Register Number									

Question Paper

Exam Date & Time: 27 Mar 2021 (2 pm to 5 pm)

MANIPAL ACADEMY OF HIGHER EDUCATION

Pharmaceutical Organic Chemistry II [PCH-BP301T]

Marks: 75 Duration: 180 mins.

I Multiple Choice Questions (MCQs)

Answer all the questions. Section Duration: 30 mins (2 pm to 2:30 pm)

No.	Question
1	Chlorine is a gas whereas Iodine is a solid due to dipolar interactions present in the same groups Van der Waals interactions hydrogen bonding
2	Which of the following statement is true about saponification value of oil? The shorter the chain of fatty acid, the lower is the saponification value The higher the saturation in fatty acid, the lower is the saponification value The lower the saturation in fatty acid, the higher is the saponification value The shorter the chain of fatty acid, the higher is the saponification value
3	unsaturated fatty acids have_____intermolecular forces weaker stronger verystrong no
4	Which of the following consumes more iodine? stearic acid linolenic acid oleic acid arachidonic acid
5	One of the major product is formed when bromination of 4-nitrobiphenyl is carried out: 4-nitro-4'-bromobiphenyl 4-nitro-2'-bromobiphenyl 4-nitro-2-bromobiphenyl 4-nitro-3-bromobiphenyl
6	One of the following compounds has high reactivity Naphthalene benzene phenanthrene anthracene
7	According to Bayer's strain theory one of the following are highly stable Cyclohexane cyclopentane cycloheptane cyclobutane
8	Which one of the following is the strongest among intermolecular forces? hydrogen bonding London forces dipolar interactions all the above
9	One of the parameter helps in classifying oils into drying, semidrying and non-drying acetyl value acid number ester value iodine value
10	one of the following statements is wrong about aromaticity a molecule should be cyclic and planar it should have a conjugated system it should have 4n+2 π electrons always have less stability than aliphatic compounds

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11	One of the following is not a meta director - CH3 -CHO -NO2 -COOH
12	One of the following is a sweetening agent Chlorbutol saccharin benzene cyclopropane
13	One of the following is weakly acidic sodium ethoxide sodium bicarbonate phenol sulphuric acid
14	Hydroxytoluene is a colouring agent cresol xylenol a surfactant
15	Azodyes are manufactured by using Resorcinol ethylalcohol ethers esters
16	.....oils are used in making paints and varnishes Fixed volatile non-drying drying
17	.....is not a ring activating group sulphonic acid amino methoxy phenyl
18	Aluminium chloride is used in Schotten Baumannreaction Aldol condenation Friedel crafts reaction Rosenmunds reduction
19	one of the following is not a hydrocarbon benzene naphthalene ethane benzil
20	Phenols are identified by Benedict 's test Libermann's test Osazone test Biuret test

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Pharmaceutical Organic Chemistry II [PCH-BP301T]

Section Duration: 150 mins (2:30 pm to 5 pm)

II Long Answers

Answer all the questions.

1. In Electrophilic aromatic substitution explain the theory of reactivity and orientation with example. Discuss the effect of substituent groups with energy diagram - 10 marks

2. A) Give the principle involved in the estimation of rancidity of oils. Mention its significance - 4 marks
   B) Discuss with mechanism the conversion of 1-naphthol to naphthalene by using zinc dust - 4 marks
   C) What is Reichert Meissl value? Give its importance - 2 marks

III Short Answers

Answer all the questions. (5 marks each)

1. Explain all the identification tests of phenol
2. Explain the general methods of preparation and reactions of aromatic carboxylic acids with equations
3. Discuss with resonance structures, the electrophilic aromatic substitution reactions of biphenyl.
4. Discuss Coulson and Moffitt's theory with an example. Explain Sachse More's theory with an example
5. Explain the reactions of aromatic amines with equations
6. Write the resonance structures of anthracene. Give the substitution reactions of anthracene. Why substitution reactions always occur at 9th and 10th position?
7. Why higher membered saturated fatty acids have increased melting points? Write a note on hydrogenation of oils. Mention its importance.