Reaction prediction set 1 answers

Redirect to Download Chemical Response Predictions Response Package PDF after Seconds Author's Addiction * Relevant Authors Cavendish Laboratory, University of Cambridge, Cambridge CB3 0HE, UK E-mail: aal44@.cam.ac.uk b Medicine Design, Pfizer Inc., Cambridge, MA 02139, USA C Modeling and Modeling Sciences, Pfizer Inc., Cambridge, MA 02139, U.S. Department of Chemistry, Cambridge University, Cambridge CB2 1EW, UK e Modeling and Modeling Sciences, Pfizer Inc., Groton, CT 06357, USA Predict how a complex molecule reacts with different reagents, and how to synthesize complex molecules from simpler starting materials are very important in organic chemistry We show that the attention-based machine translation model – molecular transformer – solves both reaction prediction and retrosynthesis problems by learning from the same dataset. Reagents, reagents and products are represented as SMILES text strings. For the prognosis of the reaction, the model forces THE REAGENTS AND REAGENT SMILES into the product SMILES and the opposite of retrosynthesis. In addition, a model trained from publicly available data can accurately predict patented molecules extracted from a pharmacy electronic laboratory notebook, which indicates that chemical spaces are generalized. We hope that our universal system will be widely applied to problems such as reaction condition prediction, reagent prediction and harvest forecast. You have access to this article Wait until we upload your content ... Something's wrong. try again? Return to navigation tab Chem. Commun., 2019.55, 12152-12155 A. A. Lee, Q. Yang, V. Sresht, P. Bolgar, X. Hou, J.L. Klug-McLeod and C.R. Butler, Chem. Commun., 2019, 55, 12152 If you are not the author of this article and want to reproduce the material from it in a third party other than the RSC Journal, you must formally apply for permission through the copyright clearance centre. For more information, go to the instructions for using the Copyright Center. Authors contributing to RSC publications (magazine articles, books or books) need not formally request authorisation to reproduce the material contained in this Article If the reproduced material is accompanied by a fair approval. The reproduced material should be classified as follows: If the material has been adapted instead of being reproduced from the original RSC publication Reproduced from, it may be replaced by a tailored from. In all cases, REFERENCE XX is reference XX in the list of references. If you are the author of this article, you do not need to formally apply for permission to reproduce the figures, charts, etc. contained in this article in third-party publications or in a dissertation or dissertation if the reproduced material is accompanied by a correct confirmation. The reproduced material should be classified as follows: If you are you still need permission to reproduce the entire article in a third-party publication, except for reproduction of the entire article in dissertation or dissertation. Information about material recovery from RSC articles with different licenses can be found on our permission requests page. Tweet Share Back to The Navigation tab Download PDF in the future link Install our Android app easier to use INSTRUCTIONS Answer all questions All work must be clearly displayed if you need mathematical tables and silent no - programmable electronic calculators can be used candidates must answer questions in English. Candidates should check the question document to make sure that all pages are printed as directed and that there are no questions. Element T has an atomic number of 12.Write the T nitride formula. (1mk) What type of relationship is formed between T and nitrogen (1mk) ethanol has a lower molecular weight than butane. Explain why ethanol is a liquid and butane is a gas at room temperature (2mks) The following kit shows that how to prepare a pure Etyne gas sample in the laboratoryIdentify materials (1mk)X _____Y _____ Write down the chemical equation for the reaction that occurs in flask A (1mk) Gas takes up 500cm2 at 270C and 760mmHg. Calculate its volume when the pressure doubles and the temperature rises to 400C. (3mks) Chlorine gas bubbles with iron (II) sulphate solution. Explain the comments (2mks) Write the ionic equation for the reaction that is taking place (1mk) Examine the diagram below and answer the questions, who followIdentify cations and anions in solid X (1mk)Cations _____Anions _____

