

U-14	Biomolecules																								
2007	What are reducing sugars? What is meant by denaturation of a protein? Define enzyme																								
2008	Write two main functions of carbohydrate in plants What happens when glucose is treated with i) HI ii) Bromine water iii) HNO ₃ How are vitamins classified? Mention the chief source of Vitamin A and C Describe by giving example i) Glycosidic linkage ii) Peptide linkage iii) Primary structure of protein iv) Denaturation of protein.																								
2009	Name the four bases in DNA. Which one is not present in RNA? Name two fat soluble vitamins, their sources and diseases caused due to their deficiency																								
2010	What are reducing sugars? Amino acids may be acidic,alkaline or neutral. How does this happen? What are essential and non essential amino acids? Name one of each type. What are the product of hydrolysis of sucrose? Differentiate between fibrous and globular proteins. What is meant by denaturation of a protein? What are mono saccharides ?																								
2011	<p>1. Explain</p> <p>i) Peptide linkage ii) Pyranose structure of glucose</p> <p>2. Write the main structural difference between DNA and RNA</p> <p>3. Of the four bases , name those which are common to both DNA and RNA</p> <p>4. Write such reactions and facts about glucose that cannot be explained by its open chain structure.</p>																								
2012	What is essentially the difference between α -glucose and β -glucose ? What is meant by pyranose structure of glucose ? Write the structure of product obtained when glucose is oxidised by nitric acid.																								
2013	<p>(a) Write the name of linkage joining two amino acids.</p> <p>(b) Shanti, aa domestic helper of Mrs. Anuradha, fainted while mopping the floor. Mrs. Anuradha immediately took her to the nearby hospital where she was diagnosed to be severely 'anaemic.' The doctor prescribed an iron rich diet and multivitamins supplement to her. Mrs. Anuradha supported her financially to get the medicines. After a month, Shanti was diagnosed to be normal.</p> <p>After reading the above passage, answer the following questions :</p> <p>(i) What values are displayed by Mrs. Anuradha ?</p> <p>(ii) Name the vitamin whose deficiency causes 'pernicious anaemia'.</p> <p>(iii) Give an example of waer soluble vitamin.</p> <p>What is the product of hydrolysis of sucrose?</p>																								
2014	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">1)</td> <td style="width: 85%;">What are the products of hydrolysis of sucrose?</td> <td style="width: 10%; text-align: right;">1</td> </tr> <tr> <td>2)</td> <td>Define the following terms as related to protiens:</td> <td style="text-align: right;">3</td> </tr> <tr> <td></td> <td>(i) Peptide linkage</td> <td></td> </tr> <tr> <td></td> <td>(ii) Primary structure</td> <td></td> </tr> <tr> <td></td> <td>(iii) Denaturation</td> <td></td> </tr> <tr> <td>3)</td> <td>What are the products of hydrolysis of maltose?</td> <td style="text-align: right;">1</td> </tr> <tr> <td>4)</td> <td>Define the following terms:</td> <td style="text-align: right;">3</td> </tr> <tr> <td></td> <td>(i) Glycosidic linkage</td> <td></td> </tr> </table>	1)	What are the products of hydrolysis of sucrose?	1	2)	Define the following terms as related to protiens:	3		(i) Peptide linkage			(ii) Primary structure			(iii) Denaturation		3)	What are the products of hydrolysis of maltose?	1	4)	Define the following terms:	3		(i) Glycosidic linkage	
1)	What are the products of hydrolysis of sucrose?	1																							
2)	Define the following terms as related to protiens:	3																							
	(i) Peptide linkage																								
	(ii) Primary structure																								
	(iii) Denaturation																								
3)	What are the products of hydrolysis of maltose?	1																							
4)	Define the following terms:	3																							
	(i) Glycosidic linkage																								

	(ii) Invert sugar (iii) Oligosaccharides
2015	1. Which one of the following is an oligosaccharide : starch, maltose, fructose, glucose? 2. Write one difference between DNA and RNA? 3. Write the name of the disease caused by the deficiency of Vitamin B ₁
2016	(i) Write the name of monosaccharides which are obtained after the hydrolysis of Lactose. (ii) What type of bonding is responsible for the stability of α -helix ? (iii) Write the difference between Nucleotide and Nucleoside.
2017	After watching a programme on TV about the presence of carcinogens (cancer causing agents) Potassium bromated and Potassium iodate in bread and othe bakery products , Rupali a class XII student decided to make others aware about the adverse effects of these carcinogens in food. She consulted the school principal and requested him to instruct the canteen contractor to stop selling sandwiches, pizzas, burgers and othe bakery products to the students. The principal took an immediate action and instructed to the canteen contractor to replace the bakery products wit some protein and vitamin rich food like fruits , salads, sprouts , etc. The decision was welcome by the parents and the students. After reading the above passage , answer the following questions : a) What are the values (at least two) displayed by Rupali ? b) Which polysaccharide component of carbohydrate is commonly present in bread ? c) Write the two types of secondary structures of protein d) Give two examples of water soluble vitamins.

