PPSC Chemistry Part VII NanoChemistry Online Test

Sr	Questions	Answers Choice
1	Formation of nano particles involves process lime	A. Foramtion of metal nuclei on different sizes. B. Interaction among the formed particles C. Both A and B D. No interaction among the nano particles synthesized
2	The full form of STM is	A. Scanning Tunneling Microscope B. Scientific Technical Microscope C. Systematic Technical Microscope D. SuperTensile Microscope
3	The suffix '-ene' in the name of fullerene shows the presence of ___ in the molecule.	A. One triple bond B. One double bond C. Two single bonds D. Two triple bonds
4	Chemical and physical properties of metal nano particles of atoms were observed to change periodically depending upon	A. Number of atoms in a particle B. Shape of particle C. type of organization D. All of the above
5	Attention should be focused on qualitative changes in particle properties as a function of.	A. Particle numebrs B. Particle mass C. Particle size D. Particle density
6	A considerable number of atoms pertaining to the surface_____ with the decreasing the particle size.	A. Increase B. Decrease C. No effect D. Both a and b
7	What exactly is quantum dot	A. A semiconductor nanostructure that confines the motion of conduction band electrons, valence band holes or excitation in all three spatial directions B. The sharpest possible tip of an atomic force microscope C. A fictional term used in science fiction for the endpoints of wormholes D. Unexplained spots that appear electron microscopy images of nanostructures smaller than 1 nanometer
8	Which of the following is class of nanorods	A. metals B. alloys C. Metal oxide and Metal sulphite D. All of the above
9	A diameter of human hair is approximately _____ m	A. 75000 B. 75 C. 7.5 x 10⁻⁵ D. 7.5 x 10⁻⁹
10	The size of nanoparticles is between _____ nm	A. 100 to 1000 B. 1 to 100 C. 0.1 to 10 D. 0.01 to 1
11	In compressive strength of a nanotube _____ its tensile strength.	A. I less than B. Is greater than C. Is equal to D. Less than or equal to.
12	Which of the following techniques is bulk technique.	A. Powder XRD B. Single Crystal XRD C. SEM D. TEM
13	Length of semiconductor nanorods are in the range of.	A. 1.50 nm B. 1-50 micro meter C. 100-500 nm

		D. 50-100 nm
14	When fullerencs were discovered they were thought to be	A. First example of spherical aromatic molecule B. First example of spherical non aromatic molecule C. First example of diamond lime molecule D. None of the above
15	Who was the first scientist to describe that substance having Nano dimensions possess altogether different and unique properties.	A. Richard Feynamann B. Erick Drexler C. Archimedes D. Michael Faraday
16	Opticla tweezers	A. Are used to remove facial hair with miniaturized laser beams B. use light to manipulate particles as small as single atom C. Are a nanotechnology bases tool for stamp collectors D. Don't exist
17	Greeks and Romans had used nanoparticles in the manufacture of.	A. Cosmetics for eyes B. Medicines C. Metals D. Hair -dye
18	In a bucky ball each carbon atom in bound in _____ adjacent carbon atoms.	A. 1 B. 2 C. 3 D. 4
19	The smallest cluster of carbon atoms in Bucky balls known till today consists of _____ carbon atoms.	A. 75 B. 20 C. 60 D. 15
20	_____ are the extensions of bucky balls.	A. Goodesic domes B. Hexagons C. Carbon nanotubes D. AFM and STM
21	The orientation of a crystalline surface is confidently defined in terms of.	A. Lijima Indices B. Miller indices C. Clausen indices D. None
22	The size of quantum dot is _____m	A. 5 B. 5 x 10⁻⁹ C. 5 x10⁻¹⁰ D. 5 x10⁻¹¹
23	The diameter of fly ash particles is._____ micro meter	A. 5-10 B. 10-20 C. 20-30 D. 100
24	The hardest material found in nature is	A. Steel B. Topaz C. Diamond D. Quartz
25	In Nano synthesis new unsual chemical reactions are due to.	A. Non equilibrium system B. Equilibrium system C. Isothermal system D. Adiabatic process
26	The physical methods of nano roads syntheses involves.	A. Top down approach B. Bottom up approach C. Left right approach D. Right left approach
27	The thermal conductivity of an SWNT along length is _____ watt/(m.k)	A. 35 B. 330 C. 386 D. 3500
28	The width of a typical DNA molecule is _____nm	A. 1 B. 2 C. 5 D. 10
29	"There is a plenty of room at the bottom" This was stated by	A. Issac Newton B. Albert Einstein C. Richard Feynman D. Eric Drexler
		A. 100

