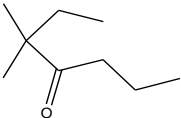




Time: 01 hours

Date: 18/01/2020

Marks: 100

- An n-type semiconductor is**
(a) Positively charged (b) Negatively charged
(c) Electrically neutral (d) None of the above
- In a semiconductor current conduction is due to**
(a) Only holes (b) Only free electrons
(c) Holes & free electrons
(d) None of the above
- Which one of the following does not affect the elasticity of a substance ?**
(a) Hammering (b) Change of temperature
(c) Adding impurity in the substance
(d) Changing the dimensions
- Entropy is a**
(a) Point function, extensive property
(b) Path function, extensive property
(c) Point function, intensive property
(d) Path function, intensive property
- What is the effect of increase in the temperature on the surface tension of the liquid?**
(a) It decreases (b) It increases
(c) It remain the same (d) None of the above
- Which of the following is a unit of kinematic viscosity?**
(a) Pa-s (b) Stokes (c) m²/s (d) Poise
- The density of chlorine gas at STP, in grams per liter, is approximately**
(a) 6.2 (b) 3.9 (c) 3.2 (d) 4.5
- Angular momentum is**
(a) A scalar (b) A polar vector
(c) An axial vector (d) None of these
- The IUPAC name of the compound**

(a) 2-ethyl-2-methyl-3-hexanone
(b) 5-ethyl-5-methyl-4-hexanone
(c) 5,5-dimethyl-4-heptanone
(d) 3,3-dimethyl-4-heptanone
- Which is used in the preparation of explosive?**
(a) Picric acid (b) Methyl amine
(c) Cumene (d) Ethanol
- Which of the following is not a truly synthetic fiber?**
(a) Nylon 6 (b) Rayon (c) Nylon 66 (d) Terylene
- Saccharin is marketed as its**
(a) Na-salt only (b) Ca-salt only
(c) Either Na-salt or Mg-salt
(d) Either Na-salt or Ca-salt
- The electronic configuration of Cu²⁺ (Atomic number of Cu=29) is**
(a) [Ar] 3d⁸ 4s¹ (b) [Ar] 3d⁷ 4s²
(c) [Ar] 3d⁹ (d) [Ar] 3d⁶ 4s² 4p¹
- Lanthanides used in glass blowers goggles are**
(a) Pr and Nd (b) Eu and Gd
(c) Th and Dy (d) Pm and Sm
- Catalyst used in contact process of manufacture of sulphuric acid is**
(a) No(g) (b) Ni
(c) Pt (d) MnO₂
- Which of the following is an antibiotic?**
(a) Calmpose (b) Aspirin
(c) Chloroquine (d) Ampicillin
- The equation of circle passing through origin**
(a) x²+y²=r² (b) (x-h)²+(y-k)²=r²
(c) (x-0)²+(y-k)²=r² (d) None of these
- If $\vec{a} = 2\vec{i} + 2\vec{j} + k$ $\vec{b} = \vec{i} - 2\vec{j} + 2\vec{k}$ then $\vec{a} \cdot \vec{b}$ is equal to**
(a) 1 (b) 0 (c) -1 (d) None of these
- If f(x) = x² + 4 then**
(a) f(x) is even function (b) f(x) if odd function
(c) f(x) is both even and odd (d) None of these
- The solution of equation x²+1=0 is**
(a) -1 (b) 1 (c) ±1 (d) ±i
- If A and B are any 2×2 matrices then, det(AB)=0 implies that**
(a) det(A)+ det(B)=0
(b) det(A)=0 and det(B)=0
(c) det(A)=0 or det(B)=0 (d) None of these
- The equation x²+y²-2x+4y+5=0 represents**
(a) A point (b) A straight line
(c) Circle (d) None of these

