

Divya Bhushan

**KENDRIYA VIDYALAYA SANGATHAN**

**Patna Region**

**Summative Assessment – II (2014 – 15)**

**SCIENCE**

**Class IX**

TIME-3 HRS

MM-90 MARKS

**GENERAL INSTRUCTIONS :-**

- (I) The question paper comprises of two sections, A and B. You are to attempt both the section respectively.
- (II) All Questions are compulsory.
- (III) There is no choice in any of the question.
- (IV) Question no. 1 to 3 in section are 1 mark question. These are to be answered in one word or in one sentence.
- (V) Question no. 4 to 6 are two marks questions. These are to answered in about 30 words each.
- (VI) Question no. 7 to 18 are 3 marks question. These are to be answered in about 50 words each.
- (VII) Question no. 19 to 22 are five marks question. These are to be answered in about 70 words each.
- (VIII) Question no. 23 and 24 are based on OTBA ( open text based assessment ) and each question carries 5 marks.
- (IX) Question no. 25 to 33 are multiple type questions based on practical skills and each question carries one mark.
- (X) Question no. 34 to 36 are explanatory questions based on practical skills and each carry two marks.

QUESTION PAPER @2015 for SA2

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**SECTION - A**

- Q.1. Valency of an element X is 3. Write the chemical formula of its oxide.
- Q.2. State the law of conservation of energy.
- Q.3. Name a nucleus which does not contain neutron.
- Q.4. Calculate the number of molecules present in 0.5 mole of water.
- Q.5. Why is vaccination considered as preventive measure of certain diseases?
- Q.6. Why is it difficult to hold a school bag having a strap made of a thin and a strong string?

Q.7. What were the three conclusions made by Rutherford on the basis of his alpha particle scattering experiment?

Q.8. Composition of the nuclei of two atomic species 'X' and 'Y' are given as under

	X	Y
Protons	6	6
<del>Electrons</del> Neutrons	6	8

Give the mass numbers of X and Y. What is the relation between the two species?

Q.9. Explain the basis for grouping organisms into five kingdoms.

Q.10. A laundry engaged in washing clothes has been pouring waste water directly into the river. Over a period of time, it was found that large numbers of fish were dying in the river.

Answer the following questions based on the above information:

- (i) Mention the reasons for the dying of fish.
- (ii) Is there any way it can be avoided?
- (iii) Mention values associated with the above situation.

Q.11. Explain the causes, symptoms and preventive measures of AIDS.

Q.12. What do you mean by one Pascal? A force of 100 N acts on a surface of area  $10 \text{ cm}^2$  normally. What are the thrust and pressure on the surface?

Q.13. State Archimedes' principle. Mention the applications of Archimedes' principle.

Q.14. A certain force acting on 20 kg mass changes its velocity from  $5 \text{ ms}^{-1}$  to  $2 \text{ ms}^{-1}$ . Calculate the work done by the force.

Q.15. Define Power. An electric bulb is rated 10 W. What does it mean? What is the energy consumed in joules if it is used for 5 minutes?

Q.16. How is sound produced and how is it transmitted through a medium and received by our ears?

Q.17. What are the three limitations which one has to face while dealing with an infectious disease?

Q.18. Mention the factors necessary for a healthy person?

Q.19.(a) Write down the formulae of -

- (i) sodium sulphide                      (ii) Aluminium chloride

(b) Write down the names of the following compounds

- (i)  $\text{Al}_2(\text{SO}_4)_3$  (ii)  $\text{KNO}_3$

(c) Calculate the molecular mass of the following:

- (i)  $\text{H}_2\text{CO}_3$  (ii)  $\text{C}_2\text{H}_5\text{OH}$

(Atomic mass of H=1u, C =12u, O = 16u)

(d) What is the difference between  $\text{H}_2$  and  $2\text{H}$  ?

Q.20. Make difference between the following pairs:

- (a) Gymnosperms and Angiosperms  
(b) Amphibians and Reptiles  
(c) Who introduced Binomial system of nomenclature?

Q.21. Define potential energy. Derive its mathematical expression if an object has mass 'm' at a height 'h' above the earth surface. A ball of mass 0.5 kg is moving horizontally with a uniform velocity of 50 m/s. Find the kinetic energy possessed by the ball.

Q.22. (a) Which wave property determines loudness and pitch.

(b) Write the applications of Ultrasound.