Their oxide melting points are given below Oxide Mpt oC SiO2 1728 SO2 -76 Explain this large difference in the melting point of the compounds. (2mks) Describe how you would obtain a pure sample of sodium carbonate from Carbonate, sodium carbonate and ammonium chloride. (3mks) Mangarate (VII) ions react with iron (II) ions in h+ ions, according to this reactionMnO4- + 5Fe2+ + 8H+ → Mn2+ + 5Fe3+ + 4H2OSem the number of manganese ion oxidation in manganese ions in manganese (VII) ions (2mks) Which species have been reduced? Explain (2mks) Dry chlorine gas has been transmitted through hot iron wire as shown in the diagram belowName solid P (1mk) Write the chemical equation for the reaction that forms a hard P (1mk) The following table contains elements W, X, Y, Z in the same group of the periodic table. The letters do not reflect the actual characters of the items. Stop it to answer the following questions: Element Atomic radius (nm) Ionic beam (nm) W 0.072 0.136 X 0.133 0.216 Y 0.144 0.195 Z 0.099 0.181 Is it a group of metal or non-metallic elements? Explain (2mks) Arrange items according to the reactivity order, starting with the least reactive (1mk) Use the following half-cell standard reduction options to answer questions, given in poMg2+ + 2e- → Mg -2.362Zn2+ + 2e- → Zn -0.76Ag+ + e- → Ag +0,5 80Cu22+ + 2e- → Cu +0.34 Select two sides of cells that together provide the largest cell potential (1mk) Calculate the potential of a) formed cell. (2mks) Concentrated sulphur (VI) acid is used as a drying agent. Explain why the preparation for ammonia (2mks) is not suitable for drying Use the following bond eutalples, to answer the questions asked after bond bond euthalpies (KJ/Mol) H-H 436 N-H 3 88 N=N 944 Calculated reaction heat: N2(g) + 3H2(g) → 2NH3(g) (2mk) Is the above reaction an exothermic or endothermal? Choosing the cause (1mk) The following compound is formed when alcohol reacts with alcanic acid in the name of the concentrated sulfur (VI) acidGive compound IUPAC (1mk) Determine alcohol and alcanol acid were used for the FormAlcohol _____Alkanolic Acid _____ What mass of copper would be deposited when 2 amps of current (1F = 96500 Coulombs, Cu = 63.5) (3mks) When copper metal is started, describe how we can prepare copper (II) carbonate. (3mks) When the excess magnesium strip is burned in the air, two products are formed. Set two products (1mk) Write two equation reactions, which consist of two products i) above (2mks) Diamond and graphite are two allotropes carbonDefine term allotrope (1mk) In terms of gluing, explain why graphite carry electricity while diamond is not (2mks) 1.23g hydrated salt, MgSO4. XH2O was dissolved in 50cm3 water and the solution diluted to 500cm3 with distilled water. The concentration of the final solution was found to be 0,011 M. Find the X value (Mg = 24, S =32, O =16, H=1) (3 mks) The following measure was used to compare the effects of the electrical field on the release of radioactive decomposition. Name radiation (2mks)a _____b _____c _____Atsisakyk a and c (1mk) deformation difference Specify the industrial method of ethanol (1mk) Two uses of ethanol (1mk) The following curves were obtained when exactly the same concentration of hydrochloric acid was reacted with 25 g of marble particles. In one case, the acid was first warmed to a higher temperature. Which curve reflects the reaction using warm hydrochloric acid? (1mk) Explain how the temperature affects the reaction rate. In addition to temperature, indicate any other factor that affects the rate of reaction with solids. (1mk) Examine the energy cycle diagram below and answer the following questions: Name the heat changes marked with †H2 and â€†H3. (1mk) With this in mind† H2 = -110kJMol-1 and â€†H3 = -283kJMol-1 . Calculate the value of single graphite C = 12, O=16 (2mks) ammonium iron (II) sulphate heptahydrate clay â€†H1 was gently hot, then in a strongly dry tube. Please explain the comments submitted. (3mks) The solution contains 4 g of potassium hydroxide per litre. 25.0cm3 this solution should be 22.0cm3 diluted sulphuricVI acid for complete neutralisation. The acid concentration in the moles is calculated per litre. (K=39, O = 16) (3mks) The following structure is a popular compound used for washingSupe why it is a better detergents than soap in both hard and soft water (2mks) Specify one problem with the use of the above mentioned compound. (1mk) Specify the two properties of carbon (IV) oxide for which it is suitable for use as a fire extinguisher (1mk) Give one carbon (IV) oxide, except for the fire extinguisher (1mk) Ethanol acid, boiling in the boiling point higher than ethanol. Explain this from the point of view of structure and bonding. (2mks) Drug abuse is a fast-growing problem. Name two addictive drugs (1mk) State one problem that the drug above can cause. (1mk) (1mk)