Bihar Judicial Service (Mains) 2023

Elementary General Science · compulsory paper

Time: 3 hours · Full marks: 100

There are five Sections in the question paper. Answer one question from each Section

Section A

1. Define the following: (2×10=20)

(a) Fuel gas
(b) Abiotic components
(c) Photosynthesis
(d) Covalent bonds
(e) Respiration
(f) Reproduction
(g) Boiling point
(h) Fermentation
(i) Myopia
(j) Ozone layer depletion

2. Differentiate between the following: (4×5=20)

(a) Fertilizer and Organic manure
(b) Isotope and Isobar
(c) Reflex action and Reflex arc
(d) Antigen and Antibody
(e) Vitamins and Minerals

Section B

3. Answer the following: (2×10=20)

(a) Why does the sun appear red during sunrise and sunset?
(b) Why do we wear white clothes in summer?
(c) What do you mean by structural isomers?
(d) What is ecosystem?
(e) Why should curd and sour substances not be kept in the container made up of brass or copper?
(f) What are the applications of human tongue?
(g) What is RT-PCR technique?
(h) What are metalloids?
(i) What are compounds?
(j) What is nucleus?

4. Give reasons of the following: (4×5=20)

(a) Aluminium foils are used to wrap food Items.
(b) Rainbow is seen in the sky after rains.
(c) Body becomes more active during anger and fear.
(d) Sodium is kept immersed in kerosene.
(e) Pickle is always kept in glass jar.

Section C

5. Write brief answers of the following (4×5=20)

(a) What is global warming?
(b) What is ex situ conservation?
(c) what is the function of receptor in our body?
(d) What is organic farming?
(e) Write various types of vitamins and diseases with their deficiency.

6. Fill in the blanks: (2×10=20)

(a) _____ material is present in tears.
(b) The filament of bulb is made up of _____
(c) Rust in iron is due to _____
(d) The powerhouse of the cell is _____
(e) Mendel proposed the law of _____
(f) Vinegar contains _____
(g) _____ is the main constituent of biogas.
(h) Bronze is the alloy of _____ and _____
(i) 1 micrometre = _____ centimetre.
(j) _____ is known as laughing gas.

Section D

7. Name the scientists who discovered the following (2×10=20)

(a) Streptomycin
(b) Cell theory
(c) DNA
(d) Blackhole
(e) Periodic Table
(f) Cells
(g) Oral Polio Vaccine
(h) Microscope
(i) Law of inheritance
(j) Vaccination

8. Explain the following: (4×5=20)

(a) The sky appears blue.
(b) Fuse wire protects electrical appliances.
(c) A drop of liquid without external force is spherical in shape.
(d) In humans, the blood pressure is higher at the feet than at the brain.
(e) Modem is used in between telephone line and computer for data transfer.

Section E

9. Why do/does/is- (4×5=20)

(a) ice cubes stick together if they are rubbed against each other;
(b) we see only one side of the moon always;
(c) series arrangement not used for domestic circuit;

(d) we require vitamins;
(e) person not drown in Dead Sea

10. What happens, when (4×5=20)
(a) white blood cells are high;
(b) carbon dioxide is flowing through limewater for less time;
(c) decomposer is removed from the food chain;
(d) glycerine comes in contact with potassium permanganate
(e) cloth is washed with hard water?