Online Examinations (Even Sem/Part-I/Part-II Examinations 2020 - 2021

Course Name - –Advanced Chemistry
Course Code - BBTC403

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- B.A.(JMC)
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- B.SC.(PA)
- LLB
- B.SC(IT)-AI
- B.SC.(MSJ)
- Bachelor of Physiotherapy
- B.SC.(AM)
- Dip.CSE
- Dip.ECE
- DIP.EE
- DIP.CE

- [ ] DIP.ME
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- [ ] MBA
- [ ] M.SC.(BT)
- [ ] M.TECH(CSE)
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- [ ] M.A.(JMC)
- [ ] M.A.(ENG)
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- [ ] M.SC.(AM)
- [ ] M.SC.CS)
- [ ] M.SC.(ANCS)
- [ ] M.SC.(MM)
- [ ] B.A.(Eng)

Answer all the questions. Each question carry one mark.

9. 1. An example of sulphur containing amino acid is

Mark only one oval.

- [ ] Lysine
- [ ] Cysteine
- [ ] Alaline
- [ ] Valine

10. 2. Examples of Epimers are

Mark only one oval.

- Glucose & Galactose
- Glucose & Ribose
- Maltose & Glucose
- Fructose & Maltose

11. 3. Ozonolysis of an organic compound 'A' produces acetone and propionaldehyde in equimolar quantity. Identify 'A' from the following compounds

Mark only one oval.

- 1-pentene
- 2-methyl-1-pentene
- 2-methyl-2-pentene
- 2-pentene

12. 4. When HBr reacts with propene (by a non-radical route), which statement about the mechanism is incorrect?

Mark only one oval.

- The major product is 2-bromopropane
- A carbenium ion forms as an intermediate
- Br− adds in a rate-determining step.
- H−Br is heterolytically cleaved

13. 5. Benzaldehyde on heating with hippuric acid in presence of NaOAc and Ac2O to produce

Mark only one oval.

- Alaline
- Glycine
- Aspartic acid
- Phenyl alaline

14. 6. In peptide each carbonyl group are held by what with H atom of –NH group

Mark only one oval.

- Intermolecular H bonding
- Intramolecular H bonding
- Sulphur linkage
- Both intermolecular and intramolecular H bonding

15. 7.The building block of protein is called

Mark only one oval.

- Wax
- Carbohydrates
- Amino acids
- Lipids

16. 8. An example of basic amino acid is

Mark only one oval.

- Arginine
- Lysine
- Aspartic acid
- Both arginine and lysine

17. 9. An example of heterocyclic amino acid is

Mark only one oval.

- Proline
- Leucine
- Serine
- Glutamic acid

18. 10. An example of optically inactive amino acid is

Mark only one oval.

- Lysine
- Leucine
- Aspartic acid
- Glycine

19. 11. -NH2 group of amino acid can be protected by using

Mark only one oval.

- DCC
- p-nitro phenol
- PCl5
- BOC

20. 12. In sanger method the reagent used is

Mark only one oval.

- 2,4,dichloro flurobenzene
- 2,4,dinitro flurobenzene
- Para chloro benzoic acid
- Dansyl chloride

21. 13. Adenine and thymine are held together by how many number of Hydrogen bonds ?

Mark only one oval.

- 2
- 3
- 4
- 5

22. 14. Which end of amino acid is protected by Dansyl method ?

Mark only one oval.

- C terminal
- N terminal
- Both C and N terminal
- North East

23. 15. In Enzymatic protection of C terminal amino acid the enzyme used is

Mark only one oval.

- Carboxy peptidase
- Lysase
- Leucine aminopeptidase
- Glysase

24. 16.The enzyme used to protect N terminal end of amino acid is

Mark only one oval.

- Carboxypeptidase
- Lysase
- Leucine aminopeptidase
- Glysase

25. 17. In case of merrified resin solid peptide synthesis , C terminal amino acid is protected by using

Mark only one oval.

