

PPSC Physics Topic 7 Modern Physics

| Sr | Questions | Answers Choice |
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| 1 | The helium nucleus does not contain | A. Two electrons B. Two neutrons C. Two protons D. Six nucleons |
| 2 | Two electrons approach each other their relative velocity will be. | A. Zero B. c C. c/2 D. Infinity |
| 3 | An operational amplifier have how many input terminals. | A. One B. Two C. Three D. Four |
| 4 | Sub atomic particles which experience strong nuclear force are. | A. Leptons B. Hadrons C. Mesons D. Quarks |
| 5 | Which six particles and their antiparticles interact by the weak interaction. | A. Leptons B. Hadrons C. Muons D. pi mesons |
| 6 | Cs - 137 is a radioisotope used ot determine the thickness of the walls of steel pipes Cs 137 is chosen because it emits | A. Radiowaves B. Alpha particles C. Beta particles D. gama particles |
| 7 | The hyperfine lines in the spectrum relates to | A. Stark effect B. Zeeman effect C. Lande's splitting D. Nuclear magnetic spin |
| 8 | An emitter follower has | A. High input impedance and high output impedance B. High input impedance and low output impedance C. Low input impedance and low output impedance D. Low input impedance and high output impedance |
| 9 | The process by which nuclei emit a ,b and gama rays in order to attain stability is called. | A. Radioactive disintegration B. Radio activity C. B decay D. Radioactive transmulation |
| 10 | The half life of a radioactive substance depend on. | A. Pressure B. Temperature C. Amount of substance D. No external influences |
| 11 | In the fusion process, there are | A. Hydrogen isotopes B. Helium isotopes C. Carbon isotopes D. Oxygen isotopes |
| 12 | On which factor cut off wavelength of X-rays coming from a Coolidge tube depends upon. | A. Target material B. Accelerating voltage C. Filament temperature D. Separation between target and the filament |
| 13 | Which of the following is required for maintaining sustained chain reaction. | A. Neutrons B. Protons C. Electrons D. Photons |
| 14 | The total energy of the hydrogen atom is | A. zero B. Infinite C. positive D. Negative |

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| 15 | The particles less in mass than protons are | A. Measons B. Bosons C. Baryons D. Nucleons |
| 16 | X-rays travel with | A. The speed of light B. The speed of sound C. The speed of 3,000 m s ⁻¹ D. The speed of 3,500 m s ⁻¹ |
| 17 | The most readily fissionable isotope of uranium has atomic mass of | A. 234 B. 235 C. 236 D. 238 |
| 18 | Compton scattering experiment seemed to indicate that radiation had | A. Wave nature B. Particle nature C. Wave particle nature D. X-rays nature |
| 19 | Besides U ²³⁵ what else is needed for making as atomic bomb. | A. Electons B. Protons C. Neutrons D. Photons |
| 20 | Which of the following causes the deflection of Alpha particles when they re passed through a thin foil. | A. Attraction of nucleus B. Collision with nuclei C. Interactions with electrons D. Electrostatic repulsion by the nucleus |