

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: M. Pharm
BRANCH: PHARMACY

SEMESTER: Ist
SESSION: MO2022

SUBJECT: MPC102T ADVANCED ORGANIC CHEMISTRY I

TIME: 3.00 Hours

FULL MARK: 75

INSTRUCTIONS:

1. The missing data, if any, may be assumed suitably.
 2. Before attempting the question paper, be sure that you have got the correct question paper.
 3. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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|--------|--|------------|-----|
| Q.1(a) | Define SN2 mechanism with explanation of the general methods of reaction mechanism with equations. | CO1 | [7] |
| Q.1(b) | Elaborate (i) SN1 mechanism (ii) anchimeric assistance (iii) SNi mechanism with equations only. Provide evidences where necessary | CO2 | [8] |
| Q.2(a) | Explain the following terms with reference to free radical reactions (i) initiation (ii) termination, (iii) propagation with equations | CO2 | [7] |
| Q.2(b) | Describe (i) Aromatic free radical reaction (ii) Addition reactions | CO2 | [8] |
| Q.3(a) | Describe the following with applications of the reactions: (i) Ullman reaction (ii) Ugi reaction | CO3 | [7] |
| Q.3(b) | Illustrate the (i) Mitsunobu reaction (ii) Michael reaction (iii) Synthesis of quinoline | CO3 | [8] |
| Q.4(a) | Provide evidences for various kinds of Elimination reaction and its applications | CO4 | [7] |
| Q.4(b) | Elaborate synthesis of (i) Ketoconazole (ii) Metronidazole | CO4 | [8] |
| Q.5(a) | Elaborate the procedure of (i) Doebner Miller reaction (ii) Gattermann reaction (iii) Mannich reaction | | [7] |
| Q.5(b) | Illustrate (i) Baeyer Villiger reaction (ii) Brook Rearrangement with proper equations | CO4
CO4 | [8] |
| Q.6(a) | Write notes on various protecting groups with examples | CO1 | [7] |
| Q.6(b) | Create the synthesis of (i) Imidazole (ii) Pyrazole (iii) Pyrimidine (iv) Acridine | CO5 | [8] |
| Q.7(a) | Explain the retrosynthetic approach and the various advantages of the same | CO3 | [7] |
| Q.7(b) | Elaborate on various synthetic reagents of importance to be applied in the various laboratory reactions | CO4 | [8] |

:22/11/2023 E: