



الاجابة النموذجية لامتحان كيمياء العضوية الاليفاتية (٢)

ك ٢١٣

(نصف ورقة امتحانية)

الفرقة : الثانية

الشعبة : الكيمياء

التاريخ : الخميس ٢٦ / ١ / ٢٠١٧

الممتحن : د/ محمد عبد الرحمن موسى ابوريا

قسم : الكيمياء

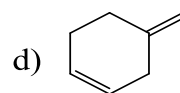
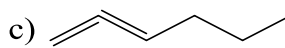
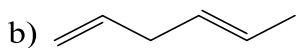
كلية : العلوم

I- Choose the correct answer:

(40 Marks)

1- Which of the following hexanoic acid is more acidic?

- a)
- σ
- chloro substituted b)
- δ
- chloro substituted
- c) β - chloro substituted**
- d)
- ϵ
- chloro substituted

2- Which of the following compounds is conjugated diene?**3- Reduction of lactic acid by heating with HI gives.**

- a) acetone b) acetaldehyde
- c) propionic acid**
- d) acetic acid

4- Which of the following hydroxy acids can be prepared from the fermentation of Grape juice sludge?

- a) Citric acid
- b) Tartaric acid**
- c) Malonic acid d) malic acid

5- Heating α -hydroxy acids in the presence of a little mineral salt gives

- a) lactone
- b) lactide**
- c) crotonic acid d) linear polymer

6- The major product of addition of halogen acids to 1,3-butadiene at low temperature is.....

- a)
- 3-bromo-1-butene**
- b) 1-bromo-2-butene c) 1-bromobutane d) bromo-2-pentene

7- Pyruvic acid can be obtained by direct oxidation of.....acid.

- a) acetic
- b) lactic**
- c) crotonic d) citric

8- Succinic acid can be obtained by the reduction of..... acid.

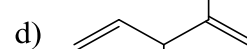
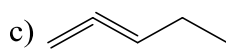
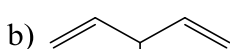
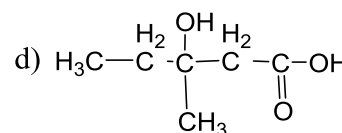
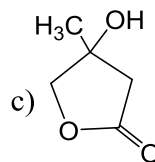
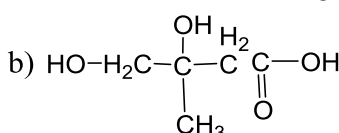
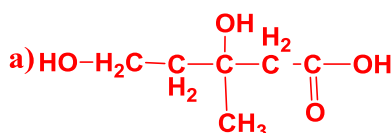
- a) citric b) lactic
- c) tartaric**
- d) acetic

9- Malic acid can be obtained from..... acid.

- a) succinic b) tartaric c) acetic
- d) a&b**

10- How many products are expected from addition of HBr to 1,3-butadiene?

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

11- Which of the following dienes is suitable as the diene component in a Diels–Alder reaction?**12- The hydrolysis of the following lactone:  gives...****13- Oxalic acid can be prepared from.....by oxidation with HNO_3 .**

- a) acetic acid
- b) tartaric acid**
- c) citric acid d) a&b

14- Lemon juice waste can be used for the production ofacid.

- a) lactic**
- b) acetic c) tartaric
- d) citric**

15- Heating of hydroxy acids with conc. HCl solution gives.....

- a) Acid chloride**
- b) alkenoic acid c) saturated acids
- d) halo acids**

16- Which of the following facts are true about calcium tartrate?

- a) Has acidic nature b) soluble in water
- c) insoluble in water**
- d) extract from lemon

17- Tartonic acid can be obtained by the oxidation of tartaric acid with.....

- a)
- KMnO_4
- b)
- H_2O_2
- c) HNO_3**
- d) HI

18- Maleic acid can be obtained by strongly heating of

- a) Citric acid b) Tartaric acid
- c) malic acid**
- d) fumaric acid

19- Heating γ -hydroxy acids in the presence of a little mineral salt gives

- a)
- lactone**
- b) lactide c) crotonic acid d) linear polymer

20- Treating of maleic acid with hot dilute H_2SO_4 under pressure gives.....acid.

- a) lactic b) acetic c) tartaric **d) malic**
- 21- Malonic acid is acid.**
a)propanedioic b)propenedioic c)ethanedioic d)butenedioic
- 22- Cyclopropane undergoes ring opening reaction with Br₂, HBr and H₂(Ni) to giveproduct.**
a)open-chain substitution **b)open-chain addition** c)closed-chain d)open-chain oxidation
- 23- Nylon-6,6 is the major product of the reaction of hexamethylene diamine withacid.**
a)fumaric b)maleic **c)adipic** d)oxalic
- 24- Wurtz reaction is useful for the preparation ofmembered ring cycloalkanes.**
a)7-9 b) 6-10 c)10-13 **d)3-6**
- 25- The action of heat on calcium adipate to gives cyclopentane isreaction.**
a) **clommensen** b)Dreckmann c)Hydrolysis d) Mohr
- 26- Oxidation of oxalic acid with acidic KMNO₄ give mixture of**
a) CO+CO₂ **b) 2CO₂+H₂O** c) 2CO+H₂O d) CO+CO₂+H₂O
- 27- Mohr proposed that ring can become free from strain if**
a)all the ring carbons are forced into one plane. b) all the ring carbons are forced parallelism to the plane.
c) all the ring carbons are not forced into one plane.d)some of the ring carbons are forced into one plane.
- 28- Maleic acid is importantacid**
a)Saturated dicarboxylic b)Saturated carboxylic **c)Unsaturated dicarboxylic** d)Unsaturated phenolic
- 29- Reaction of cyclobutane with bromine in the dark form**
a)Bromocyclobutene b)1,4-dibromobutane c) Bromobutane **d) No reaction**
- 30- Carbon suboxide is produced by the action of P₂O₅ onacid.**
a)Malonic b)Phthalic c) Cinnamic d)Malic
- 31- Fumaric acid is theform of Butenedioic .**
a)Cis **b)Trans** c)Meso d)Syn
- 32- Pimelic acid structure is**
a)HOOC(CH₂)₂COOH b)HOOC(CH₂)₄ **c)HOOC(CH₂)₅COOH** d) HOOC(CH₂)₆COOH
- 33- The effect of heat on glutaric acid undergo.....**
a)Cyclodehydration b) Decarboxylation c) Cyclization d) Polymerization
- 34-Baeyer postulated that any deviation of bond angles from the normalvalue would impose a condition of internal strain.**
a)Octahedral **b)Tetrahedral** c)Triangle d)Pentagon
- 35- NBS can be obtained by action of ammonia/heat followed by alkaline Br₂ on**
a)Sebacic acid **b)Succinic acid** c)Suberic acid d)Stable cyclopropane
- 36-When 2-Butene is treated with methylene iodide in the presence of zinc-copper couple give.....**
a) Cyclopentane b)Methyl cyclopropane **c)1,2-Dimethyl cyclopropane** d)1,3-Dimethyl cyclopropane.
- 37-..... are alicyclic compounds.**
a)Alkenes b)Cycloalkoxide **c)Cycloparaffine** d) a &c
- 38-From can synthesis both oxalic and succinic acid.**
a)Sod formate b) Benzene **c)Ethylene** d)Acetic acid
- 39-Reaction of cyclohexane with chlorine in UV light is considered..... reaction.**
a)Addition b) Ring opening **c)Substitution** d)Oxidation
- 40-Malic acid can be obtained by hydration of**
a)Meso-Tartaric acid **b)Maleic acid** c) Malonic anhydride d)Fumaric acid