30	Fullerene or bucky ball is made up of _____ carbon atoms.	B. 20 C. 75 D. 60
31	The capacity of normal human eye to see the smallest object is _____ micro meter	A. 10000 B. 1000 C. 100 D. 10
32	Nano technology in other words is.	A. Carbon engineering B. Atomic engineering C. Small technology D. Microphysics
33	Nanoscience can be studied with the help of	A. Quantum mechanics B. Newtonain mechanics C. Macro dynamics D. Grophysics
34	The particles of about 1 nm need _____ activation energy to enter either aggregation processes or reactions to give to new chemicals.	A. Higher B. Lesser C. N o D. All above
35	Stablization of particles and their reactivity is affected by.	A. Surface properties B. Bulk properties C. Regardless to the surface properties D. No of particles
36	Which ratio decides the efficiency nano substance.	A. Weight /volume B. Surface area/volume C. Volume/weight D. Pressure/volume
37	The prefiex 'nano' comes from a	A. French word meaning billion B. Greek word meaning dwarf C. Latin word meaning invisible D. Spanish word meaning particle
38	What is graphene.	A. A new material made from carbon nanotubes B. A one atom thick sheet of carbon C. This film made from fullerene D. A software tool to measure and graphically respresent nanoparticles.
39	What does 'F' stand for in AFM.	A. Fine B. Front C. Force D. Flux
40	Nano particles may interact with the support to be.	A. Partially oxidized B. Partically reduced C. Both a and b D. None
41	Alpha hematite nano tubes show dimensional magnetic ordering at temperature laser than 300 K.	A. 0 B. 1 C. 2 D. 3
42	The size of E coli bacteria is._____ nm	A. 75000 B. 2000 C. 200 D. 5
43	The tensile strength of a carbon nanotube is _____ times that of steel.	A. 10 B. 25 C. 100 D. 1000
44	When a large block of silicon wafer is reduced to smaller component and hence non material is formed this approach is called.	A. Bottom up B. Top down C. Left to right D. Right to left
45	The most important problem regarding nano chemistry	A. Elucidation of relationship between also and chemical reactivity of particle B. Determination of size of particle C. Determination of reactivity of particle D. Determination of physical properties of nano particles.
46	In radial direction the thermal conductivity of a nano tube is _____ watt/(m.k)	A. 3500 B. 385 C. 0

		D. 350
47	The diameter of a bucky ball is about _____	A. o 1 A B. 1 nm C. o 100 A D. 10 nm
48	1 nanometre =_____ cm	A. 10⁻⁹ B. 10⁻⁸ C. 10⁻⁷ D. 10⁻⁶
49	The width of a carbon nano tube is._____ nm	A. 1 B. 1.3 C. 2.5 D. 10
50	1 meter = _____ nm	A. 10⁹ B. 10⁻⁹ C. 10¹⁰ D. 10⁻¹⁰
51	Who coined the word nanotechnology.	A. Eric Drexler B. Richard Feynamann C. Sumio tijma D. Richard smalley
52	Which of the microscope techniques is similar to the Atomic Force Microscopy (AFM)	A. Scanning Electron Microscopy B. Scanning Tunneling Microscopy C. Transmission Electron Microscopy D. None of the above
53	20 micron =_____ nm	A. 20 x10⁻⁹ B. 20000 C. 200 D. 20x10⁹
54	Which of the following does not apply to nanotechnology.	A. It is a general purpose technology B. It can be called Green technology C. Newtonian mechanics can describe it. D. It involves rearrangement of atoms
55	What is abuckyball	A. A carbon molecule B. Nickname for Mercedes -Benz's futuristic concept car (CIII) C. Plastic explosives nanoparticle (C4) D. Concrete nanoparticle with a compressive strength of 20 nanonewtons(C20)
56	The electrical conductivity of a nano tube is _____ times that of copper.	A. 10 B. 100 C. 1000 D. 1/100
57	Which of these historical works of art contain nanotechnology.	A. Lycurgus cup B. Medieval stained glass windows in churches C. Damascus steel swords D. All of the above
58	In confining and growing nano roade CNTs will act as.	A. Template B. Support C. Source of oxidant D. Sieve
59	The diameter of hydrogen atom is._____nm	A. 10 B. 1 C. 0.1 D. 0.01
60	Egyptians were using _____ to prepare make up for eyes.	A. Nanoaluminium B. Nanocopper C. Nanosteel D. Nanolead
61	Who prepared and explained nano tubes for the first time.	A. Sumio Tijima B. Richard Smaley C. Erick Drexler D. Richard Feynamann
62	How many oxygen atoms lined up in a now would fit in a one nanometer speace.	A. None an oxygen atoms is bigger than 1 nm B. One C. Seven D. None of the above

63	Which idea of envisioned the construction of nano robots	A. Building nano materials atom by atom B. Destruction of macromolecules to nano ones C. Bothe of the above D. None of the above
64	The ration of thermal conductivity of silver to that of a carbon nanotube is.	A. 100 : 1 B. 1 :100 C. 10:1 D. 1:10