

F.Y. Diploma Sem. II: Summer 2019

• Tel. : 022-4232 1140 • WhatsApp 7045 018 539



| Group | Subject | MSBTE Examination Scheme | | | | |
|-------|---------|--------------------------|---------------------|-------------------------|-----------------------------|-------|
| | | Theory Marks | | Practical Marks | | TOTAL |
| | | All | Applied Mathematics | End Semester Exam (ESE) | Progressive Assessment (PA) | |
| 70 | 30 | | | - | - | |

| Study Material (that will be distributed to the Students) | | | |
|-----------------------------------------------------------|-----------------------|--------------------------|------------------------------------------|
| Notes (In Question & Answer Format with Solved Examples) | Graded Questions (GQ) | Past Exam Questions (EQ) | Past Exam Paper Solutions (EQ Solutions) |

Tentative Lesson Plan

| Week | Unit No. | Topic | Branches | | | | Weightage (Marks) | | | Total marks |
|------|-------------------------------------------------------|--------------------------------------------------|----------|-----------|----------|----------|----------------------|------------------------|---------------------------|-------------|
| | | | CO/Group | EJ/-Group | CE/Group | ME-Group | R Level (R=Remember) | U Level (U=Understand) | A Level (A=Apply & Above) | |
| 1. | - | Introduction | | | | | | | | |
| | 1.1 | Differential Calculus | | | | | | | | |
| 2. | 1.1 | Differential Calculus | | | | | | | | |
| 3. | 1.2 | Differential Calculus | ✓ | ✓ | ✓ | ✓ | 4 | 8 | 12 | 24 |
| 4. | 1.2 | Differential Calculus | | | | | | | | |
| 5. | 1.3 | Differential Calculus | | | | | | | | |
| 6. | 1.3 | Differential Calculus | | | | | | | | |
| 7. | 2.1 | Integral calculus | | | | | | | | |
| | Revision + Doubt Solving Session (For PT-I) | | | | | | | | | |
| 8. | 2.2 | Integral calculus | ✓ | ✓ | ✓ | ✓ | 2 | 6 | 8 | 16 |
| 9. | 2.2 | Integral calculus | | | | | | | | |
| 10. | 2.2 | Integral calculus | | | | | | | | |
| 11. | 3.1 | Application of definite integration | | | | | | | | |
| 12. | 3.2 | Application of definite integration | ✓ | ✓ | ✓ | ✓ | 2 | 2 | 4 | 08 |
| 13 | 4.1 | First Order, First Degree Differential Equations | | | | | | | | |
| | Revision + Doubt Solving Session (For PT-II) | | ✓ | ✓ | ✓ | ✓ | 2 | 2 | 4 | 08 |
| 14 | 4.2 | First Order, First Degree Differential Equations | | | | | | | | |
| E* | 5. | Numerical Methods | ✓ | - | - | - | 2 | 5 | 7 | 14 |
| E* | 5. | Complex Number & Laplace transform | - | ✓ | - | - | 2 | 5 | 7 | 14 |
| E* | 5. | Numerical Integration | - | - | ✓ | - | 2 | 5 | 7 | 14 |
| E* | 5. | Probability Distribution | - | - | - | ✓ | 2 | 5 | 7 | 14 |

❖ Test will be conducted on each Topic after the Topic gets over.
 ❖ Model Solutions will be distributed immediately after the exams.
 ❖ Needless to say, attendance for these Unit Tests is Mandatory.
 ❖ Tests will be supervised by the Subject Faculty.

Note: ♦ *Extra Lectures, if required, will be engaged and will be decided in consultation with the Students.

♦ **Personal Doubt Solving:** Personal Doubt Solving sessions will be held after each lecture.

| Test No. | Topic for Test @ Vidyalankar | Test No. | Topic for Test @ Vidyalankar |
|----------|----------------------------------------------------|----------|-------------------------------------------------|
| 1. | Differential Calculus (Derivatives) | 4. | Definite Integration + Application |
| 2. | Differential Calculus (Application of Derivatives) | 5. | First Order, First Degree Differential Equation |
| 3. | Integral Calculus (Indefinite Integration) | | |

PT Exam (MSBTE):

| PT Exam | Day / Date | Exam Leave (No Lecture) | Note: Sem. II MSBTE Final Theory Exam is likely to be held from 11 April . |
|---------|------------------------------------|--------------------------|------------------------------------------------------------------------------------------|
| PT-I | In the week starting Mon, 4 Feb. | 3,4,5, Feb. | |
| PT-II | In the week starting Wed, 20 March | 19,20,21,22, March | |

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|------------|-------------------|--------------------------|-----------------------------|-----------------|----|-------|
| | | Theory Marks | | Practical Marks | | TOTAL |
| Mechanical | Applied Mechanics | End Semester Exam (ESE) | Progressive Assessment (PA) | ESE | PA | 150 |
| | | 70 | 30 | 25 | 25 | |

| Study Material (that will be distributed to the Students) | | | |
|-----------------------------------------------------------|-----------------------|--------------------------|------------------------------------------|
| Notes (In Question & Answer Format with Solved Examples) | Graded Questions (GQ) | Past Exam Questions (EQ) | Past Exam Paper Solutions (EQ Solutions) |

