

## M. Sc. (Mathematics) Semester I & II (CBCS)

| Paper             | Code      | Paper Name                                | Paper              | Code      | Paper Name            |
|-------------------|-----------|---|--------------------|-----------|-----------------------|
| <b>Semester I</b> |           |   | <b>Semester II</b> |           |                       |
| Paper I           | PSCMTHT01 | Algebra-I                                 | Paper VI           | PSCMTHT06 | Algebra-II            |
| Paper II          | PSCMTHT02 | Real Analysis-I                           | Paper VII          | PSCMTHT07 | Real Analysis-II      |
| Paper III         | PSCMTHT03 | Topology-I                                | Paper VIII         | PSCMTHT08 | Topology-II           |
| Paper IV          | PSCMTHT04 | Linear Algebra and Differential Equations | Paper IX           | PSCMTHT09 | Classical Mechanics   |
| Paper V           | PSCMTHT05 | Numerical Analysis                        | Paper X            | PSCMTHT10 | Differential Geometry |

| Theory Paper       | Code      | Teaching Scheme Hrs./Week |           | Credit    |          |           | Examination Scheme |            |            |             |                       |                     |
|--------------------|-----------|---------------------------|-----------|-----------|----------|-----------|--------------------|------------|------------|-------------|-----------------------|---------------------|
|                    |           | Theory                    | Total     | Theory    | Seminar  | Total     | Duration in Hrs.   | Max. Marks |            | Total Marks | Minimum Passing Marks |                     |
|                    |           |                           |           |           |          |           |                    | External   | Internal   |             | Theory External       | Internal Assessment |
| <b>Semester I</b>  |           |                           |           |           |          |           |                    |            |            |             |                       |                     |
| Paper I            | PSCMTHT01 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper II           | PSCMTHT02 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper III          | PSCMTHT03 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper IV           | PSCMTHT04 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper V            | PSCMTHT05 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| <b>TOTAL</b>       |           | <b>25</b>                 | <b>25</b> | <b>20</b> | <b>5</b> | <b>25</b> | <b>15</b>          | <b>500</b> | <b>125</b> | <b>625</b>  | <b>250</b>            | <b>35</b>           |
| <b>Semester II</b> |           |                           |           |           |          |           |                    |            |            |             |                       |                     |
| Paper VI           | PSCMTHT06 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper VII          | PSCMTHT07 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper VIII         | PSCMTHT08 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper IX           | PSCMTHT09 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper X            | PSCMTHT10 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| <b>TOTAL</b>       |           | <b>25</b>                 | <b>25</b> | <b>20</b> | <b>5</b> | <b>25</b> | <b>15</b>          | <b>500</b> | <b>125</b> | <b>625</b>  | <b>250</b>            | <b>35</b>           |

### M. Sc. (Mathematics) Semester III & IV (CBCS)

| Paper                                   | Code             | Paper Name   |                  | Paper                                   | Code             | Paper Name   |                  |
|---|------------------|--|------------------|---|------------------|--|------------------|
| <b>Semester III</b>                     |                  |  |                  | <b>Semester IV</b>                      |                  |  |                  |
| <b>Paper XI</b>                         | <b>PSCMTHT11</b> | <b>Complex Analysis</b>  |                  | <b>Paper XVI</b>                        | <b>PSCMTHT16</b> | <b>Dynamical Systems</b>   |                  |
| <b>Paper XII</b>                        | <b>PSCMTHT12</b> | <b>Functional Analysis</b>   |                  | <b>Paper XVII</b>                       | <b>PSCMTHT17</b> | <b>Partial Differential Equations</b>  |                  |
| <b>Paper XIII</b>                       | <b>PSCMTHT13</b> | <b>Mathematical Methods</b>  |                  | <b>Paper XVIII</b>                      | <b>PSCMTHT18</b> | <b>Integral Equations</b>  |                  |
| <b>Paper XIV<br/>(Core Elective)</b>    | <b>PSCMTHT14</b> | 1. Fluid Dynamics I<br>2. General Relativity I<br>3. Graph Theory  | } <b>Any One</b> | <b>Paper XIX<br/>(Core Elective)</b>    | <b>PSCMTHT19</b> | 1. Fluid Dynamics II<br>2. General Relativity II<br>3. Combinatorics   | } <b>Any One</b> |
| <b>Paper XV<br/>(Foundation Course)</b> | <b>PSCMTHT15</b> | 1. Operations Research I<br>2. Elementary Mathematics<br>3. MATLAB Programming<br>4. Number Theory<br>5. Fuzzy Mathematics I | } <b>Any One</b> | <b>Paper XX<br/>(Foundation Course)</b> | <b>PSCMTHT20</b> | 1. Operations Research II<br>2. Elementary Discrete Mathematics<br>3. Coding Theory<br>4. Financial Mathematics<br>5. Fuzzy Mathematics II | } <b>Any One</b> |

| Theory Paper       | Code      | Teaching Scheme Hrs./Week |           | Credit    |          |           | Examination Scheme |            |            |             |                       |                     |
|--------------------|-----------|---------------------------|-----------|-----------|----------|-----------|--------------------|------------|------------|-------------|-----------------------|---------------------|
|                    |           | Theory                    | Total     | Theory    | Seminar  | Total     | Duration in Hrs.   | Max. Marks |            | Total Marks | Minimum Passing Marks |                     |
|                    |           |                           |           |           |          |           |                    | External   | Internal   |             | Theory External       | Internal Assessment |
| <b>Semester I</b>  |           |                           |           |           |          |           |                    |            |            |             |                       |                     |
| Paper XI           | PSCMTHT11 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper XII          | PSCMTHT12 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper XIII         | PSCMTHT13 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper XIV          | PSCMTHT14 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper XV           | PSCMTHT15 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| <b>TOTAL</b>       |           | <b>25</b>                 | <b>25</b> | <b>20</b> | <b>5</b> | <b>25</b> | <b>15</b>          | <b>500</b> | <b>125</b> | <b>625</b>  | <b>250</b>            | <b>35</b>           |
| <b>Semester II</b> |           |                           |           |           |          |           |                    |            |            |             |                       |                     |
| Paper XVI          | PSCMTHT16 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper XVII         | PSCMTHT17 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper XVIII        | PSCMTHT18 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper XIX          | PSCMTHT19 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| Paper XX           | PSCMTHT20 | 5                         | 5         | 4         | 1        | 5         | 3                  | 100        | 25         | 125         | 50                    | 07                  |
| <b>TOTAL</b>       |           | <b>25</b>                 | <b>25</b> | <b>20</b> | <b>5</b> | <b>25</b> | <b>15</b>          | <b>500</b> | <b>125</b> | <b>625</b>  | <b>250</b>            | <b>35</b>           |