importance of vitamins (2) | Any one correct point of importance of vitamins (1) | Wrong answer  (0) |  |
| **5 (a)** | Chart of alkane ,alkene and alkyne, their functional groups , general formula and relevant examples | Making correct chart, functional group, general formula and example of alkane (02) | Any two correct aspects (1.5) | Any one correct aspect (1) | Any relevant information (0.5) | Wrong answer (0) |
| Making correct chart, functional group, general formula and example of alkene (02) | Any three correct aspects (1.5) | Any two correct aspects (1) | Any one correct aspect (0.5) | Wrong answer (0) |
| Making correct chart, functional group, general formula and example of alkyne (02) | Any three correct aspects (1.5) | Any two correct aspects (1) | Any one correct aspect (0.5) | Wrong answer (0) |
| **5(b)** | Preparation of ethene from alcohol and ethyl bromide | Completely illustrating the preparation of ethene from Alcohol (2) | Partially correct response (1) | Any relevant information (0.5) | Wrong answer (0) |  |
| Completely illustrating the preparation of ethene from ethyl bromide (2) | Partially correct response (1) | Any relevant information (0.5) | Wrong answer (0) |  |