5 Years Integrated MCA (3rd Semester)

060060312: DSE3 Advanced Mathematics for Computer Applications

Assessment Policy

### Theory Assessment Policy

<table>
<thead>
<tr>
<th>Assessment Code</th>
<th>Assessment Type</th>
<th>Duration of each</th>
<th>Occurrence</th>
<th>Each of marks</th>
<th>Weightage in CIE of 40 marks</th>
<th>Tentative Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Quiz</td>
<td>1 Hour</td>
<td>1</td>
<td>20</td>
<td>$06 \times 01=06$</td>
<td>2nd week of July</td>
</tr>
<tr>
<td>A2</td>
<td>EYU</td>
<td>1 Hour</td>
<td>2</td>
<td>20</td>
<td>$06 \times 02=12$&lt;br&gt;[EYU \ 01 \text{ Based on Unit 01, 02 and 03} ]&lt;br&gt;[EYU \ 02 \text{ Based on Unit 01, 02, 03, 04 and 05} ]</td>
<td>EYU 01&lt;br&gt;4th week of July</td>
</tr>
<tr>
<td>A3</td>
<td>Unit Test</td>
<td>1 Hour</td>
<td>2</td>
<td>20</td>
<td>$06 \times 02=12$&lt;br&gt;[Unit Test 01 \text{ Based on Unit 01 and 02} ]&lt;br&gt;[Unit Test 02 \text{ Based on Unit 01, 02, 03 and 04} ]</td>
<td>Unit Test 01&lt;br&gt;Last week of July</td>
</tr>
<tr>
<td>A4</td>
<td>Internal Examination</td>
<td>3 Hours</td>
<td>1</td>
<td>60</td>
<td>$10 \times 01=10$&lt;br&gt;Covers entire syllabus</td>
<td>Last week of Sept</td>
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</tbody>
</table>

### Mapping Thinking Order

<table>
<thead>
<tr>
<th>Assessment Code</th>
<th>Assessment Type</th>
<th>Weightages (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Remembering</td>
<td>Understanding</td>
</tr>
<tr>
<td>A1</td>
<td>Quiz</td>
<td>-</td>
</tr>
<tr>
<td>A2</td>
<td>EYU</td>
<td>20</td>
</tr>
</tbody>
</table>

Approved by

Ms. Poonam Godhwani

[Signature]

[Signature]
### Assessment Type Classification:

<table>
<thead>
<tr>
<th>Assessment Code</th>
<th>Weightage of Content</th>
<th>Unit</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td></td>
<td>01</td>
<td>100</td>
</tr>
</tbody>
</table>

**Assessment Type:** Quiz

**Question Format:** Choose the most appropriate answer(s) for questions from the given options. [20 questions of 1 mark each are of understanding type.]

**Course Outcome Mapped:**
- CO1: Design and use foundational concepts of notations and results of graph theory in information storage and retrieval.

**Programme Outcome Mapped:**
- PO1: Ability to understand the concepts of key areas in computer science.
- PO2: Ability to design and develop system, component or process as well as test and maintain it so as to provide promising solutions to industry and society.

<table>
<thead>
<tr>
<th>Assessment Code</th>
<th>Weightage of Content</th>
<th>Unit</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2</td>
<td></td>
<td>2</td>
<td>100</td>
</tr>
</tbody>
</table>

**Assessment Type:** EYU (Express Your Understanding) 01

**Question Format:**
- All are evaluation type questions. Students have to write what they gain from particular Unit during lecture session.
- Q-1 Do as directed. Each question of 5 marks. (2 questions, marks will be 5 \( \times 2 = 10 \) marks)
- Q-2 Write summaries for given question. Each question of 5 marks. (2 questions, marks will be 5 \( \times 2 = 10 \) marks)

[Note: To measure learning understanding]
Course Outcome Mapped:

C01: Design and use foundational concepts of notations and results of graph theory in information storage and retrieval.

Programme Outcome Mapped:

P01: Ability to understand the concepts of key areas in computer science.
P02: Ability to design and develop system, component or process as well as test and maintain it so as to provide promising solutions to industry and society.

<table>
<thead>
<tr>
<th>Assessment Code</th>
<th>Weightage of Content</th>
<th>Unit</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A3</td>
<td></td>
<td>1 &amp; 2</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>60</td>
</tr>
</tbody>
</table>

Assessment Type: Unit Test 01

Question Format:

Q-1 (A): Answer in brief. Each question of 1 mark. (4 questions, marks will be 1 X 4 = 4 marks)

Q-1 (B): Answer in brief. Each questions of 2 marks. (3 out of 4 questions, marks will be 2 X 3 = 6 marks)

Q-2 Analysis based answer. Each questions of 5 marks. (2 out of 4 questions, marks will be 5 X 1 = 5 marks)

Q-3 Answer in detail. Each questions of 5 marks. (2 out of 3 questions, marks will be 5 X 1 = 5 marks)

Total Mark: Q-1+ Q-2 + Q-3 = 10 + 10 + 10 = 30 Marks

Course Outcome Mapped:

C01: Design and use foundational concepts of notations and results of graph theory in information storage and retrieval.

C02: Apply the basic concepts of spanning tree algorithm namely DFA, BFS, Prim’s and Kruskal’s in design of networks.

