KES Anandibai Pradhan Science College Nagothane
T.Y.BSc. Sem V Sample Question Sept.2020
Chemistry – III (Organic Chemistry)

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1) Acidity is ---------- term.
a) Thermodynamic
b) External
c) Kinetic
d) external.
2) Nucleophile is an --------rich species having tendency to donate electrons.
a)neutron
b) Proton
c) Electron
none of this
3) ---------- ia an example of neutral electrophile
a)NO_2+
b)Cl^+
c) $AlCl_3$
d) NH_3
4) ---------- do not have definite shape structure.
a)Transition State.
b) reactant
c) biprodct
d)intermediate
5) Due to----------, nucleophilic substitution reactions gives products with retention in configuration.
a) NGP
b) SN2
c) SN1
d) none of this
6) Carboxylic acid and alcohol refluxed in presence of Acid catalyst to give----------.
a) ester
b) ether
c) Ethane
d) all
7) Alkaline hydrolysis of ester product----------
a)acid
b) Sodium salt
c) ester
d) base
8) Pericyclic reactions proceeds via formation of----------
a) Intermediate
b) T.S.
c) byproduct
d) carbanion

9) Reactions occurs in presence of light energy is called as ----------
a) Photolysis
b)hydrolysis
c)thermolysis
d) ozonolysis
10)Sigma tropic reactions involves rearrangement of---------- electrons
a) nb
b) ∏
c) 6
d) all
11) Xanthate ester having B-hydrogen on thermal decomposition gives alkene. This is called as---------- reaction.
a) chugaev
b)cope sigma tropic
d) none of this
12) Spin multiplicity of singlet state is ----------
a) 3
b 1
c) 2
d) all
13) Vibrationally relaxed molecule returns back from S1 to So ground state by emitting light is called as ----------
a) Fluorescence
b) Phosphorescence
c) Red light
d) Blue light
14) Photochemical reaction rearrangement of---------- diene to cyclopropane derivative is called as Di-∏ methane rearrangement
a) 1, 2
b) 1, 4
c) 1, 3
d) 1, 5
15) Norrish I reaction involves cleavage of --------- C-CO bond
a) α
b)β
c) γ
d) ∏
16) Photo reduction of Benzophenone at ---------- nm gives Benzpinacol
A) 230
b) 330
c) 220
d) 320
17) Diels Alder reaction is the best example of ---------- cycloaddition reaction
a) (2+2) ∏
b) (2+4) ∏
c) (4+4) ∏
d) (4+2) ∏

18 NGP reactions are proceed via formation of ----------
a) bridge ion
b) carbanion
c)carbocation
d)free radical
19) Basicity is an extent to which it accept ----------
a) neutron
b) proton
c) electron
d) none of this
20) Intermediate has slightly ----------energy.
a) less
b) greater
c) large
d) more

21) Meso tartaric acid is optically inactive due to_____ of symmetry
   a) Plane
   b) Centre
   c) Axis
   d) Diagonal
22) Biphenyl is showing optical activity due to _____ rotation
   a) Free
   b) Restricted
   c) Movable
   d) Non of these
23) Cumulene with_____ number of double band may be optically active
   a) Even
   b) Odd
   c) Alternate
   d) None of these
24) Optically active biphenyl must have_____ size group on orthoposition
   a) Smaller
   b) Larger
   c) Medium
   d) None of these
25) Central carbon of allene shows _____ hybridization
   a) Sp^2
   b) Sp
   c) Sp^3
   d) All of the above
26) 2,3 dimethyl cyclobutane 1,3 dicarboxylic acid becomes optically inactive due to presence of _____ symmetry
   a) Plane
   b) Centre
   c) Axis
   d) Diagonal

27) Molecular chirality is defined as molecular _____ due to which molecules cannot superimpose with its minor image

