

**CLASS IX SCIENCE (THEORY)**  
**SUMMATIVE ASSESSMENT TERM II SAMPLE PAPER II**

**Time: 3 hours**

**M.M.: 80**

**SECTION A**

1. When do we say that work is done?
2. Joule per second is the unit of which physical quantity?
3. Name two processes that play an important role in oxygen cycle.
4. Name the zone of Earth's atmosphere where ozone is found.
5. Distinguish between loudness and intensity of sound.
6. a. Draw a sketch of Bohr's model of an atom with three shells.  
b. If K and L shell of an atom are full, then what would be the total number of electrons in the atom?
7. What is the mass of?  
(i) 0.2 mole of oxygen atoms?  
(ii) 0.5 mole of water molecules?
8. The volume of 50 g of a substance is 20 cm<sup>3</sup>. If the density of water is 1g/cm<sup>3</sup>, will the substance float or sink?
9. (a) How many cotyledons are present in the seeds of monocots and dicots? (b) Why do bryophytes called as amphibians of the plant kingdom?
10. (a) Name the carbon compound responsible for depletion of ozone.  
(b) What are the different states in which water is found during the water cycle?
11. (a) Give one example each of biotic and abiotic components of biosphere. (b) Define water pollution.
12. Following observations were taken while determining the relative density of a liquid.  
Weight of the solid in air = 0.100 kgf  
Weight of the solid in liquid = 0.080 kgf  
Weight of the solid in water = 0.075 kgf  
Calculate:  
(a) the apparent loss in weight of solid in liquid  
(b) the apparent loss in weight of solid in water
13. List one similarity and one difference between fungi and plant.
14. Draw a neat diagram of human ear and label external ear, middle ear and inner ear.
15. A man whose mass is 50 kg climbs up 30 steps of the stairs in 30 seconds. If each step is 20 cm high, calculate the power used in climbing the stairs.
16. a. Two children are at opposite ends of an aluminium rod. One strikes the end of the rod with a

stone. Find the ratio of times taken by the sound wave in air and in aluminium to reach the second child.

b. What is the consequence of two sound waves which arrive at the ear in a time interval shorter than 0.1 s?

17. (a) Who discovered vaccine for the first time?

(b) What is an antibiotic? Give two examples.

18. (a). What is the significance of symbols? (b). Define the atomic mass unit.

(c) Why is it not possible to see an atom with naked eyes?

19. Using the valencies, write down the chemical formulae of the following compounds: (i) Calcium nitrate

(ii) Lead acetate

(iii) Barium chloride

(iv) Silica

(v) Phosphine

(vi) Baking soda

(Valency of calcium = 2, nitrate = 1, lead = 2, acetate = 1, barium = 2, chlorine = 1, silicon = 4, oxygen = 2, phosphorous = 3, hydrogen = 1, sodium = 1, bicarbonate =

1)

20. (a) Give one word for:

i. Diseases which can spread from one person to another. ii. Diseases which are present since birth.

iii. Diseases which last for short duration.

iv. Diseases which last for longer duration. (b) What is vaccination?

21. (a) Which chordate character has evolved has vertebral column in higher vertebrates? Define it.

(b) Why coelom is absent in diploblastic organisms?

22. (a) Define

i) Vector ii) Carrier

(b) What are the modes of transmission of AIDS?

23. (a) What is transformation of energy? Explain with any two suitable examples.

(b) What must be the velocity of a moving body of mass 2 kg so that its K.E. is 25 J?

(c) Represent graphically a constant force acting on a body producing a displacement along the direction of motion on a force-displacement graph. What is the significance of force-displacement graph?

**Or**

(a) Define potential energy. Give two examples.

(b) Two bodies of different masses  $m_1$  and  $m_2$  ( $m_1 > m_2$ ) have same kinetic energy. They are stopped by applying same retarding force. Which body will stop first?

24. (a) What would be the impact of increase in the concentration of carbon dioxide in the atmosphere?

(b)

(i) What do you mean by biogeochemical cycles? Name any two of the Biogeochemical cycles.

(ii) Nitrogen cycle is called a perfect cycle in nature. Explain.

(a)

Or

i. Name two agents of soil erosion

ii. Write any two steps used to control soil erosion.

(b) A forest area has cleaned by cutting trees for industrialisation purpose. List any two changes that will be brought in the water cycle of that area.

25. (a) How are electrons arranged around the nucleus in an atom?

(b) If an atom of an element has atomic number 11 and mass number 23, find the number of protons electrons and neutrons in its atoms.

Or

(a) The average atomic mass of a sample of an element X is 16.2 u. What are the percentages of isotopes  $^{168}\text{X}$  and  $^{188}\text{X}$  in the sample?

(b) Complete the following table.

<b>E l e m e n t</b>	<b>A t o m i c  N u m b e r</b>	<b>M a s s  N u m b e r</b>	<b>P r o t o n s</b>	<b>N e u t r o n s</b>	<b>E l e c t r o n s</b>
<b>A</b>	1	-	-	1	-
<b>B</b>	1	-	-	2	-
<b>C</b>	-	3	-	-	1
<b>D</b>	-	5	9	-	7
-	-	-	-	1	-

-            2            -            0            1  
              0                                -            0