Tentative Lesson Plan

| Week | Unit No. | Topic | Weightage (Marks) | | | |
|-------------------------------------------------------|----------|---------------------------------|----------------------|------------------------|---------------------------|-------------|
| | | | R Level (R=Remember) | U Level (U=Understand) | A Level (A=Apply & Above) | Total marks |
| 1. | - | Introduction | - | - | - | - |
| 2. | I | Mechanics and Force System | 2 | 2 | 2 | 6 |
| 3. | | Mechanics and Force System | | | | |
| 4. | II | Simple Lifting Machine | 2 | 4 | 6 | 12 |
| 5. | | Simple Lifting Machine | | | | |
| 6. | | Simple Lifting Machine | | | | |
| 7. | III | Resolution and Composition | 2 | 4 | 8 | 14 |
| Revision + Doubt Solving Session (For PT-I) | | | | | | |
| 8. | III | Resolution and Composition | 2 | 2 | 10 | 14 |
| 9. | | Resolution and Composition | | | | |
| 10. | IV | Equilibrium | 2 | 2 | 10 | 14 |
| 11. | | Equilibrium | | | | |
| 12. | | Equilibrium | | | | |
| 13. | V | Friction | 2 | 4 | 6 | 12 |
| Revision + Doubt Solving Session (For PT-II) | | | | | | |
| 14. | V | Friction | 2 | 4 | 6 | 12 |
| 15. | | Friction | | | | |
| *16. | VI | Centroids and Centre of Gravity | 2 | 2 | 8 | 12 |

Test will be conducted on each Topic after the Topic gets over.
 ❖ Model Solutions will be distributed immediately after the exams.
 ❖ Needless to say, attendance for these Unit Tests is Mandatory.
 ❖ Tests will be supervised by the Subject Faculty.

Note: ♦ * Extra Lectures, if required will be engaged and will be decided in consultation with the Students.

♦ **Personal Doubt Solving:** Personal Doubt Solving sessions will be held after each lecture.

| Topic for Test @ Vidyalankar | Test-1 | Test-2 | Test-3 |
|------------------------------|--------|-------------------------|-----------------------------------------|
| | | Simple Lifting Machines | Force system Resolution and Composition |

Note: Preliminary Exam: Preliminary exam will be held before the MSBTE Exam. Exact schedule will be informed to students in the Class

PT Exam (MSBTE):

| PT Exam | Day / Date | Exam Leave (No Lecture) | Note: Sem. II MSBTE Final Theory Exam is likely to be held from 11 April |
|---------|------------------------------------|--------------------------|----------------------------------------------------------------------------------------|
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| Group | Subject | MSBTE Examination Scheme | | | | |
|-------|---------|--------------------------|---------------------|-------------------------|-----------------------------|-------|
| | | Theory Marks | | Practical Marks | | TOTAL |
| | | Mechanical | Engineering Drawing | End Semester Exam (ESE) | Progressive Assessment (PA) | |
| 70 | 30 | | | 25 | 25 | |

| Study Material (that will be distributed to the Students) | | | |
|-----------------------------------------------------------|-----------------------|--------------------------|------------------------------------------|
| Notes (In Question & Answer Format with Solved Examples) | Graded Questions (GQ) | Past Exam Questions (EQ) | Past Exam Paper Solutions (EQ Solutions) |

Tentative Lesson Plan

| Week | Unit No. | Topic | Weightage (Marks) | | | |
|-------------------------------------------------------|----------|--------------------------------------------------|----------------------|------------------------|---------------------------|-------------|
| | | | R Level (R=Remember) | U Level (U=Understand) | A Level (A=Apply & Above) | Total marks |
| 1. | I | Projection of Straight Lines | - | 2 | 8 | 10 |
| 2. | | Projection of Straight Lines | | | | |
| 3. | | Planes | | | | |
| 4. | II | Projection of Solids | - | 2 | 10 | 12 |
| 5. | | Projection of Solids | | | | |
| 6. | | Projection of Solids | | | | |
| 7. | III | Section of Solids | - | 2 | 10 | 12 |
| Revision + Doubt Solving Session (For PT-I) | | | | | | |
| 8. | III | Section of Solids | | | | |
| 9. | | Section of Solids | | | | |
| 10. | IV | Sectional orthographic Views | - | 2 | 10 | 12 |
| 11. | | Sectional orthographic Views | | | | |
| 12. | | Sectional orthographic Views | | | | |
| 13. | V | Missing Views | 2 | 4 | 12 | 18 |
| Revision + Doubt Solving Session (For PT-II) | | | | | | |
| 14. | V | Missing & Auxiliary Views | | | | |
| 15. | | Missing & Auxiliary Views | | | | |
| *16. | VI | Free Hand Sketches/ Conventional Representations | 4 | 2 | - | 6 |

❖ Test will be conducted on each Topic after the Topic gets over.
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 ❖ Tests will be supervised by the Subject Faculty.

