



## COMMON FIRST REVISION TEST – 2023

Standard X

Reg.No. : -10326

## SCIENCE

Part - I

Time: 3.00 hrs.

Marks: 75

12 x 1 = 12

## I. Choose the correct answer:

- Impulse is equals to \_\_\_\_\_.  
a) rate of change of momentum b) rate of force and time  
c) change of momentum d) rate of change of mass
- Power of a lens is  $-4D$ , then it's focal length is \_\_\_\_\_.  
a) 4 m b)  $-40$  m c)  $-0.25$  m d)  $-2.5$  m
- The value of universal gas constant \_\_\_\_\_.  
a)  $3.81 \text{ J mol}^{-1} \text{ K}^{-1}$  b)  $8.03 \text{ J mol}^{-1} \text{ K}^{-1}$  c)  $1.38 \text{ J mol}^{-1} \text{ K}^{-1}$  d)  $8.31 \text{ J mol}^{-1} \text{ K}^{-1}$
- \_\_\_\_\_ aprons are used to protect us from gamma radiation.  
a) lead oxide b) iron c) lead d) aluminium
- The number of periods and groups in the periodic table are \_\_\_\_\_.  
a) 6,16 b) 7,17 c) 8,18 d) 7,18
- Powdered  $\text{CaCO}_3$  reacts more rapidly than flaky  $\text{CaCO}_3$  because of \_\_\_\_\_.  
a) large surface area b) high pressure  
c) high concentration d) high temperature
- TFM in soaps represents \_\_\_\_\_ content in soap.  
a) mineral b) vitamin c) fatty acid d) carbohydrate
- Which is formed during anaerobic respiration?  
a) carbohydrate b) ethyl alcohol c) acid CoA d) pyruvate
- Which one is referred as 'Master Gland'?  
a) pineal gland b) pituitary gland c) thyroid gland d) adrenal gland
- The essential parts of a flower are \_\_\_\_\_.  
a) calyx and corolla b) calyx and androecium  
c) corolla and gynoecium d) androecium and gynoecium
- We can cut the DNA with the help of \_\_\_\_\_.  
a) scissors b) restriction endonucleases  
c) knife d) RNAase
- 'World No Tobacco Day' is observed on  
a) May 31 b) June 6 c) April 22 d) October 2

## Part - II

## II. Answer any 7 questions: (Q.No.22 is compulsory)

7 x 2 = 14

- Define inertia - Give it's classification.
- Why is tungsten metal used in bulbs but not in fuse wires?
- When and where was the first nuclear reactor built?
- Give any two examples for heterodiatomic molecules.
- What is rust? Give the equation for the formation of rust.
- Name the simplest ketone and give its structural formula.
- Why is the teeth of rabbit called heterodont?



(2)

X Science

20. Define genetic engineering.
21. How are e-wastes generated?
22. Calculate the pH of 0.0001 M  $\text{HNO}_3$ ?

**Part - III**

**III. Answer any 7 questions: (Q.No.32 is compulsory)**

**7 x 4 = 28**

23. Distinguish between ideal and real gas.
24. a) What is meant by electric current?  
b) Name and define it's unit.
25. a) Define one roentgen.  
b) Give the function of control rods in a nuclear reactor.
26. a) What is molar volume of a gas?  
b) Write the different types of isotopes of oxygen and it's percentage abundance.
27. Define combination reaction. Give one example for an exothermic reaction.
28. a) Draw and label the structure of oxisomes.  
b) What is respiratory quotient?
29. Enumerate the functions of blood.
30. Which hormone requires iodine for it's formation? What will happen if intake of iodine in our diet is low?
31. What are the advantages of using biogas?
32. A sound wave has a frequency of 200 Hz and a speed of  $400 \text{ ms}^{-1}$  in a medium. Find the wavelength of the sound wave.

**Part - IV**

**IV. Answer all the questions:**

**3 x 7 = 21**

33. a) i) Differentiate the eye defects myopia and hypermetropia.  
ii) Write any two applications of concave lens.  
**(OR)**  
b) i) What do you understand by the term 'Ultrasonic Vibration'?  
ii) State three uses of ultrasonic vibrations.  
iii) Name three animals which can hear ultrasonic vibrations.
34. a) i) Calculate the number of water molecule present in one drop of water which weighs 0.18 g.  
ii) Derive the relationship between relative molecular mass and vapour density.

**(OR)**

- b) How is ethanol manufactured from sugarcane? Explain.
35. a) With a neat labelled diagram explain the structure of neuron.  
**(OR)**  
b) Suggest measures to overcome the problems of an alcoholic.

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