Question Paper 2016 – 2017

CBSE Class – 11 English core (SA-I)

General Instructions:

- All the sections A, B and C are compulsory.
- Separate instructions are given for each section and question follow them.

SECTION – A Reading (20 Marks)

1. Read the passage carefully. (12)

1. Carbon is a very special material, and there are atoms of it in many things; for instance the 'lead' of a pencil is made of carbon, coal is made of carbon, and so are diamonds. A number of other things such as wood, plants and oils are made very largely of carbon, but have other substances as well. The molecules which make up our bodies depend on carbon.

2. Carbon atoms are so special because they have the property of joining together into molecules in different ways.For instance, the atoms of coal and diamond are joined together to make crystals, but each in its own pattern, and consequently from carbon atoms come two things so different to look at. A pencil 'lead' is also carbon, but here the atoms are arranged not in crystals but in flat sheets, far too small, of course, to see.When we press a pencil onto paper, the paper pulls some of the sheets of atoms away, and these make the pencil marks.Paper may feel smooth, but it is rough enough to slide off some sheets of atoms. If you try to write on glass and cellophane, your pencil leaves no marks, for these are too smooth to pull the sheets away from the pencil 'lead'.

3. Besides forming into crystals and making sheets carbon atoms can also form into long series of atoms, like chains. No other substance can do this so well. Each chain of carbon atoms can also have other substances attached to the links of the carbon chain. If the carbon chain has hydrogen atoms joined on it, we have what the scientists call a 'hydrocarbon'. Hydrocarbons give us molecules of oil, petrol, paraffin, tar and natural gas, like that found under the North Sea.

4. Scientists have discovered that carbon chains can be very long and can contain thousands

of both carbon and other atoms. These long carbon chains are single molecules, but much more complicated than the single molecules of water, for instance, which are made of only three atoms. These are the molecules of very complicated substances such as plastics, and living things and many kinds of food. The difference between different kinds of oils, such as petrol and paraffin, depends on the way in which the atoms are arranged in the molecules.

The chemist can make petrol or paraffin from the oil out of an oil-well by heating it enough to change the pattern of the atoms in its molecules.

5. The chemist today has found out how to make new substances by heating materials made of hydrocarbon chains, such as oil or coal, in giant pressure cookers and mixing with them other chemicals. very hot indeed, the atoms of the other chemicals fit into the hydrocarbon chain and combine to make molecules of a new pattern. The result of this may be a plastic for making cups or washing-up bowls or an artificial fiber for making clothes. Milk contains carbon chains, and the chemist can extract these and reform them into a plastic for making solid things such as buttons and door handles.

6. The carbon chains in living things are even more complicated than those in oils, plastics or artificial fibers, and may contain hundreds of thousands of atoms; there is often more than one chain in each molecule, and these may be twisted together like ropes or bundles. It is a difficult problem for the scientists to unravel these complicated molecules, and therefore, although he can make an artificial fiber, he had not yet been able to fit the molecules together to make a living plant or animal.

On the basis of your understanding of the passage answer the following questions by selecting the most appropriate option from the given options: [1 × 4 - 4 marks]

(a)The carbon atoms join to form. .....

(i) crystals

(ii) flat sheets

(iii) chains

(iv)all of the above

(b) Which of the following is NOT true?

(i) Heating does not change the pattern of the atoms in oil molecules

(ii) Plastic can be extracted from milk

(iii) Wood is made of carbon

(iv) Coal and diamonds are made of carbon

(c) The scientists have not been able to make a living plant or animal as carbon chains in them.....

(i)are so complicated

(ii) contain hundreds of thousands of atoms

(iii) are twisted together like ropes or bundles

(iv) all of the above

(d) Which of the following is NOT true about carbon chains ?

(i) They contain only carbon atoms

(ii) They contain thousands of both carbon and other atoms

(iii) They are single molecules

(iv) They can be coiled up in different ways

Answer the following questions briefly :[1 x 6 = 6 marks]

(e) How does a pencil 'lead' leave a mark on paper?

(f) What makes petrol different from paraffin?

(g) Name any two things which are purely made of carbon.

(h) What makes carbon atoms special?

(i) A pencil does not make a mark on glass. Why?