

QB365 Question Bank Software Study Materials

Recent Developments in Physics 30 Important 1 Marks Questions With Answers (Book Back and Creative)

12th Standard

Physics

Total Marks : 30

Multiple Choice Question

30 x 1 = 30

- 1) The particle size of ZnO material is 30 nm. Based on the dimension it is classified as _____.
(a) Bulk material **(b) Nanomaterial** (c) Soft material (d) Magnetic material
- 2) Which one of the following is the natural nanomaterial.
(a) Peacock feather (b) Peacock beak (c) Grain of sand (d) Skin of the Whale
- 3) The blue print for making ultra durable synthetic material is mimicked from _____.
(a) Lotus leaf (b) Morpho butterfly **(c) Parrot fish** (d) Peacock feather
- 4) The method of making nanomaterial by assembling the atoms is called _____.
(a) Top down approach **(b) Bottom up approach** (c) Cross down approach (d) Diagonal approach
- 5) "Sky wax" is an application of nano product in the field of _____.
(a) Medicine (b) Textile **(c) Sports** (d) Automotive industry
- 6) The materials used in Robotics are _____.
(a) Aluminium and silver (b) Silver and gold (c) Copper and gold **(d) Steel and aluminum**
- 7) The alloys used for muscle wires in Robots are _____.
(a) Shape memory alloys (b) Gold copper alloys (c) Gold silver alloys (d) Two dimensional alloys
- 8) The technology used for stopping the brain from processing pain is _____.
(a) Precision medicine (b) Wireless brain sensor **(c) Virtual reality** (d) Radiology
- 9) The particle which gives mass to protons and neutrons are _____.
(a) Higgs particle (b) Einstein particle (c) Nanoparticle (d) Bulk particle
- 10) The gravitational waves were theoretically proposed by _____.
(a) Conrad Rontgen (b) Marie Curie **(c) Albert Einstein** (d) Edward Purcell
- 11) Nanoscience is the science of object with typical sizes of _____.
(a) 1 - 100 μ **(b) 1 - 100 nm** (c) 1 - 100 cm (d) 1- 100 m
- 12) If the particle of a solid is of size less than 100 nm, it is said to be a _____.
(a) Nano particle (b) Nano bytes **(c) Nano solid** (d) Nano technology
- 13) _____ Scanning Electron Micrograph (SEM) showing the nano structures on the surface of a leaf from a lotus plant
(a) Parrot fish (b) Morpho butterfly **(c) Lotus leaf surface** (d) Peacock feathers
- 14) _____ is synthesized top down approach
(a) Ball milling (b) Plasma etching (c) lithography **(d) Ball milling and lithography**

- 15) George Devel invented the first digitally operated programmable robot called _____.
 (a) **Unimate** (b) Robotics (c) Motors (d) Generators
- 16) Chinese scientists have created the world's first autonomous _____ to combat cancer tumours.
 (a) RNA Robot (b) **DNA Robot** (c) m RNA Robot (d) r RNA Robot
- 17) In _____ it was established that atoms are made up of electrons, protons and neutrons
 (a) 1945 (b) 1923 (c) **1930** (d) 1927
- 18) A single strand of DNA, the building block of all living things, is about _____ nanometers wide.
 (a) Two (b) **Three** (c) Four (d) Five
- 19) Bulk particles of nanoparticles are synthesized by _____
 (a) **Top - down approach** (b) Bottom - up approach (c) Top - top approach (d) Bottom - real approach
- 20) Which of the property does not change when a matter is divided into nano Particle?
 (a) Electrical (b) **Chemical** (c) Magnetic (d) Optical
- 21) Natural object for the mimic of water-repellant paint is _____.
 (a) Parrotfish (b) **lotus leaf surface** (c) Peacock feather (d) the scales of the wings of a morph butterfly
- 22) The function of actuators in robots is _____.
 (a) sensing (b) **conversion of energy into movement** (c) contraction (d) conducting current
- 23) _____ helps in the treatment of Autism.
 (a) Precision medicine (b) Artificial organ (c) Wireless brain sensors (d) **Medical virtual reality**
- 24) Higgs particle is responsible for the _____ of particles like protons.
 (a) charge (b) spin (c) **mass** (d) energy
- 25) Any accelerated _____ emits a gravitational wave.
 (a) **mass** (b) charge (c) nano Particle (d) proton
- 26) The black hole which is at the center of milky way is _____.
 (a) Jupiter- g (b) **Sagittarius A** (c) Apollo-G (d) Tirus - D
- 27) The adsorbing nature of the nano particles depends on the _____ of the nano particles.
 (a) mass (b) thickness (c) **surface** (d) hardness
- 28) The relation between focal length and radius of curvature in spherical mirror is
 (a) **$f = \frac{R}{2}$** (b) $f = 2R$ (c) $f = \frac{R}{\sqrt{2}}$ (d) $f = \sqrt{R}$
- 29) The relation between half - life and decay constant is _____
 (a) **$T_{1/2} = \frac{\sqrt{2}}{\pi}$** (b) $T_{1/2} = \sqrt{2}\lambda$ (c) $T_{1/2} = \frac{0.6931}{\lambda}$ (d) $T_{1/2} = 0.6931\lambda$
- 30) The relation between focal length and radius of curvature in spherical mirror is
 (a) **$f = \frac{R}{2}$** (b) $f = 2R$ (c) $f = \frac{R}{\sqrt{2}}$ (d) $f = \sqrt{2}R$