

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

**CLASS: M. PHARM.
BRANCH: PHARMACY**

**SEMESTER: II
SESSION: SP/2023**

SUBJECT: MQA204T PHARMACEUTICAL MANUFACTURING TECHNOLOGY

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.
5. Answer any five questions.

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| 1a. | Discuss the preparation and evaluation of tablets | [7] | CO2 |
| 1b. | Discuss the problems and remedies in tablet coating | [8] | CO2 |
| 2a. | Discuss the wet, dry and direct compression process for tablet granulation. | [7] | CO2 |
| 2b. | Discuss the different stages of granulation. Explain the various aspects of fusion, cold welding, compaction, compression and consolidation in tablet. | [8] | CO2 |
| 3a. | Discuss the different processing problems of tablets and their remedies | [7] | CO2 |
| 3b. | Discuss the Air suspension technique and Perforated pan coating with schematic diagram and also mention their advantage and limitations. | [8] | CO2 |
| 4a. | Explain the following (i) sugar coating (ii) Method of determination of minim per gram factor | [7] | CO2 |
| 4b. | Discuss in detail the following (i) With a schematic diagram the process of manufacture of soft gelatin capsules (ii) Evaluation of Tablets | [8] | CO2 |
| 5a. | Discuss in details drug-plastic interactions. Provide evaluation of Packaging materials | [7] | CO3 |
| 5b. | Define and mention the use of the following (i) QTPP (ii) CQA (iii) PAT (iv) TPQP | [8] | CO3 |
| 6a. | What do you mean by industrial plant lay out? Discuss the factors affecting layout for industrial plant in detail | [7] | CO1 |
| 6b. | What do you mean by routing and scheduling? Discuss the significance for production planning in detail | [8] | CO1 |
| 7a. | Discuss the in process quality control for emulsion in detail | [7] | CO2 |
| 7b. | Explain the automation in pharmaceutical industry in detail | [8] | CO2 |

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