- T-butyl oxy carbonyl
- T-butyl chloride
- T-butyl iodide
- T-butyl fluoride

26. 18.An example of non-reducing sugar is

Mark only one oval.

- Fructose
- Glucose
- Sucrose
- Mannose

27. 19. Glucose on treatment with HIO_4 produces

Mark only one oval.

- 5HCOOH and 1HCHO
- 4HCOOH and 2HCHO
- 6HCOOH
- 3HCOOH and 3HCHO

28. 20. Anomers are diasteroisomers that differs in the configuration of which carbon

Mark only one oval.

- C1
- C2
- C3
- C4

29. 21. Sucrose molecule is formed by combination of

Mark only one oval.

- α D (+) glucopyranoside and β D(-) Fructopyranoside
- α D (+) glucopyranoside and β D(-) Fructofuranoside
- α D (+) glucofuranoside and β D(-) Fructopyranoside
- α D (+) glucopyranoside and β D(+) Fructopyranoside

30. 22. Alkene reacts with Iodine and PhCOOAg to produce

Mark only one oval.

- Cis diol
- Trans diol
- Epoxide
- Both cis and trans diol

31. 23.Alkyne on treatment with Na /liquid NH3 produces

Mark only one oval.

- E-alkene
- Z-alkene
- Both E and Z alkene
- Epoxide

32. 24. Ozonolysis of acetylene produces

Mark only one oval.

- Glyoxal
- Methyl glyoxal
- Phenyl glyoxal
- Ethyl glyoxal

33. 25. If the 3 –OH groups of glycerol are esterified by more than one type of fatty acids then it is known as

Mark only one oval.

- Simple triglyceride
- Mixed triglyceride
- Steroid
- Terpenoid

34. 26. Glucose on reaction with Bromine water produces

Mark only one oval.

- Glucaric acid
- Gluconic acid
- Fructose
- Aldol

35. 27. Glucose on treatment with conc nitric acid produces

Mark only one oval.

- Gluconic acid
- Glucaric acid
- Glucosazone
- Fructose

36. 28. The reaction of glucose with phenyl hydrazine does not proceed beyond C2 due to

Mark only one oval.

- Intermolecular H bonding
- Intramolecular H bonding
- Acidity
- Basicity

37. 29.All methyl pyranosides of α-D-hexose series have same configuration at

Mark only one oval.

- C1 and C5
- C2 and C5
- C3 and C5
- C1 and C2

38. 30. The red precipitate formed when glucose is treated with Fehling's solution is

Mark only one oval.

- Cupric hydroxide
- Cuprous oxide
- Cupric oxide
- Cuprous hydroxide

39. 31.Majority of the monosaccharides found in human body are of

Mark only one oval.

- L type
- D type
- d type
- l type

40. 32.In carbohydrate which special functional groups are present?

Mark only one oval.

- Alcohol and Carbonyl groups
- Alcohol and hydrogen
- Alcohol and ester
- Alcohol and acid

41. 33. Class of carbohydrate which can not be hydrolysed further is

Mark only one oval.

- Oligosaccharide
- Polysaccharide
- Disaccharide
- Monosaccharide

42. 34. Which class of carbohydrate can be considered as non sugar?

Mark only one oval.

- Monosaccharide
- Disaccharide
- Oligosaccharide
- Polysaccharide

43. 35.Which of the following glycoside linkage is found in maltose

Mark only one oval.

- glucose-fructose
- glucose-glucose
- galactose-glucose
- glucose-gulose

44. 36. Select the odd one from the following.

Mark only one oval.

- Arabinose
- Xylose
- Lyxose
- Erythose

45. 37. In fructose furanose ring is formed between

Mark only one oval.

- C1-C3
- C1-C4
- C2-C5
- C2-C6

46. 38. Glycosidic bond in sucrose is

Mark only one oval.

- α 1-4
- α 1-2
- β 1-4
- β 1-2

47. 39. Which one of the following is not a disaccharide?

Mark only one oval.

- Sucrose
- Maltose
- Lactose
- Cellulose

48. 40.Choose an aldo-pentose.

Mark only one oval.

