Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM - SEMESTER– 3 EXAMINATION – SUMMER -2019

Subject Code: BP301TP **Date: 28-05-2019**

Subject Name: Pharmaceutical Organic Chemistry II

Time: 02:30 PM TO 05:30 PM **Total Marks: 80**

Instructions:

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Explain molecular orbital structure and resonance energy of benzene.	**06**
	(b)	Explain effect of substituent on acidity of benzoic acid.	**05**
	(c)	Notes on Sachse Mohr's theory.	**05**
Q.2	**(a)**	Why benzene undergoes electrophilic substitution reaction? Explain halogenation reaction of benzene with mechanism.	**06**
	(b)	Write down important reaction involve in benzoic acid in detail.	**05**
	(c)	Discuss about reaction of cyclopropane and cyclobutane.	**05**
Q.3	**(a)**	Notes on Haworth synthesis for naphthalene and Anthracene.	**06**
	(b)	Discuss about Coulson and Moffitts modification of cycloalkanes.	**05**
	(c)	Write down structure and medicinal use of Anthracene, diphenylmethane triphenylmethane derivatives.	**05**
Q.4	**(a)**	Write a notes on acidicity and effect of substituents of phenol.	**06**
	(b)	Discuss the molecular orbital structure of naphthalene?	**05**
	(c)	What happen when (a) Naphthalene is treated with concentrated sulphuric acid at 165^0C. (b) Anthracene is treated with sodium dichromate and sulphuric acid.	**05**
Q.5	**(a)**	Write down significance and principle involve in determination of (a) RM value (b) Acetyl value (c) Ester value (d) Iodine value	**06**
	(b)	Notes on synthetic use of aryl diazonium salts.	**05**
	(c)	Explain (a) Why phenol is more acidic than ethyl alcohol? (b) Why o-nitrophenol is steam volatile whereas p-nitrophenol is not?	**05**
Q. 6	**(a)**	How will you synthesise the following compounds from benzene (a) Benzene hexachloride (b) Ethylbenzene (c) Isopropylbenzene (d) Cyclohexane	**06**
	(b)	Write down structure and use of following compounds (a) DDT (b) Saccharin (c) Cresol	**05**
	(c)	Notes on inductive group and its directing effect in monosubstituated benzene.	**05**
Q.7	**(a)**	Explain hydrogenation of oil with diagram. Discuss significance and principal of acid value and saponification value.	**06**
	(b)	Notes on a Fridel crafts alkylation and acylation of benzene	**05**
	(c)	Discuss Bayer's strain theory with suitable examples.	**05**

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