Note: ♦ *Extra Lectures, if required, will be engaged and will be decided in consultation with the Students.
 ♦ **Personal Doubt Solving:** Personal Doubt Solving sessions will be held after each lecture.

| Topic for Test @ Vidyalankar | Test-1 | Test-2 | Test-3 |
|------------------------------|--------|---------------------------------------|----------------------|
| | | Projection of Straight Lines & Planes | Projection of Solids |

Note: Preliminary Exam: Preliminary exam will be held before the MSBTE Exam. Exact schedule will be informed to students in the Class

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Note: Sem. II MSBTE Final Theory Exam is likely to be held from **11 April**.

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| | | Theory Marks | | Practical Marks | | TOTAL |
| | | End Semester Exam (ESE) | Progressive Assessment (PA) | ESE | PA | |
| Mechanical | Applied Science (Physics) | 35 | 15 | 25 | 25 | 100 |

| Study Material (that will be distributed to the Students) | | | |
|-----------------------------------------------------------|-----------------------|--------------------------|------------------------------------------|
| Notes (In Question & Answer Format with Solved Examples) | Graded Questions (GQ) | Past Exam Questions (EQ) | Past Exam Paper Solutions (EQ Solutions) |

Tentative Lesson Plan

| Week | Unit No. | Topic | Weightage (Marks) | | | |
|-------------------------------------------------------|----------|-------------------------|----------------------|------------------------|---------------------------|-------------|
| | | | R Level (R=Remember) | U Level (U=Understand) | A Level (A=Apply & Above) | Total marks |
| 1. | I | Introduction | 3 | 5 | 6 | 14 |
| 2. | | Properties of Matter | | | | |
| 3. | | Properties of Matter | | | | |
| 4. | | Properties of Matter | | | | |
| 5. | | Non Destructive Testing | | | | |
| 6. | II | Types of Motion | 2 | 2 | 6 | 10 |
| 7. | | Types of Motion | | | | |
| Revision + Doubt Solving Session (For PT-I) | | | | | | |
| 8. | II | Types of Motion | | | | |
| 9. | | Types of Motion | | | | |
| 10. | III | Photoelectricity | 3 | 4 | 4 | 11 |
| 11. | | Photoelectricity | | | | |
| 12. | | X-Rays | | | | |
| 13. | | Lasers | | | | |
| Revision + Doubt Solving Session (For PT-II) | | | | | | |

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 ♦ **Personal Doubt Solving:** Personal Doubt Solving sessions will be held after each lecture.

| Topic for Test @ Vidyalankar | Test-1 | Test-2 | Test-3 |
|------------------------------|--------|----------------------|-----------------|
| | | Properties of Matter | Types of Motion |

Note: Preliminary Exam: Preliminary exam will be held before the MSBTE Exam. Exact schedule will be informed to students in the Class

PT Exam (MSBTE):

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|------------|-----------------------------|--------------------------|-----------------------------|-----------------|----|-------|
| | | Theory Marks | | Practical Marks | | TOTAL |
| | | End Semester Exam (ESE) | Progressive Assessment (PA) | ESE | PA | |
| Mechanical | Applied Science (Chemistry) | 35 | 15 | 25 | 25 | |

| Study Material (that will be distributed to the Students) | | | |
|-----------------------------------------------------------|-----------------------|--------------------------|------------------------------------------|
| Notes (In Question & Answer Format with Solved Examples) | Graded Questions (GQ) | Past Exam Questions (EQ) | Past Exam Paper Solutions (EQ Solutions) |

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|------------------------------------------------------|----------|----------------------|----------------------|------------------------|---------------------------|-------------|
| | | | R Level (R=Remember) | U Level (U=Understand) | A Level (A=Apply & Above) | Total marks |
| 1. | IV | Introduction | 2 | 4 | 6 | 12 |
| 2. | | Metals , Alloys | | | | |
| 3. | | Metals , Alloys | | | | |
| 4. | | Cement | | | | |
| 5. | | Refractory Materials | | | | |
| 6. | V | Water Treatment | 2 | 3 | 6 | 11 |
| 7. | | Water Treatment | | | | |
| Revision + Doubt Solving Session (For PT-I) | | | | | | |
| 8. | V | Water Treatment | 2 | 3 | 6 | 11 |
| 9. | | Water Treatment | | | | |
| 10. | VI | Fuel | 3 | 4 | 5 | 12 |
| 11. | | Fuel and Combustion | | | | |
| 12. | | Combustion | | | | |

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| Topic for Test @ Vidyalankar | Test-1 | Test-2 | Test-3 |
|------------------------------|--------------------------------------------------|-----------------|--------|
| | Metals , Alloys, Cement and Refractory Materials | Water Treatment | Fuel |

Note: Preliminary Exam: Preliminary exam will be held before the MSBTE Exam. Exact schedule will be informed to students in the Class.

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