(c) A submarine emits a sonar pulse, which returns from an underwater cliff in 1.02s.

if the speed of sound in salt water is 1531m/s. How far away is the cliff?

Q.23. (a) Compare the air pressure of the mars with air pressure of the earth.

(b) Describe about temperature and humidity of the earth.

Q.24. (a) Why does life not exist on the mars.

(b) Expand ISRO. How are the mars and the earth similar to each other.

## SECTION - B

Q.25. In the reaction  $\text{A} + \text{B} \rightarrow \text{C} + \text{D}$ , according to law of conservation of mass, mass of

(a)  $\text{A} = \text{C}$

(b)  $\text{A} + \text{C} = \text{B} + \text{D}$

(c)  $\text{A} + \text{B} = \text{C} + \text{D}$

(d)  $\text{B} = \text{D}$

Q.26. If up thrust on a body in tap water and salted water are  $U_A$  and  $U_B$  respectively, then:

(a)  $U_A = U_B$

(b)  $U_A > U_B$



Q.30. A bat searches out prey and flies in dark night by

- (a) emitting and detecting reflection of infrasonic wave
- (b) emitting and detecting refraction of ultrasonic wave
- (c) emitting and detecting reflection of ultrasonic wave
- (d) none of these

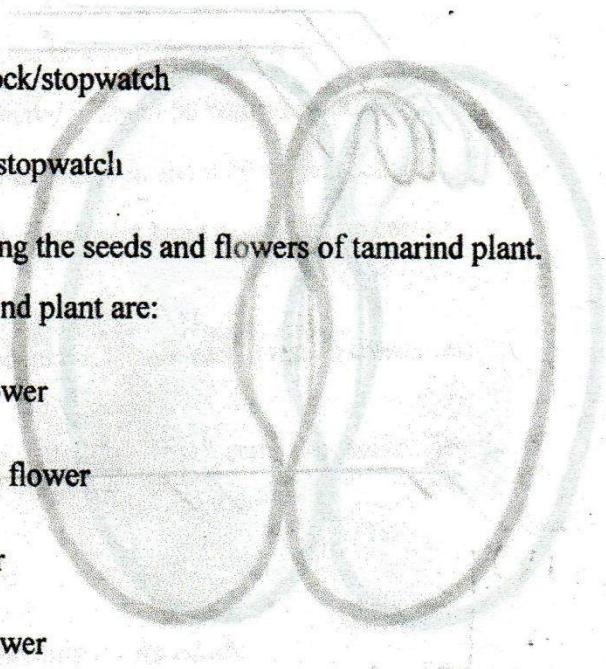
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Q.31. To find the velocity of the pulse in a string, we need:

- (a) only a measuring scale
- (b) only a stop clock or a stopwatch
- (c) both a measuring scale as well as a stop clock/stopwatch
- (d) neither a measuring scale nor a stop clock/stopwatch

Q.32. Four students A, B, C and D are observing the seeds and flowers of tamarind plant. They reported that seeds and flowers of tamarind plant are:

- (a) Monocotyledonous seeds and trimerous flower
- (b) Monocotyledonous seeds and pentamerous flower
- (c) Dicotyledonous seeds and trimerous flower
- (d) Dicotyledonous seeds and pentamerous flower



Q.33. A student took solid bodies of different shapes, sizes and materials and noted down the apparent loss in weight on partially or fully immersing the bodies in different liquids. Based on the observations he wrote the following conclusions. Which conclusion is wrong?

- (a) Upthrust depends upon the volume of the body immersed.
- (b) Upthrust increases as body goes deeper and deeper inside the liquid.

(c) Upthrust depends upon the density of the liquid. PAPER © 2012 for SA2

(d) Upthrust does not depend upon the shape of the vessel in which liquid is filled. JSUNIL TUTORIAL

Q.34. The same body is immersed in two liquids A and B in succession. The extent to which the body sinks in liquid B is less than in liquid A. what are the conclusions that could be derived from such an observation? QUESTION PAPER © 2012 for SA2 JSUNIL TUTORIAL

Q.35. According to law of conservation of mass, if 123.5g of  $\text{CuCO}_3$  is heated, what amount of CuO and  $\text{CO}_2$  will be formed? www.jsuniltutorial.weebly.com

Q.36. Name the parts labelled as A, B, C and D of a dicot seed whose diagram given below-

