

Date : 9/3/2010

SCIENCE AND TECHNOLOGY - II

Time : 2 Hrs.)

Question Paper : March 2010

(Max. Marks : 40)

* Note : Refer to Question Paper March 2008 *

- Q. 1. (A) Select the proper alternative and rewrite the following statements. (2)**
- (1) Plaster of Paris is prepared from
(a) burnt plaster (b) burnt alum (c) gypsum (d) copper sulphate
 - (2) The flavour of adulterated ghee is improved by adding
(a) dextrin (b) animal fat (c) tributyrin (d) starch
 - (3) Germ theory of disease was postulated by
(a) Robert Koch (b) Louis Pasteur (c) Pugh (d) MacMahon
 - (4) Modern biotechnology operated at level.
(a) sub-atomic (b) atomic (c) molecular (d) matter
- (B) Rewrite the second column so as to match the first column. (2)**
- | Column I | Column II |
|----------------------------|----------------------|
| (1) Argemone oil | (a) Beri-beri |
| (2) Thiamin deficiency | (b) Pellagra |
| (3) Cholesterol deposition | (c) Epidemic dropsy |
| (4) Niacin deficiency | (d) Asteriosclerosis |
- (C) State whether the following statements are true or false and rewrite. (2)**
- (1) Hydrogen sulphide gas turns lime water milky.
 - (2) Bleaching powder is used for disinfecting drinking water.
 - (3) Infective agent for schistosomiasis is snail.
 - (4) Protein injection is better than vaccination.
- (D) Find the odd man out. (2)**
- (1) Haematite, Limonite, Siderite, Bauxite. (2) Vitamin A, B, D, K.
 - (3) Starch, Glucose, Fructose, Calcium. (4) Rice, Wheat, Gram, Maize.
- Q. 2. (A) Give scientific reasons for any two. (4)**
- (1) Nails should be kept clean and cut short periodically.
 - (2) Dried food grains remain unspoiled for a long period.
 - (3) Milk is considered as the complete food.
 - (4) The common salt fortified with small quantities of sodium or potassium iodate is widely used throughout India.
- (B) Answer any two of the following. (4)**
- (1) How is cancerous tumour caused ?
 - (2) Write the preventive measures of ascariasis (any four).
 - (3) Give the names of nutritional programmes initiated by Government of India.
 - (4) Give the disadvantages of excessive nutrient intake (any four).
- Q. 3. (A) Explain the following chemical reactions with the help of balanced chemical equations. (Any two) (4)**
- (1) Carbon dioxide from air reacts with bleaching powder.

- (2) Calcium carbonate is strongly heated.
- (3) Sodium carbonate reacts with dil. hydrochloric acid.
- (4) The crystals of copper sulphate are strongly heated.

(B) Answer any one of the following.

(4)

- (1) Give the functions of water in our body (any four).
- (2) With a well-labelled diagrammatic representation of DNA, describe the structure of DNA.

Q. 4. (A) Draw neat diagrams of any two and label as given.

(4)

- (1) Blast furnace : (a) Cup and cone, (b) Molten iron.
- (2) Laboratory preparation of Hydrogen Sulphide gas : (a) Iron sulphide and dil. acid. (b) H₂S gas
- (3) Laboratory preparation of Ammonia Gas : (a) Ammonium chloride and slaked lime. (b) Ammonia gas.
- (4) Structure of HIV virus : (a) Lipid envelope (b) Knob of protein.

(B) Answer any one of the following.

(4)

- (1) How will you maintain : (a) Food hygiene (b) Personal hygiene in food preparation ?
- (2) Give the sources and functions of Proteins.

Q. 5. (A) Answer any four of the following.

(4)

- (1) Write the structural formula of Benzene. (2) What are enzymes ?
- (3) What is metallurgy ? (4) Name the disease caused due to deficiency of Insulin.
- (5) Write the formula of Body Mass Index. (6) Define Personal Hygiene.

(B) Discuss in detail the factors affecting growth of organisms. (Any four)

(4)

OR

What are Hydrocarbons ? Give the classification of the hydrocarbon.