- Ribose
- Gulose
- Glucose
- Fructose

49. 41. A polysaccharide formed by β1-4 glycosidic linkage is

Mark only one oval.

- Starch
- Cellulose
- Sucrose
- Xylose

50. 42. The typical cyclic structure of glucose is α and β D

Mark only one oval.

- Glucopyranose
- Glucofuranose
- Glycoside
- Glucosamine

51. 43. Which of the following is not an aldose?

Mark only one oval.

- Ribose
- Glucose
- Fructose
- Mannose

52. 44. The general structure of all amino acids are same except for

Mark only one oval.

- Glycine
- Lysine
- Proline
- Aspartic acid

53. 45. How is the secondary structure of protein mainly stabilized?

Mark only one oval.

- Hydrogen bonding
- Vander Waal's force
- Covalent interaction
- Hydrophobic interaction

54. 46. The peptide bond in proteins is

Mark only one oval.

- Planar but rotates to three preferred dihedral angles
- Non polar but rotates to three preferred dihedral angles
- Planar and usually found in a trans conformation
- Not cleaved by hydrolysis

55. 47.If the peptide is sequenced using the Edman degradation, which step will be part of the procedure?

Mark only one oval.

- The Edman reagent will react with all 12 amino acids simultaneously
- Lithium borohydride will react with an α-carboxyl group.
- Phenylisothiocyanate will react with a α-amino group.
- Strong acid will be used to cleave off one modified amino acid.

56. 48. A peptide consists of lys-gly-glu.What problem might be seen when analyzing the N terminal amino acid with dinitrofluro benzene?

Mark only one oval.

- Fluorodinitrobenzene might react with free NH2 group of lysine
- Flurodinitrobenzene react with any free amine group of lysine and not specifically with N terminal group
- Flurodinitrobenzene react with glutamic acid.
- Flurodintrobenzene react with glycine

57. 49. Lipids are

Mark only one oval.

- Esters of fatty acid
- Esters of glycerol
- Esters of fatty acid with glycerol
- Esters of butanal

58. 50. Lipids are mainly composed of

Mark only one oval.

- C,N,Br
- N,Cl,Br
- C,H,O
- C,N,Cl

59. 51. An example of saturated fatty acid is

Mark only one oval.

- Caproic acid
- Capric acid
- Palmitic acid
- Both capric and caproic acid

60. 52. Lower fatty acid contains..... C atoms

Mark only one oval.

- 3-11
- 1-9
- 2-10
- 2-12

61. 53. An example of higher fatty acid is

Mark only one oval.

- Palmitic acid
- Butyric acid
- Stearic acid
- Both palmitic and stearic acid

62. 54.The short hand representation of linoleic acid is

Mark only one oval.

- 18:2(9,11)
- 18:2(9,14)
- 18:2(9,12)
- 18:2(9,13)

63. 55. If 3-OH groups of glycerol are esterified with 3 molecules of same fatty acid then it is known as

Mark only one oval.

- Simple triglyceride
- Mixed triglyceride
- Wax
- Mericyl palmitate

64. 56. Waxes are

Mark only one oval.

- Solid esters of long chain fatty acid only
- Solid esters of long chain fatty acid with a long monohydric alcohol
- Esters of fatty acid with glycerol
- Esters of butanal

65. 57. The composition of bee wax is

Mark only one oval.

- Sodium acetate
- Mericyl chloride
- Mericyl palmitate
- Mericyl nitrate

66. 58. The no of milligram of KOH required to neutralize the fatty acids resulting from complete hydrolysis of 1 gm of fat is known as

Mark only one oval.

- Saponification number
- Iodine number
- Acid value
- RM number

67. 59. The mass of iodine absorbed in gm by 100 gm of fat is known as

Mark only one oval.

- Saponification number
- Iodine number
- Acid value
- RM number

68. 60. The number of mg of KOH required to neutralize the free fatty acids present in 1 gm of fat is known as

Mark only one oval.

- Saponification number
- Iodine number
- Acid value
- RM number