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B.Sc. (Hons.) IN OPTOMETRY AND OPHTHALMIC TECHNIQUES

Term-End Examination

June, 2009

BOS-001 : COMMUNICATIVE ENGLISH

Time : 3 hours *Maximum Marks : 70*

Note : *Answer **all** the questions.*

1. Read the following passage and answer the questions given after the passage :

The chemicals in our bodies are built by the cells (the living units) of which we are made. Each cell contains a set of chemical instructions as to how to do this. Each instruction is named a gene. The genes are stored in special packages named chromosomes. Science has begun to 'read' the instructions in all kinds of plants and animals, including people. This will help us to find out about the genes which fight diseases. When we understand how the genes work, we can design more effective medicines.

The total of all the genes in any plant or animal is called genome. In 1989 a huge world wide project

was launched to study all the genes in the human genome. As the genome contains millions of bits of information the project will probably go on well into the twenty - first century. The project on the human genome was completed on 26 June 2000. Some genes have already been indentified. For instance, in 1989 the single gene for a disease named cystic fibrosis was identified in the instructions. Children who are born with this disease produce too much mucus in their lungs. The condition is very difficult to treat and the children usually die young. Now that we knew where the gene for the disease is in the genome, one can begin to work out how to correct it. First though, we can find out who carried the gene. We know that about one person in twenty has it. You may carry it yourself. Only when both parents carry the gene it is likely to be passed on to a son or a daughter. By screening (testing) couples, doctors can warn them of any risks before they have children.

There are many diseases which can be inherited from one's parents in the same ways as oystic fibrosis. Unfortunately, many of these diseases involve more than one gene, which makes them more difficult to deal with. However, finding out where the genes are in the genome, and what they do chemically, will be a very great step forward. Scientists may then be able to make drugs which

cure the illness or even switch off the instructions in the genes before they can do any damage.

In 1990 scientists put human genes into a new breed of mice so that the animals could be used to test drugs against AIDS. Moving genes from one animal or plant to another is named genetic engineering. It has been used for a number of years in the plant and animal breeding industries. For example, in the USA there is now a breed of pigs which are not real pigs at all.

They have been produced by combining pig genes with those of cattle. The resulting animals are larger and leaner than traditional pigs. Plant breeders are putting genes from plants such as peas into wheat, other grain crops and soya beans. peas can make their own fertiliser from the air and the hope is that these other crops will eventually be able to do the same. By using this kind of genetic engineering, medical scientists hope that some plant may be given the genetic instructions to enable them to make drugs. The soya bean, e.g., may be genetically engineered to produce large quantities of antibodies to kill cold and flu viruses.

It is easy to see the possible benefits of genetic engineering. However, such knowledge also presents us with very dangerous choices. At present genetic engineering consists of splitting

the chemicals containing the instructions and inserting new ones. The long-term aim is to alter the chemical instructions themselves. When scientists are able to do this, then a genetic time bomb will go off.

You probably know people who are particularly good at maths or music or spent or who learn things easily. We are all good at doing certain things. Our talents are partly a result of our genes. If we know how to change these genes we could 'design' people with particular talents. Would this be a good thing? This is probably the most important choice which human beings will ever have faced. It goes well beyond simply wanting to make people healthier. The science of genetics is developing so fast that this choice may not be far away.

(a) (i) Give a suitable title to the passage.

(ii) What are the 'instructions' that science has begun to 'read' from plants?

(iii) Why does the author say that the pigs being bred in the USA are not pigs at all?

(iv) What is the long-term aim of genetic engineering?

(v) What 'choice' is the author refering to in the last line of paragraph 7 ? **1x5=5**

(b) Match the following words/phrases in column A with their meanings in column B : 5

	Column A		*Column B*
(i)	Gene	(a)	Change
(ii)	Antibodies	(b)	one of the minute threads in every nucleus of cells, carrying genes
(iii)	Alter	(c)	One of the factors that control heredity
(iv)	Chromosome	(d)	Substance produced in the blood that fight and destroy disease causing bacteria and virus

2. Write a paragraph on ***one*** of the following topics in ***150*** words : **10**

(a) Health care in India

(b) Problems of old age

(c) The state of eye care in India

(d) Prevention is better than cure

3. Write a letter to your younger sibling about taking studies seriously. **10**

4. Prepare a clinical case study with reference to an Opthalmology case. **10**

5. Fill in the blanks with the correct preposition : 5

(a) Kanta is a nurse _____ a Mumbai hospital.

(b) Kanta lives _____ Vashi and has to take the train to work.

(c) The journey takes over an hour_____. which Kanta usually sleeps or reads.

(d) Kanta does not mind the long hours, but, of course, certain days are very taxing even _____ her.

(e) She feels that the best time _____ the day is lunch-break.

6. Fill in the blanks with correct article. 5

(a) We went to _____ Regal cinema to watch _____film.

(b) Please don't switch on_____fan.

(c) His bank is _____Bank of Baroda.

(d) He kept all_____lights on.

(e) It was_____five-mile walk.

7. Fill in the blanks with the correct present tense form of the verbs given below. There is one extra option given. 5

(a) Animal lovers_____to find shelter for injured animals.

(b) What we _____is a sound philosophy of education.

(c) He _____ no English at all.

(d) Faith, they_____can move mountains.

(e) He_____ to come here as a guest.

(need, say, try, want, speak, talk)

8. Match the diseases to their symptoms : 5

(a)	Influenza	(i)	severe headache, blurred vision, dizziness
(b)	Typhoid	(ii)	swollen, painful joints
(c)	Jaundice	(iii)	headache, cold, fever
(d)	Arthritis	(iv)	upset stomach, fever
(e)	Migraine	(v)	yellow skin, nausea, fever

9. Make a summary of the following passage. Make it approximately one-third of the passasge. Give it an appropriate title. 10

People depend on plants for their existance. Plants in the form of seeds, especially grains, are important to people because, they are the principal ingredients in most people's diets. Yet most of the plants that are important to people were domesticated or tamed, in prehistoric times. For example, before history was written, corn and wheat became part of people's diets. People have grown these grains as crops in small fields for thousands of years.

Scientist have only recently begun to keep records of the domestication of plants. Because of their records, scientists can predict some of the problems in domestication of a plant. On the other

hand, there are three reasons why scientists cannot guess all of the problems or all of the solutions. The first reason is that they have never been successful in taming a wild plant. The second reason is that they have kept records for a relatively short time. The third reason is that each plant species is unique, different from all other plants. The jojoba is an example, of a plant that scientists are trying to domesticate.

The jojoba is a desert plant that grows wild in the dry regions of the southwestern United States and northern Mexico. It is a bush that grows to be about two metres high. On its many moody branches, the jojoba produces a fruit that is 40 percent to 64 percent liquid wax. This liquid substance, called jojoba oil, is valuable. It can be used as a base for all kinds of cosmetics. It works well as an ingredient in high quality machine oils. By domesticating the jojoba, scientists hope to change unproductive desert land into productive agricultural land.

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