a) Symmetry
b) Disymmetry
c) Variety
d) None of these

28) _____ is a chemical used to protect crops from pest and weeds

a) Fertilizers
b) Compost
c) Agrochemical
d) All of the above

29) Chemicals that kills insects are called as _____

a) Insecticides
b) Pesticides
c) Fungicides
d) Herbicides

30) _____ exert their action in gaseous state to kill the insects

a) Fungicides
b) Fumigent
c) Herbicides
d) All the above

31) D.D.T is an _____

a) Insecticides
b) Fungicides
c) Fumigent
d) Herbicides

32) Neem oil is used as _____

a) Insecticides
b) Bio pesticides
c) Herbicides
d) All of the above

33) Indole 3. Acetic acid is an example of naturally occurring

a) Harmones
b) Auxin
c) Vitamin
d) None of these

34) Fungicides kills the

a) Fungi
b) Insects
c) Herbs
d) All the above

35) _____ spectroscopy is bared upon electronic transition

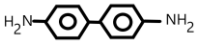
a) Mass
b) uv
c) IR
d) Nmr

36) Due to absorption of _____ light electronic energy raised
   a) IR,
   b) uv,
   c) Nmr,
   d) Mass
37) UV spectrum has _____ spectrum
   a) Sharp
   b) Clear
   c) Broad
   d) None of these
38) 6⟶6^* transition is shown by _____ compound
   a) Saturated
   b) Conjugated
   c) Unsaturated
   d) Aliphatic
39) π⟶π^* transition is shown by _____ compound
   a) Saturated
   b) Conjugated
   c) Unsaturated
   d) Aliphatic
40) Shift is absorption band from lower to longer wavelength is called as _____shift
   a) Bathochromic
   b) Hypochrome
   c) Longer
   d) Lower
41) Chromophore is _____ function group which can impart colour
   a) Saturated
   b) Conjugated
   c) Unsaturated
   d) Aliphatic
42) Auxochrome is_____ group which can deepen the color
   a) Saturated
   b) Conjugated
   c) Unsaturated
   d) Aliphatic
43) B- carotene orange red due presence of _____ conjugated double bond
   a) 7
   b) 9
   c) 11
   d) 19
44) Due to loss of _____ , neutral molecules gives formation of molecular ion
a) Electron
b) Proton
c) Neutron
d) All of the above

45) The peak of 100% intensity is called as _____peak
a) Base
b) Highest
c) Tallest
d) Molecular ion
46) _____rule state that compound containing even number of nitrogen show molecular ion of even mass number
a) Oxygen
b) Carbon
c) Nitrogen
d) All of the above
47) UV spectrum of ethanolic aniline obtain at _____nm
a) 330
b) 230
c) 220
d) 320
48) Increase in conjugation causes_____ shift
a) Bathochromic
b) Hypsochromic
c) Ionic
d) None of these
49) In mass spectroscopic sample is bombarded with _____
a) Proton
b) Neutral
c) Electron
d) None of these
50) Naturally occurring terpenes are made up of _____
a) Isoprene
b) Duprene
c) Terylene
d) Propene
51) In structure of terpene_____ are attached together in head to tail fashion
a) Isoprene
b) Duprene
c) Terylene
d) Propene
52) Citral is an unsaturated_____
a) Ketone
b) Ester
c) Aldehyde
d) Acid
53) Alkaloids are compound containing heterocyclic ring having at least one _____atom
a) Oxygen
b) Nitrogen
c) Sulphur
d) Halogen

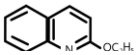
54) Nicotine is an example of poisonous _____
a) Terpene
b) Alkaloid
c) Vitamin
d) Harmone
55) Citral is made of methyl heptenone and _____
a) Formic acid
b) Acetic acid
c) Acetaldehide
d) Acetone
56) Molecular formula of citral is _____
a) $C_{10}H_{18}O$
b) $C_{10}H_{16}O$
c) $C_{10}H_{14}O$
d) $C_{10}H_{20}O$
57) Nicotin is made of _____ and N-methyl pyridine
a) Piperidine
b) Benzene
c) Pyridine
d) None of these

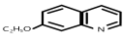
58) Fused ring compound containing two common carbon atoms are called as _____ compound
   a) Spiro
   b) Bicyclo
   c) Biphenyl
   d) Phenyl
59) Biphenyl is a compound where two phenyl rings are connected through _____ bond
   a) C—C
   b) C—O
   c) O—H
   d) N—H
60) IUPAC name of  is
   a) Bicyclo [4.4.0] decane
   b) Spiro (4,4) nonane
   c) Bycyclo [4.4.1] decane
   d) Spiro (4.1) hexane
61) IUPAC name of 
   a) Spiro [3,4] octane
   b) Spiro [4,3] octane
   c) Spiral [4,4] octane
   d) None of these

62) IUPAC name of 

a) 3,4 diaminodiphenyl
b) 4,4 diaminobiphenyl
c) 4,3 diamino biphyl
d) 2,2 diamino biphenyl

63) 2-ethoxy quinoline has structure_____

a) 

b) 

c) 

d) None of this

64) Butatriene is_____

a) Allene
b) Cumulene
c) Biphenyl
d) Diene

65) In fuse ring compound _____ atoms are common between two rings

a) One
b) Two
c) Three
d) Four

66) Quinoline and isoquinoline is a compound belong to fused _____ compound

a) Acyclic
b) Cyclic
c) Heterocyclic
d) All the above

67) Spiro compound has _____ common carbon between two rings

a) One
b) Two
c) Three
d) None of these

68) 2,3,4 heptatriene has structure _____ cumulative double bonds

a) 2
b) 3
c) 4
d) 1

69) 4-Butyl quinolone is a fused ring _____ compound

a) Acyclic
b) Cyclic
c) Heterocyclic
d) Cathocyclic

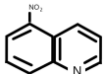
70) Napthalene is _____ compound

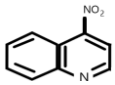
a) Monocyclic
b) Bicyclic
c) Heterocyclic
d) Acyclic