Programme Outcome Mapped:

P01: Ability to understand the concepts of key areas in computer science.
P02: Ability to design and develop system, component or process as well as test and maintain it so as to provide promising solutions to industry and society.
### Assessment Code: A2

<table>
<thead>
<tr>
<th>Weightage of Content</th>
<th>Unit</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>100</td>
</tr>
</tbody>
</table>

**Assessment Type:** EYU (Express Your Understanding) 02

**Question Format:**

- All are evaluation type questions. Students have to write what they gain from particular unit during lecture session.

- Q-1 Do as directed. Each question of 5 marks. (2 questions, marks will be 5 x 2 = 10 marks)

- Q-2 Write summaries for given question. Each question of 5 marks. (2 questions, marks will be 5 x 2 = 10 marks)

[Note: To measure learning understanding]

**Course Outcome Mapped:**

- CO1: Design and use foundational concepts of notations and results of graph theory in information storage and retrieval.

- CO2: Apply the basic concepts of spanning tree algorithm namely DFA, BFS, Prim's and Kruskal's in design of networks.

**Programme Outcome Mapped:**

- PO1: Ability to understand the concepts of key areas in computer science.

- PO2: Ability to design and develop system, component or process as well as test and maintain it so as to provide promising solutions to industry and society.

- PO5: Recognition of the need for life-long learning.

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### Assessment Code: A3

<table>
<thead>
<tr>
<th>Weightage of Content</th>
<th>Unit</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1, 2 &amp; 3</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>4 &amp; 5</td>
<td>60</td>
</tr>
</tbody>
</table>

**Assessment Type:** Unit Test 02

**Question Format:**

- Q-1 (A): Answer in brief. Each question of 1 mark. (4 questions, marks will be 1 X 4 = 4 marks)

- Q-1 (B): Answer in brief. Each questions of 2 marks. (3 out of 4 questions, marks will be 2 X 3 = 6 marks)

- Q-2 Analysis based answer. Each questions of 5 marks. (2 out of 4 questions, marks will be 5 X 1 = 5 marks)

- Q-3 Answer in detail. Each questions of 5 marks. (2 out of 3 questions, marks will be 5 X 1 = 5 marks)
Total Mark: Q:1+ Q:2 + Q:3 = 10 + 10 + 10 = 30 Marks

Course Outcome Mapped:
C01: Design and use foundational concepts of notations and results of graph theory in information storage and retrieval.
C02: Apply the basic concepts of spanning tree algorithm namely DFA, BFS, Prim’s and Kruskal’s in design of networks.

Programme Outcome Mapped:
P01: Ability to understand the concepts of key areas in computer science.
P02: Ability to design and develop system, component or process as well as test and maintain it so as to provide promising solutions to industry and society.
P05: Recognition of the need for life-long learning.

<table>
<thead>
<tr>
<th>Assessment Code :</th>
<th>Weightage of Content :</th>
<th>Unit</th>
<th>(%)</th>
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</thead>
<tbody>
<tr>
<td>A4</td>
<td></td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>3</td>
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<td></td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
<td>15</td>
</tr>
</tbody>
</table>

Assessment Type : Internal Exam

Question Format:
Q-1 (A): Answer in brief. Each question of 1 mark. (4 questions, marks will be 1 X 4 = 4 marks)

Q-1 (B): Answer in brief. Each questions of 2 marks. (3 out of 4 questions, marks will be 2 X 3 = 6 marks)

Q-2 Analysis based answer. Each questions of 5 marks. (2 out of 4 questions, marks will be 5 X 2 = 10 marks)

Q-3 Answer in detail. Each questions of 5 marks. (2 out of 3 questions, marks will be 5 X 2 = 10)

Q-4 (A): Answer in brief. Each question of 1 mark. (4 questions, marks will be 1 X 4 = 4 marks)

Q-4 (B): Answer in brief. Each questions of 2 marks. (3 out of 4 questions, marks will be 2 X 3 = 6 marks)

Q-5 Analysis based answer. Each questions of 5 marks. (2 out of 4 questions, marks will be 5 X 2 = 10 marks)

Q-6 Answer in detail. Each questions of 5 marks. (2 out of 3 questions, marks will be 5 X 2 = 10)
<table>
<thead>
<tr>
<th>Course Outcome Mapped:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C01: Design and use foundational concepts of notations and results of graph theory in information storage and retrieval.</td>
<td></td>
</tr>
<tr>
<td>C02: Apply the basic concepts of spanning tree algorithm namely DFA, BFS, Prim's and Kruskal's in design of networks.</td>
<td></td>
</tr>
<tr>
<td>C03: Apply the basics of project scheduling in Software engineering and project scheduling.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Programme Outcome Mapped:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>P01: Ability to understand the concepts of key areas in computer science.</td>
<td></td>
</tr>
<tr>
<td>P02: Ability to design and develop system, component or process as well as test and maintain it so as to provide promising solutions to industry and society.</td>
<td></td>
</tr>
<tr>
<td>P05: Recognition of the need for life-long learning.</td>
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</tr>
</tbody>
</table>

Bonus Policy: Student shall have 2 marks as bonus in theory internal marks, if student have cleared at least 4 CIEs with minimum 50% marks in each.

Note: Bonus shall be given to eligible students such that final internal marks do not exceed 40.