U-15	Polymer
2007	Write formula of monomer of polythene and Teflon
2008	Define the term polymerization What are thermoplastic and thermosetting polymer. Give examples Distinguish between homo polymer and co polymer with examples
2009	What does 6,6 indicates in Nylon-6 6? What are thermoplastic and thermosetting polymer. Give differences and examples What is the primary structural features necessary for a molecule to make it useful in a condensation polymerization reaction? Differentiate condensation and addition polymerization with examples
2010	What does 6,6 indicates in Nylon-6 6? Draw the molecular structure and write the name of monomer of i) PVC ii) Teflon What is meant by co polymerization? Draw the molecular structure and write the name of monomer of i) Bakelite ii) Nylon-6

2011	Draw the molecular structure and write the name of monomer of i) PVC ii) Teflon iii) Polythene iv) Buna-S v) Dacron vi) Neoprene
2012	Differentiate between thermoplastic and thermosetting polymer. Give examples.
2013	<ol style="list-style-type: none"> 1. Give one example of a condensation polymer. 2. Define thermoplastic and thermosetting polymers. Give one example of each. 3. What is a biodegradable polymer ? Give an example of a biodegradable aliphatic polyester. 4. Is $(-CH_2-CH(Cl))_n$ a homopolymer or copolymer ?
2014	<ol style="list-style-type: none"> 1) Which of the following is natural polymer? 1 Buna-S, Proteins, PVC 2) Write the name of monomers used for getting the following polymers: 2 (i) Bakelite (ii) Neoprene 3) Based on molecular forces what type of polymer is neoprene? 1 4) Write the name of monomers used for getting the following polymers: 2 (i) Terylene (ii) Nylon-6,6
2015	1. Write the names and structures of the monomers of the following polymers : a) Glyptal b) Teflon c) Nylon-6
2016	1. Write the names and structures of the monomers of the following polymers : a) Buna-S b) Terylene c) Nylon-6
2017	Write the structures of the monomers used for getting the following polymers : a) Nylon -6,6 b) Melamine –formaldehyde polymer c) Buna-S d) Polyvinyl chloride (PVC) e) Buna-N f) Teflon g) Neoprene

U-16	Chemistry in everyday life
2008	Mention one use the following drugs i) Ranitidine ii) Paracetamol iii) Tincture of iodine
2009	Describe with example i) Non ionic detergent ii) Food preservatives iii) Disinfectants iv) cationic detergent v) Enzymes vi) sweetening agents
2010	Describe with example i) detergent ii) Food preservatives iii) enzymes iv) antibiotic v) antiseptic vi) analgesic What are analgesic drugs? How are they classified and when they usually recommended for use.
2011	Describe with example i) synthetic detergent ii) Food preservatives iii) antacids
2012	Differentiate between disinfectant and antiseptic. What are food preservative ? Name two such substances.
2013	(i) What class of drug is Ranitidine ?

	<p>(ii) If water contains dissolved Ca^{2+} ions, out of soaps and synthetic detergents, which will you use for cleaning clothes ?</p> <p>(iii) Which of the following is an antiseptic ? 0.2% phenol, 1% phenol</p>
2014	<p>1) On the occasion of World Health Day, Dr. Satpal organized a 'health camp' for the poor farmers living in a nearby village. After checkup, he was shocked to see that the most farmers suffered from cancer due to regular exposure to pesticides and many were diabetic. They distributed free medicines to them. Dr. Satpal immediately reported the matter to the National Human Rights Commissions (NHRC). On the suggestion of NHRC, the govt. decided to provide medical care, financial assistance, setting up of super specialty hospitals for treatment and prevention of the deadly disease in the affected village all over the India. 3</p> <p>(i) Write the values shown by</p> <p>(a) Dr. Satpal</p> <p>(b) NHRC</p> <p>(ii) What type of analgesics are chiefly used for the relief of pains of terminal cancer?</p> <p>(iii) Give an example of artificial sweetener that could have been recommended to diabetic patients.</p>
2015	<p>Mr Roy the principal of one reputed school organized a seminar in which he invited parents and principals to discuss the serious issue of diabetes and depression in students. They all resolved this issue by strictly banning junk food in schools and introducing healthy snacks and drinks like soup, lassi, milk etc in school canteens. They also decided to make compulsory half an hour of daily physical activities for the students in the morning assembly. After six months, Mr Roy conducted the health survey in most of the schools and discovered a tremendous improvement in the health of the students.</p> <p>(i) What are the values (at least two) displayed by Mr Roy?</p> <p>(ii) As a student, how can you spread awareness about this issue ?</p> <p>(iii) What are tranquilizers? Give an example.</p> <p>(iv) Why is use of aspartame limited to cold foods and drinks ?</p>

2016	<p>Due to hectic and busy schedule, Mr.Singh started taking junk food in the lunch break and slowly became habitual of eating food irregularly to excel in his field. One day during meeting he felt severe chest pain and fell down. Mr. Khanna, a close friend of Mr.Singh, took him to doctor immediately. The doctor diagnosed that Mr.Singh was suffering from acidity and prescribed some medicines. Mr.Khanna advised him to eat home made food and change his lifestyle by doing Yoga, meditation and some physical exercise. Mr.Singh followed his friend's advice and after few days he started feeling better.</p> <p>After reading the above passage, answer the following :</p> <p>(i) What are the values (at least two) displayed by Mr.Khanna ?</p> <p>(ii) What are antacids ? Give one example.</p> <p>(iii) Would it be advisable to take antacids for a long period of time ? Give reason.</p>
2017	<p>Define the following a) Anionic detergents b) Limited spectrum antibiotics c) Antiseptics d) Antacids e) Narrow spectrum antibiotics , f) Cationic detergents g) Broad spectrum antibiotics h) Tranquilizers</p>
<p>A.K.SAMAL,PGT(CHEMISTRY),PH NO-7381884606,aksamal74@gmail.com</p>	