

[KZ 804]

OCTOBER 2011

Sub. Code: 3804

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION**FIRST YEAR****PAPER IV – PHARMACEUTICAL ORGANIC CHEMISTRY***Q.P. Code: 383804***Time: Three Hours****Maximum: 100 marks****Answer ALL questions in the same order.****I. Elaborate on :****Pages Time Marks
(Max.) (Max.) (Max.)**

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| 1. a) Define Electrophilic aromatic substitution reaction.
Explain the mechanism of nitration, sulphonation,
halogenation and Friedel craft's alkylation reactions
with examples. | 17 | 40 min. | 20 |
| b) Write a note on activating and deactivating O, P, and
M directing groups. | | | |
| 2. a) Compare aliphatic nucleophilic bimolecular and
unimolecular reaction. (SN_2 vs SN_1). | 17 | 40 min. | 20 |
| b) Explain the mechanism and kinetics of 1, 2
Elimination reactions. (E_2 and E_1). | | | |

II. Write notes on :

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| 1. Write a note on Markownikoff's rule and Peroxide effect. | 4 | 10 min. | 6 |
| 2. Explain about electrophilic addition of conjugated dienes.
(1, 2 versus 1, 4 addition). | 4 | 10 min. | 6 |
| 3. Write about the mechanism of Cannizzaro's reaction with example. | 4 | 10 min. | 6 |
| 4. Define polarity of molecules and intermolecular forces with
examples. | 4 | 10 min. | 6 |
| 5. Explain Bayer's strain theory with its merits and limitations. | 4 | 10 min. | 6 |
| 6. Explain Kolbe's reaction and Reimer -Tiemann's reaction. | 4 | 10 min. | 6 |
| 7. Write a note on allyl radical as a resonance hybrid. | 4 | 10 min. | 6 |
| 8. Write a note on oxidation-reduction reactions with examples. | 4 | 10 min. | 6 |
| 9. Give an example for free radical halogenation of alkenes with
respect to carbon – carbon double bond acting as substituent. | 4 | 10 min. | 6 |
| 10. Define orientation, reactivity and stability. | 4 | 10 min. | 6 |
