



(نصف ورقه إمتحانيه)

الزمن : ساعتان
الإجابة النموذجية لامتحان الكربوهيدرات والاحماض الامينية واللييدات 419 ك
الفرقة : الرابعة
الشعبة : ميكروبيولوجى وكيمياء
التاريخ : مساء الاربعاء 2019 / 1/ 9
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قسم : الكيمياء

كلية : العلوم

Choose the correct answer:

(48x0.5=24 mark)

- 1- Ketose is polyhydroxy compound has group.
a) **carbonyl** b) formyl c) carboxylic d) amino
- 2- Deoxy sugar is sugar which replaced hydroxy group by
a) amino **b) hydrogen** c) carboxyl d) cyano
- 3- The simplest sugar contain carbon atom.
a) 5 b) 6 c) 4 **d) 3**
- 4- The ratio of oxygen and hydrogen in carbohydrate like
a) acid b) aldehyde **c) water** d) ketone
- 5- The sugar which has five asymmetric carbon atom hasisomer.
a) 16 b) 8 c) 32 d) 64
- 6- All sugar has asymmetric carbon atom except
a) glyceraldehyde **b) dihydroxy acetone** c) maltose d) lactose
- 7- In furanose ring the carbon indicated the D and L isomers.
a) 2 **b) 3** c) 4 d) 5
- 8- α and β of cyclic sugar is represented by carbon
a) two b) three c) four **d) one**
- 9- Furanose ring formed from attack of carbon number two on carbon number
a) three b) four **c) five** d) six
- 10- Glucose and fructose are epimers at carbon atom number
a) 2 b) 3 c) 4 **d) none of them**
- 11- Glucose and galactose showed a type of isomerism called
a) aldose/ketose b) optical c) geometric **d) none of them**
- 12- Mannose is epimer with glucose at carbon number
a) 3 **b) 2** c) 4 d) 5
- 13- In pyranose structure the carbon number indicated the L and D isomers.
a) 5 b) 3 **c) 4** d) 2
- 14- Galactose and glucose are epimer for each other at carbon number
a) 3 **b) 4** c) 5 d) 2
- 15- Oligosaccharides have units of monosaccharide.
a) 11 b) 12 **c) 8** d) 13

- 16- Ketohexose have
 a) formyl group b) carbonyl group c) six carbon atom **d) (b) & (c)**
- 17- Dihydroxy acetone has isomerism for glyceraldehyde.
 a) optical b) geometrical **c) aldose/ketose** d) all of them
- 18- Fructose has asymmetric carbon atom equal to
 a) one b) two **c) three** d) six
- 19- The more oxidized group in glucose is carbon number
a) one b) two c) three d) six
- 20- Fructose has isomeric structure.
 a) 6 b) 32 **c) 8** d) 12
- 21- glucose has asymmetric carbon atom at carbon number
 a) 5 b) 4 c) 2 **d) all of them**
- 22- Acylation of glucopyranose give pentacetate derivatives.
 a) α b) β c) γ **d) (a) & (b)**
- 23- Treatment of glucose with base give
 a) mannose b) fructose c) glucose **d) all of them**
- 24- Oxidation of glucose by conc. nitric acid give acid.
 a) Uronic **b) saccharic** c) gluconic d) all of them
- 25- Mild reduction of glucose give
 a) fructose **b) sorbitol** c) mannose d) hexane
- 26- The carbon, which determined the D and L configuration of glucose.
 a) Three b) four c) two **d) five**
- 27- Enzyme oxidation of glucose give acid.
a) Uronic b) saccharic c) gluconic d) all of them
- 28- Optical activity properties appear in
 a) arabinose b) fructose c) galactose **d) all of them**
- 29- Strong reduction of glucose give
 a) sorbitol **b) hexane** c) heptane d) (a) & (b)
- 30- Esterification of glucose occur at carbon
 a) 3 b) 5 **c) 6** d) 4
- 31- Osazone resulted from reaction of with excess of phenylhydrazine.
 a) fructose b) mannose c) galactose **d) one of them**
- 32- Furfural obtained from reaction of with HCl.
 a) mannose b) fructose **c) arabinose** d) galactose
- 33- Hydrolysis of maltose give
a) glucose b) fructose c) mannose d) (a) & (b)
- 34- Glucosoxime resulted from reaction of glucose with
 a) hydrazine **b) hydroxyl amine** c) urea d) (a) or (b)
- 35- Reaction of glucose with semicarbazide give derivative.
 a) hydrazone b) nitrile **c) semicarbazone** d) (a) or (c)
- 36- Dithioacetal produced from reaction of with glucose.
a) methanethiol b) hydrazine c) hydrogen cyanide d) (a) or (b)
- 37- Lactose formed by glycoside bond.
 a) α -1,4 **b) β -1,4** c) α -1,3 d) β -1,3
- 38- Hydrolysis of sucrose give
 a) mannose b) fructose c) glucose **d) (b) & (c)**
- 39- Mutarotation occurs in
 a) sucrose b) lactose c) maltose **d) (b) or (c)**
- 40- Arabinose converted to glucose through reaction with
 a) HCN b) H_2O/Δ c) $LiAlH_4$ **d) all of them**

- 41- Starch is homopolysaccharide contain units.
a) fructose b) galactose **c) glucose** d) mannose
- 42- Fructose and galactose give the same structure when treated with
a) PhNHNH₂ b) H₂NOH c) NH₂NH₂ d) HCN
- 43- Glucose react with phenyl hydrazine to form osazone via
a) condensation, firstly b) oxidation c) condensation, secondly **d) all of them**
- 44- The carbon which determined the D- and L- forms of fructose is carbon number....
a) 4 **b) 5** c) 3 d) 6
- 45- Dihydroxy acetone has asymmetric carbon equal to.....
a) 1 b) 2 c) 3 **d) none of them**
- 46- Glyceraldehyde has isomers.
a) 1 **b) 2** c) 4 d) 5
- 47- Mannose has isomers.
a) 16 b) 8 c) 10 d) 32
- 48- Sucrose has properties of
a) reducing b) formation of asazone c) mutarotation **d) none of them**

With best wishes
Prof. Aly A. Aly