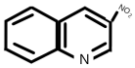
71) While numbering spiran _____ring is numbered first

a) Smaller
b) Bigger
c) Fused
d) Larger

72) Structure of 5 nitroquinoline is _____

a) 

b) 

c) 

d) None of this

73) IUPAC name of CH_3—CH=C=CH—CH_3 is _____ pentadiene

a) 2,3
b) 1,2
c) 3,4
d) 1,3

74) In bicyclo compounds, numbering is start from _____ carbon

a) Common
b) Chiral
c) Asymmetric
d) None of these

75) Cummuline is hydrocarbon containing more than _____ cumulative double bond

a) 2
b) 3
c) 1
d) 4

76) The IUPAC name of  is

a) Byclo [2,2,0] hexane
b) Byclo [2,1,2] hexane
c) Byclo [2,2,2] octane
d) Byclo [1,2,3] octane

77) 1,3 Butadiene shows _____ electronic transition

a) 6—6*
b) π—π*
c) η—π*
d) η—π*

78) Cyclohexanol shows _____ electronic transition
   a) $6 \text{---} 6^*$
   b) $\pi - \pi^*$
   c) $\eta - \pi^*$
   d) $\eta - 6^*$

79) Nitrobenzene absorbed at _____ wavelength than m-dinitrobenzene
   a) Shorter
   b) Longer
   c) Least
   d) None of these

80) Cyclobutanone absorbed at _____wavelength cyclohexanone
   a) Shorter
   b) Higher
   c) Bigger
   d) Longer

81) Acidic solution of aniline absorbed at _____ wavelength than ethanolic solution of analine
   a) Shorter
   b) Longer
   c) Higher
   d) None of these

82) When molecule is rotated through 90^o than a reflexation of this new object in a plane perpendicular to axis is identical to original object then it contains _____ fold alternate axis of symmetry
   a) Three
   b) Four
   c) Six
   d) Two

83) Cumulene with _____ number of double bond becomes optically inactive
   a) Odd
   b) Even
   c) Large
   d) All of these

84) In optically active biphenyl two rings appears in a plane nearly _____ to each other
   a) Perpendicular
   b) Parallel
   c) Similar
   d) Dissimilar

85) Allene contains _____ cumulative double bonds
   a) 2
   b) 3
   c) 4
   d) 1

86) For opticaly active cumulene there must be unsymmetrical substitution at _____ carbon
    a) Terminal
    b) Middle
    c) Secondary
    d) All the above
87) Tartaric acid has _____ chiral carbons
    a) 3
    b) 2
    c) 1
    d) 4
88) Optically active biphenyl should have bulkier groups on _____ positions
    a) Ortho
    b) Meta
    c) par
    d) All the above
89) Symmetrical substitution at ortho position of biphenyl make it optically _____
    a) Inactive
    b) Active
    c) Rich
    d) Poor
90) Methyl parathion is used as _____
    a) Insecticides
    b) Herbicides
    c) Fungicides
    d) None of these
91) Green chemistry concept aim to reduce _____ and keep environment clean.
    a) Temperature
    b) Pollution
    c) Flood
    d) Air
92) According to principles of green chemistry synthetic methodology should be design to generate or used substances which are _____
    a) Highly toxic
    b) Toxic
    c) Non- toxic
    d) Produces pollution
93) Synthesis in which the product is obtained to a series of single step reaction is called as _____
    a) Linear synthesis
    b) Convergent synthesis
    c) Multicomponent synthesis
    d) One pot synthesis

94) Nitration of acetanilide using acid mixture gives _____ as a major product
   a) O-nitroacetanilide
   b) P-nitroacetanilide
   c) m-nitroacetanilide
   d) 2,4,6 Trinitroacetanilide
95) After the use of chemicals we must _____ them properly
   a) Use
   b) Reuse
   c) Disposed
   d) Stored
96) Among the following _____ is the green solvent
   a) Chloroform
   b) Carbon tetrachloride
   c) Methylene chloride
   d) Water
97) The reduction of m-dinitrobenzene by NaSH gives high yield of _____
   a) m-nitroaniline
   b) p-nitroanilene
   c) m-phenylene diamine
   d) m-nitrophenol
98) Diels-Alder reaction between butadiene and ethane is _____ atom economical
   a) 25%
   b) 50%
   c) 75%
   d) 100%
99) Manich reaction is an example of _____ synthesis
   a) Linear
   b) Convergent
   c) Multicomponent
   d) Both linear and convergent
100) Smaller e factor of reaction implies lesser _____
   a) Reactant
   b) Product
   c) Wastage
   d) Desired product