

B.L.D.E. Association's

S.B. Arts and K.C.P. Science College

Vijayapur

DEPARTMENT OF CHEMISTRY

ADVANCE LEARNING

QUIZ COMPETITION

2016-17

B.L.D.E.ASSOCIATION'S
S. B. ARTS AND K. C. P. SCIENCE COLLEGE
VIJAYAPUR
Department of Chemistry

NOTICE

All the Chemistry students of B.Sc I, III and V sem are hereby informed that a quiz competition is conducted under Dalton's Society Activity on 11/07/2016 at Seminar Hall at 4:00 pm. So, all interested students can register their names in Prof .Dr. A.S. Pujari within 10 /07 /2016.



Head

Dept. of Chemistry
SB Arts & KCP Sc. College
Vijayapur.



IQAC, Co-ordinator

S.B.Arts & K.C.P.Science College,
Vijayapur.



Principal,

S.B.Arts & K.C.P. Science College,
VIJAYAPUR.

Details of Participants

| Team | Name of the Students | Class |
|------|----------------------|-------|
| A | Sridevi Biradar | V |
| B | Rahul | III |
| C | Akshata M | V |
| D | .Akshata S | I |

COMPETITION DETAILS

DATE : 11/07/2016

TIME : 4:00 to 5:30 pm

VENUE: Seminar Hall

ORGANISER : Dr. A.S.Pujar

NAME OF THE JUDGES : 1. Dr. M.I. Kumbar

2. Dr. D.M.Hiremath

Questions asked for quiz

- Which of the following statements do not form a part of Bohr's model of Hydrogen atom?
 - Energy of the electrons in the orbits are quantized
 - The electron(s) in the orbit nearest to the nucleus has the lowest energy
 - Electrons revolve in different orbits around the nucleus
 - The position and velocity of the electrons in the orbit can not be determined simultaneously.
 -
- The quantum numbers of $+1/2$ and $-1/2$ for the electron spin represent
 - Rotation of the electron in clockwise and anticlockwise direction respectively
 - Rotation of the electron in anticlockwise and clockwise direction respectively
 - Magnetic moment of the electron pointing up and down respectively
 - Two quantum mechanical spin states which have no classical analogue.
- Bohr's model of atom is not in agreement with
 - Line spectra of hydrogen atom
 - Pauli's principle
 - Planck's theory
 - Heisenberg's principle.
- Which of the following statements in relation to the hydrogen atom is correct?
 - 3s-orbital is lower in energy than 3p-orbital
 - 3p-orbital is lower in energy than 3d-orbital
 - 3s and 3p orbitals are of lower energy than 3d orbital
 - 3s, 3p and 3d orbitals all have the same energy.
- The third line of the Balmer series, in the emission spectrum of the hydrogen atom, is due to the transition from the
 - fourth Bohr orbit to the first Bohr orbit
 - fifth Bohr orbit to the second Bohr orbit
 - sixth Bohr orbit to the third Bohr orbit
 - seventh Bohr orbit to the third Bohr orbit
- The ground state configuration of Fe^{3+} ion in gaseous state is:
 - $[\text{Ar}]18 3d^3 4s^2$
 - $[\text{Ar}]18 3d^6 4s^2$
 - $[\text{Ar}]18 3d^5$
 - $[\text{Ar}]18 3d^6$
- For which of the following sets of quantum -numbers an electron will have the highest energy ?
 - 3,2,1,1/2
 - 4,2,-1,1/2
 - 4, 1,0, -1/2
 - 5,0,0, 1/2.

8. The scientist who did not contribute in the construction of periodic table?

- a. Al-Razi
- b. Moseley
- c. Dobereiner
- d. Democritus

9. An element having low value of ionization energy and low value of electron affinity is likely to belong to

- a. Group IA
- b. Group IB
- c. Group VIIA
- d. Group VIII

10. How many significant figures are present in the number 10,450?

- a) three
- b) four
- c) five
- d) none of these

11. Accuracy is defined as:

- a) A measure of how often an experimental value can be repeated.
- b) **The closeness of a measured value to the real value.**
- c) The number of significant figures used in a measurement.
- d) None of these

12. What section of the periodic table is a very strong oxidizer?

- a) alkali metals
- b) lanthanides
- c) **halogens**
- d) none of these answers is correct.

13. Which of the following contains both ionic and covalent bond?

- a) KCl
- b) **KCN**
- c) CH₄
- d) H₂

14. Real gases do not react as expected

- a) ideal gas
- b) noble gas
- c) **non-ideal gas**
- d) inert gas

15. The process of separation of a racemic modification into d and l enantiomers is called

- a) **Resolution**
- b) Dehydration
- c) Revolution
- d) Dehydrohalogenation

16. Which one of the following species contains a polar covalent bond?
a) oxygen b) carbon dioxide c) sodium chloride d) magnesium fluoride
17. Which one of the following elements has valence electrons in the $n = 3$ shell?
a) beryllium b) oxygen c) silicon d) neon
18. Which one of the following elements has valence electrons in the $n = 3$ shell?
a) beryllium b) oxygen c) silicon d) neon
19. Which one of the following species has the same electron configuration as the Al^{3+} cation? Which one of the following species has the same electron configuration as the Al^{3+} cation?
a) F^- b) Cl^- c) S^{2-} d) O^-
20. Which of the following cyclohexane conformations has the MOST energy?
a. chair b. half-chair c. boat d. twist-boat
21. Which of the following may be separated by ordinary physical methods?
a. a pair of identical molecules b. a pair of enantiomers
c. a pair of diastereomers d. a pair of identical atoms
22. Which of the following may be separated by ordinary physical methods?
a. (R)-3-bromo-1-butene and (S)-3-bromo-1-butene
b. cis-2-bromo-2-butene and trans-2-bromo-2-butene
c. (2R,3S)-1,2-dibromobutane and (2S,3R)-1,2-dibromobutane
d. (R)-2-bromobutane and (S)-2-bromobutane
23. Propane (C_3H_8) and butane (C_4H_{10}) in liquid form are used in
a) LSG
b) LPG
c) ECG
d) LNG

24. How many isomers are contained by Hexane?

- a) Two
- b) Three
- c) Four
- d) Five

25. A person living in Shimla observed that cooking food without using pressure cooker takes more time. The reason for this observation is that at high altitude:

- a) pressure increases
- b) temperature decreases
- c) pressure decreases
- d) temperature increases

PRIZE DISTRIBUTION

Prize distribution is done during Hindi Divas celebration. To the winners of quiz completion the chief guest distributed the prizes.

| PRIZE | NAME OF THE WINNERS |
|--------|---------------------|
| FIRST | Sachin Y R |
| SECOND | .Savita. M. B |

First Prize winner:



Second Prize winner:



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