- 23. Range of function $f(x)=\sqrt{x^2 + 1}$ for real number x is**
 (a) $[1,\infty)$ (b) $(-1,\infty]$ (c) $[2,3]$ (d) $(-\infty,\infty)$
- 24. Two lines having slopes m_1 and m_2 are said to be parallel to each other if**
 (a) $m_1+m_2=0$ (b) $m_1=m_2$
 (c) $m_1m_2=1$ (d) $m_1m_2=-1$
- 25. Fertility of soil increased by**
 (a) Nitrogen fixing bacteria
 (c) Denitrifying bacteria
 (b) Plasmalemma (d) Cell membrane
- 26. Unit of recombination is**
 (a) Replicon (b) Recon (c) Muton (d) Operon
- 27. Photorespiration is called**
 (a) C_2 cycle (b) C_3 cycle
 (c) C_4 cycle (d) None of these
- 28. A complex formed by deoxyribose sugar, phosphate and nitrogen base is**
 (a) Polypeptide (c) Ribonucleotide
 (b) Deoxiribonucleotide (d) Nucleoside
- 29. Bacterial genome contains**
 (a) DNA & histone (c) DNA without histone
 (b) DNA or histone (d) Neither DNA or histone
- 30. Rod shaped bacteria are called**
 (a) Coccus (c) Spirillum
 (b) Bacillus (d) Actinomyces
- 31. The term respiration was given by**
 (a) Sachs (b) Lavosier
 (c) Kreb (d) Dutrochet
- 32. Typhoid fever is caused by a species of**
 (a) Streptococcus (b) Staphylococcus
 (c) Salmonella (d) Mycobacterium
- 33. Goiter is caused by the deficiency of**
 (a) Vitamin A (b) Vitamin C
 (c) Iodine (d) Protein
- 34. Amoeba belongs to which phylum**
 (a) Porifera (b) Annelida
 (c) Coelenterate (d) Protozoa
- 35. Groups of lions and lioness is called**
 (a) Pride (b) Flock
 (c) Herd (d) None of these
- 36. Outer layer of teeth is known as**
 (a) Enamel (b) Chitin (c) Cementin (d) Pulp
- 37. Survival of the fittest was proposed by**
 (a) Lamark (b) Darwin
 (c) Mendel (d) Karl Marx
- 38. Study of cancer is known as**
 (a) Gynecology (b) Endocrinology
 (c) Oncology (d) Optometry
- 39. Rough endoplasmic reticulum has _____ attached to it**
 (a) Lysosomes (b) Ribosomes
 (c) DNA (d) RNA
- 40. Malarial parasite is transferred to human by**
 (a) Female anopheles (b) Male Anopheles
 (c) Culex Male (d) Culex Female
- 41. Which data type is most suitable for storing a number 65000 in a 32-bit system?**
 (a) Signed short (b) Unsigned short
 (c) Long (d) Int
- 42. Which of the following is not a type of Number system?**
 (a) Positional (b) Non-Positional
 (c) Octal (d) Fractional
- 43. Which of the following is not a binary number?**
 (a) 1111 (b) 101 (c) 11E (d) 000
- 44. IMS stands for?**
 (a) Information Mastering System
 (b) Instruction Management System
 (c) Instruction Manipulating System
 (d) Information Management System
- 45. The fastest type of memory from the following**
 (a) Tape (b) Disc
 (c) Semiconductor memory (d) Bubble Memory
- 46. Fifth generation Computers are based on**
 (a) Programming Intelligence
 (b) Artificial Intelligence
 (c) System Knowledge (d) Compiled Program
- 47. Microsoft Word is an example of**
 (a) An operating system (b) Processing Device
 (c) System Software (d) Application Software
- 48. Which Storage device cannot be erased?**
 (a) A floppy disk (b) Magnetic tape storage
 (c) A CD-ROM (d) All of these
- 49. Acid deposition causes**
 (a) Greenhouse effect to lessen
 (b) Lacks and forests to die (c) Acid indigestion
 (d) Global warming
- 50. Salinization is _____.**
 (a) Accumulation of salt in water
 (b) Accumulation of salts in soil
 (c) Accumulation of salts in body
 (d) Accumulation of salts in animal