

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

**CLASS: MPHARM.
BRANCH: PHARMACY**

**SEMESTER: I
SESSION: MO24**

SUBJECT: MPC104T CHEMISTRY OF NATURAL PRODUCTS

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. Describe morphine alkaloid extraction methods to separate its components. | [7] |
| 1b. Elaborate on opium poppy cultivation, collection of latex, and chemical tests for morphine alkaloid detection. | [8] |
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| 2a. Describe macrolide antibiotics and the isolation procedure of erythromycin. | [7] |
| 2b. Elaborate on natural resources, isolation, and mechanism of action of antimalarial drugs artemisinin and quinine. | [8] |
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| 3a. Elaborate on recombinant technology and its role in drug and new pharmaceutical discovery. | [7] |
| 3b. Define gene and elaborate on gene therapy's principle, application, advantages, and disadvantages. | [8] |
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| 4a. Elaborate on the natural resources, mechanism of action, and medical uses of paclitaxel and docetaxel. | [7] |
| 4b. Discuss the chemistry of adrenocorticoids. | [8] |
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| 5a. Explain the methods of isolation and purification of alkaloids. | [7] |
| 5b. Elucidate the structure of ephedrine. | [8] |
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| 6a. Explain the methods of isolation and purification of flavonoids. | [7] |
| 6b. Elucidate the structure of quercetin. | [8] |
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| 7a. State isoprene rule and classify terpenoids with suitable examples. | [7] |
| 7b. Elucidate the structure of citral. | [8] |

:::12/12/2024:::M