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| <b>Name:</b>         |  |
| <b>Enrolment No:</b> |  |

**End Semester Examination, December 2024**

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| <b>Course:</b> Pharmacology & Toxicology   | <b>Duration: 3 Hours</b><br><b>Max. Marks: 100</b> |
| <b>Semester:</b> 3   |  |
| <b>Program:</b> BSc Microbiology   |  |
| <b>Course Code:</b> HSCR2035P  |  |
| <b>Instructions:</b> Attempt all the question, draw suitable diagrams and flowcharts where necessary |  |

| S. No. | Section A<br>Short answer questions/ MCQ/T&F<br>(20Qx1.5M= 30 Marks)              | Marks | COs |
|--------|---|-------|-----|
| Q 1    | Define the term ‘pharmacology’  | 1.5   | CO1 |
| Q2     | What is the mechanism of action of sulfasalazine?                                 | 1.5   | CO1 |
| Q3     | Write the name of natural penicillin.   | 1.5   | CO1 |
| Q4     | What is genotoxicity?   | 1.5   | CO1 |
| Q5     | Differentiate broad and narrow spectrum antibiotics with example                  | 1.5   | CO1 |
| Q6     | What is the mechanism of synergistic effect shown by cotrimoxazole?               | 1.5   | CO2 |
| Q7     | What is the difference between bactericidal and bacteriostatic drugs              | 1.5   | CO2 |
| Q8     | Which drug is used in the treatment of congestive heart failure?                  | 1.5   | CO2 |
| Q9     | Define signal transduction mechanism.   | 1.5   | CO2 |
| Q10    | Agonists are defined as .....   | 1.5   | CO2 |
| Q11    | The surmountable effect is .....  | 1.5   | CO3 |
| Q12    | The process of ..... is considered as a sink condition.                           | 1.5   | CO3 |
| Q13    | Therapeutic index is the ratio of...../.....                                      | 1.5   | CO3 |
| Q14    | When two drugs are administered together.....is considered as Synergistic effect. | 1.5   | CO3 |
| Q15    | The graded response is also known as all or none response (True/ False)           | 1.5   | CO3 |
| Q16    | Charcoal is an example of Physiological antagonist (True/ False)                  | 1.5   | CO4 |
| Q17    | Pharmacodynamics is the process of what drug does to the body (True/False)        | 1.5   | CO4 |
| Q18    | The effect of drug on unborn baby is considered as Teratogenesis (True/False)     | 1.5   | CO4 |

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| <b>Q19</b>                                   | Diuretics increase the urine output to lower the blood pressure (True/False)   | <b>1.5</b> | <b>CO4</b> |
| <b>Q20</b>                                   | What is teratogenicity?  | <b>1.5</b> | <b>CO4</b> |
| <b>Section B</b><br><b>(4Qx5M=20 Marks)</b>  |  |            |            |
| <b>Q 1</b>                                   | Discuss the mechanism of action of digitalis, in detail.   | <b>5</b>   | <b>CO2</b> |
| <b>Q2</b>                                    | Define distribution, explain the mechanism of excretion.   | <b>5</b>   | <b>CO2</b> |
| <b>Q3</b>                                    | Define pharmacodynamics, explain in detail about absorption.   | <b>5</b>   | <b>CO2</b> |
| <b>Q4</b>                                    | Explain the mechanism of adverse drug reaction.  | <b>5</b>   | <b>CO2</b> |
| <b>Section C</b><br><b>(2Qx15M=30 Marks)</b> |  |            |            |
| <b>Q 1</b>                                   | Explain the term 'RAAS', discuss the significance of RAAS system in maintaining blood pressure, write the name any 2 drugs acting on RAAS to control hypertension (3+8+4)  | <b>15</b>  | <b>CO3</b> |
| <b>Q2</b>                                    | Write the mechanism of action any 5 drugs (3x5)<br>i. Erythromycin                      iv. Tetracycline<br>ii. Penicillin G                        v. Amphotericin<br>iii. Sulfonamide                        vi. Cotrimoxazole | <b>15</b>  | <b>CO3</b> |
| <b>Section D</b><br><b>(2Qx10M=20 Marks)</b> |  |            |            |
| <b>Q 1</b>                                   | Explain in detail "Environmental toxicology and ecotoxicology".  | <b>10</b>  | <b>CO4</b> |
| <b>Q 2</b>                                   | Outline the mechanism of Gs and Gi mediated receptor activation and processing in detail.  | <b>10</b>  | <b>CO4</b> |