



UNIVERSITY MODEL SCHOOL

DR. B.R. AMBEDKAR UNIVERSITY, AGRA

HOLIDAY HOME -2024-25

CLASS – XI (SCIENCE)

English :-

Prepare speech on any One of the following topics.

- 1) Save wild life, Save Mankind.
- 2) Cancer – A Silent Killer.
- 3) “Democracy is an impossible thing Until the power is shared by all
- 4) Happiness is a state of mind.
- 5) Movies have a positive impact on youngsters.

Write down in file (handwritten) & make a video (3 minute) of speech on any one topic.

Physics :-

Prepare a project file “Mathematics Tools” (Milky File)

Learn and Write in fair copy.

- Force, Newton’s law.
- Momentum, impulse, motion, velocity, Acceleration.

CHEMISTRY:-

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| <p>1. Rutherford's α-particle scattering experiment proved that atom has :-</p> <p>(1) Electrons (2) Neutrons (3) Nucleus (4) Orbitals</p> <p>2. A and B are two elements which have same atomic weight and are having atomic number 27 and 30 respectively. If the atomic weight of A is 57 then number of neutron in B is :-</p> <p>(1) 27 (2) 33 (3) 30 (4) 40</p> <p>3. Find out the nucleus which are isoneutronic :-</p> <p>(1) ${}^{14}_6\text{C}, {}^{15}_7\text{N}, {}^{17}_9\text{F}$ (2) ${}^{12}_6\text{C}, {}^{14}_7\text{N}, {}^{19}_9\text{F}$ (3) ${}^{14}_6\text{C}, {}^{14}_7\text{N}, {}^{17}_9\text{F}$ (4) ${}^{14}_6\text{C}, {}^{14}_7\text{N}, {}^{19}_9\text{F}$</p> <p>4. Species which are isoelectronic to one another are</p> <p>(a) CN^- (b) OH^- (c) CH_3^+ (d) N_2 (e) CO</p> <p>Correct answer is :-</p> <p>(1) a, b, c (2) a, c, d (3) a, d, e (4) b, c, d</p> <p>5. For any anion X^{3-}, the mass number is 14. If anion has 10 electrons, then number of neutrons in X_2 nucleus :-</p> <p>(1) 10 (2) 14 (3) 7 (4) 5</p> <p>6. Which of the following pairs is correctly matched</p> <p>(1) Isotopes ${}^{40}_{20}\text{Ca}, {}^{40}_{19}\text{K}$ (2) Isotones ${}^{30}_{14}\text{Si}, {}^{31}_{15}\text{P}, {}^{32}_{16}\text{S}$ (3) Isobars ${}^{16}_8\text{O}, {}^{17}_8\text{O}, {}^{18}_8\text{O}$ (4) Isoelectronic $\text{N}^{3-}, \text{O}^{2-}, \text{Cr}^{+3}$</p> <p>7. The atom A, B, C have the configuration $\text{A} \rightarrow [\text{Z}(90) + n(146)], \text{B} \rightarrow [\text{Z}(92) + n(146)],$ $\text{C} \rightarrow [\text{Z}(90) + n(148)]$ so that :-</p> <p>(a) A and C – Isotones (b) A and C – Isotopes (c) A and B – Isobars (d) B and C – Isobars (e) B and C – Isotopes</p> <p>(1) a, b only (2) c, d, e only (3) a, c, d only (4) a, c, e only</p> <p>8. (i) ${}^{54}_{26}\text{Fe}, {}^{56}_{26}\text{Fe}, {}^{57}_{26}\text{Fe}, {}^{58}_{26}\text{Fe}$ (a) isotopes (ii) ${}^1_1\text{H}^3, {}^2_2\text{He}^3$ (b) Isotones</p> | <p>(iii) ${}^{32}_{32}\text{Ge}, {}^{33}_{33}\text{As}$ (c) Isodiapher (iv) ${}^{92}_{92}\text{U}, {}^{235}_{90}\text{Th}$ (d) Isobars (v) ${}^1_1\text{H}^1, {}^1_1\text{D}^2, {}^1_1\text{T}^3$</p> <p>Match the above correct terms :-</p> <p>(1) [(i), - a], [(ii), - d], [(iii), - b], [(iv), - c], [(v), - a] (2) [(i), - a], [(ii), - d], [(iii), - d], [(iv), - c], [(v), - a] (3) [(v) - a], [(iv), - c], [(iii), - d], [(ii), - b], [(i), - a] (4) None of them</p> <p>9. Choose the false statement about deuterium :-</p> <p>(1) It is an isotope of hydrogen (2) It contains $[(1e^-) + (1p^+) + (1n)]$ (3) It contains only $[(1p^+) + (1n)]$ (4) D_2O is called as heavy water</p> <p>10. If the table of atomic masses is established with the oxygen atom and assigned value of 200, then the mass of carbon atom would be, approximately :-</p> <p>(1) 24 (2) 150 (3) 50 (4) 112</p> <p>11. The relative abundance of two rubidium isotopes of atomic weights 85 and 87 are 75% and 25% respectively. The average atomic weight of rubidium is :-</p> <p>(1) 75.5 (2) 85.5 (3) 86.5 (4) 87.5</p> <p>12. The ratio of specific charge of a proton and α-particle is:-</p> <p>(1) 2 : 1 (2) 1 : 2 (3) 1 : 4 (4) 1 : 1</p> <p>13. In an atom ${}^{27}_{13}\text{Al}$, number of proton is (a) electron is (b) an neutron is (c). Hence ratio will be [in order c : b : a]</p> <p>(1) 13 : 14 : 13 (2) 13 : 13 : 14 (3) 14 : 13 : 13 (4) 14 : 13 : 14</p> <p>14. Atomic weight of ne is 20.2. ne is mixture of Ne^{20} and Ne^{22}, relative abundance of heavier isotope is :-</p> <p>(1) 90 (2) 20</p> |
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| (3) 40 | (4) 10 |
| 15. Number of protons, neutrons & electrons in the element ${}_{89}Y^{231}$ is :- (1) 89, 231, 89 (3) 89, 142, 89 | (2) 89, 89, 242 (4) 89, 71, 89 |
| 16. Atoms ${}_6C^{12}$ and ${}_8C^{17}$ are related to each other as :- (1) Isotones (3) isodiaphers | (2) Isolectronic (4) Isosters |
| 17. The e/m ratio is maximum for :- (1) D^+ (3) H^+ | (2) He^+ (4) He^{2+} |
| 18. Let mass of electron is half, mass of proton is two times and mass of neutron is three fourth of original masses, then new atomic weight of O^{16} atom :- (1) increases nu 37.5% (2) remain constant (3) increases by 12.5% (4) decreases by 25% | |
| 19. An isotone of ${}_{32}Ge^{76}$ is :- (i) ${}_{32}Ge^{77}$ (iii) ${}_{34}Se^{77}$ (1) (ii) & (iii) (3) (ii) & (iv) | (ii) ${}_{33}As^{77}$ (iv) ${}_{34}Se^{78}$ (2) (i) & (ii) (4) (ii) & (iii) & (iv) |
| 20. In ${}_{7}N^{14}$ if mass attributed to electrons were doubled & the mass attributed to protons were halved, the atomic mass would become approximately :- (1) Halved (3) Reduced by 25% | (2) Doubled (4) Remain same |

Mathematics :-

1. Complete chapter. 1 in notebook
2. Prepare a project file on one of the following topics:
Contribution of " Narendra Karmakar, Harish Chandra , Satyendra Nath Bose" in mathematics.

Biology :-

- Prepare a Herbarium file (20 Sample)
- Make a chart (Human Physiology)

Computer Science:-

- Make a file on digital footprint, Netiquettes, social media etiquettes, Data Protection: Intellectual property rights, copyright, patent, trademark,
- Make a chart paper on Python History, Advantage, logo etc.

Physical Education:-

- Write an essay on "Yoga day"(500 Words)
- Prepare a Chart (Any Asana)