

PPSC Physics Topic 7 Modern Physics

| Sr | Questions | Answers Choice |
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| 1 | The photons emitted in inner shell transition are. | A. Alpha particle B. Beta particle C. Gama particle D. Characteristic X-rays |
| 2 | The half life of a radioactive substance as compared to its mean lif eis. | A. 30% B. 50% C. 70% D. 90% |
| 3 | Which one of the following has maximum frequency. | A. Visible light B. Gama rays C. Ultraviolet rays D. Infrared rays |
| 4 | The electron behave an waves because | A. They can be diffracted by a crystal B. They can produce ions in gases C. They can be deflected by magnetic field D. They can be deflected by electric field |
| 5 | Beta decay may occur by | A. Beta minus B. Beta Plus C. Electron capture D. All of these |
| 6 | The charge on a helium nucleus is equal to the charge of. | A. Two electrons B. Two protons C. Two neutrons D. One proton |
| 7 | A single quantum of electromagnetic radiation is termed as. | A. Compton B. Photon C. Hyperon D. Meson |
| 8 | One particle having zero mass and zero charge is. | A. Positron B. Electron C. Neutrino D. Neutron |
| 9 | When a posirtron is emitted it causes. | A. Mass number to increase by one B. mass number to decrease by one C. Atomic number to decrease by one D. Atomic number to increase by one |
| 10 | Radioactive substances do not emit | A. Alpha particles B. Beta particles C. Gama rays D. Neutrons |
| 11 | At room temperature the potential difference between the two sides of depletion region for silicon is of the order of. | A. 0.3 v B. 0.5 V C. 0.7 V D. 0.9 V |
| 12 | Why transistor is preferred to triode valve for use as an amplifier. | A. Because it can handle large power B. Because it has higher input impedance C. Because it has higher voltage gain D. Because it has lower voltage gain |
| 13 | Transistor stands for | A. Transfer of resistance B. Transfer of current C. Transfer of power D. Transfer of voltage |
| 14 | Mean life of a radioactive sample is 100 s its half life will be | A. 0.693 s B. $>1 s$ C. 6.93 s D. 69.3 s |

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| 15 | Alpha particles are | <p>A. Helium nuclei</p> <p>B. sodium nuclei</p> <p>C. loized nuclei</p> <p>D. Hydrogen nuclei</p> |
| 16 | One becquerel is equal to | <p>A. Decay of orie radioactive atoms per second</p> <p>B. Decay of 10 radioactive atoms per secd</p> <p>C. Decay of 100 radioactive atoms per second</p> <p>D. Decay of infinity radioactive atoms per second.</p> |
| 17 | The constant lamda is called the. | <p>A. Decay constant</p> <p>B. Gas constant</p> <p>C. Planck's constant</p> <p>D. Dose constant</p> |
| 18 | White light a tungsten filament lamp is passed through sodium vapor and viewed through a diffraction gritting Which of the following best describes the spectrum which would be seen. | <p>A. Coloured lines on a black background</p> <p>B. Coloured lines on a white background</p> <p>C. Dark lines on a coloured background</p> <p>D. Dark lines on a white background</p> |
| 19 | In a Geiger Marsden experiment why do the great majority of the Alpha particles pass straight through the metal foil. | <p>A. Atomic nuclei may contain neutrons</p> <p>B. Atoms are electrically neutral</p> <p>C. Atoms are largely empty space</p> <p>D. Atoms have positively charged nuclei</p> |
| 20 | A darling ion amplifier is characterized by | <p>A. High voltage and current gain</p> <p>B. High input resistance and current gain</p> <p>C. High output resistant and current gain</p> <p>D. Low input resistance and current gain</p> |