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B.Pharm. (Semester – III) (Old-CBCS) Examination, 2018
ORGANIC CHEMISTRY – II

Day and Date : Wednesday, 26-12-2018

Max. Marks : 70

Time : 2.30 p.m. to 5.30 p.m.

- I. Choose the most appropriate one from the following answers : **(1×15=15)**
- 1) Nucleophilicacyl substitution of -OR is easily possible by
a) $-\text{NH}_2$ b) $-\text{OC}(=\text{O})\text{R}$ c) $-\text{SH}$ d) $-\text{Cl}$
 - 2) Identify the six membered heterocycle with two hetero atoms from the list below.
a) Indole b) Pyrrole c) Pyrazole d) Diazine
 - 3) Product obtained on heating phthalic acid to its melting point is
a) Maleimide b) Phthalimide
c) Phthalic anhydride d) None
 - 4) _____ reaction that requires non α -hydrogen containing carbonyl compound.
a) Mannich b) Reformatsky c) Perkin d) Cannizzaro
 - 5) Identify a compound which is non-aromatic, from the following
a) Cyclo heptatrienyl cation b) Cyclobuta diene
c) Cyclohepta triene d) Cyclohexatriene
 - 6) Oxidation of naphthalene with Vanadium pentoxide yields
a) Phthalicacid b) Benzoquinone
c) Naphthoquinone d) None
 - 7) Phenanthrene on nitration yields _____ derivative.
a) 1-nitro b) 2-nitro c) 3-nitro d) 1,2,3-trinitro
 - 8) Most suited method for separation of amines in the lab is
a) Hinsberg b) Distillation c) Hoffmanns d) Solvent extraction

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- 9) Oxidizing agent used for obtaining aldehydes from alcohol is
- a) HCrO_4
 - b) CrO_3
 - c) KMnO_4
 - d) Pyridinium Chloro Chromate
- 10) Choose the correct reagent for completing the following reaction :
- Pyrrole + \longrightarrow 2-Nitro pyrrole
- a) HNO_3
 - b) $\text{HNO}_3:\text{H}_2\text{SO}_4$
 - c) $\text{CH}_3\text{COONO}_2$
 - d) NaNO_2
- 11) In order to get p-chloro derivative of Aniline selectively, the reaction/s to be used
- a) Halogenation, Alkylation
 - b) Acylation, Halogenation
 - c) Halogenation, Acylation
 - d) Alkylation, Halogenation
- 12) The reaction that uses chloroform, NaOH with phenols to yield Salicylaldehyde
- a) Fischer
 - b) Hoffmanns
 - c) Reimer-Tiemann
 - d) Gomberg
- 13) p-nitrophenols have higher solubility and lower b.p. compared to o-nitrophenols because _____ H-bonding.
- a) Intramolecular
 - b) Intermolecular
 - c) No
 - d) None
- 14) p-sulphonate derivative of phenols is formed at
- a) 100°C
 - b) 25°C
 - c) 0°C
 - d) -15°C
- 15) Nucleophilic aromatic substitution occurs in benzene by _____ mechanisms.
- a) Unimolecular
 - b) Bimolecular
 - c) -y^- substitution
 - d) All

II. Answer **any five** questions from the following :

(5x5=25)

- 1) Write four methods for preparing aldehydes and ketones.
- 2) Outline Hoffmann's method for separating amines.
- 3) Write three characteristic reactions for anthracene and phenanthrene.



- 4) What is nucleophilic addition reaction ? Explain Cannizzaro reaction in brief.
- 5) Explain briefly :
 - i) Role of substituents of chemical behaviour of benzene
 - ii) Reaction of amines with HONO.
- 6) What happens when phenol is reacted with an alkali, an acyl halide and sodium dichromate, an alkyl halide in alkali ?

III. Answer **any three** questions from the following : **(10×3=30)**

- 1) Write the definition, mechanism, conditions of reaction, scope and applications of :
 - a) Oppenauer oxidation
 - b) Reformatsky reaction. **(5+5)**
 - 2) Write two methods of preparation and two chemical reactions of pyridine and indole. **(5+5)**
 - 3) Describe the characteristic reactions of benzene with examples. **(2.5×4)**
 - 4) Write in brief :
 - a) Structure elucidation of Naphthalene
 - b) Nucleophilic acyl substitution. **(5+5)**
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