



# GOVERNMENT OF INDIA

## SECOND MATE FOUNDATION

### PAPER: NAUTICAL MATHEMATICS

**TIME: 2 HOURS**

**PASS MARKS: 50**

**MAX. MARKS: 100**

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#### NOTES:

1. Question 1 is compulsory
  2. Attempt any FOUR questions from the remaining question.
  3. All questions carry equal marks. i.e. 20 marks each.
  4. Draw suitable sketches/ diagrams wherever considered necessary
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#### Q1. SPHERICAL TRIGONOMETRY

a)

b)

#### Q2. Differentiation and Integration

a) Differentiation

b) Integration

#### Q3. Differentiation and Integration

a) Differentiation

b) Integration

#### Q4. BASIC MATHEMATICS and CO-ORDINATE GEOMETRY

#### Q5. BASIC MATHEMATICS and CO-ORDINATE GEOMETRY

#### Q6. SPHERICAL TRIGONOMETRY/ CO-ORDINATE GEOMETRY/ BASIC MATHEMATICS

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Please note that the above format is only an indicative of the examination paper. The candidates are advised to refer to detailed teaching syllabus and the course outline.

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# GOVERNMENT OF INDIA

## SECOND MATE FOUNDATION

### PAPER: NAUTICAL PHYSICS

**TIME: 2 HOURS**

**PASS MARKS: 50**

**MAX. MARKS: 100**

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#### NOTES:

5. Question 1 is compulsory
  6. Attempt any FOUR questions from the remaining question.
  7. All questions carry equal marks. i.e. 20 marks each.
  8. Draw suitable sketches/ diagrams wherever considered necessary
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#### Q1. MECHANICS

a)

b)

#### Q2. BASIC PHYSICS

a)

b)

#### Q3. HEAT

a)

b)

#### Q4. SOUND

a)

b)

#### Q5 MAGNETISM and MECHANICS

a)

b)

#### Q6. HEAT, SOUND and BASIC PHYSICS

a)

b)

c)

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# GOVERNMENT OF INDIA

SECOND MATE FOUNDATION

PAPER: NAUTICAL CHEMISTRY

TIME: 2 HOURS

PASS MARKS: 50

MAX. MARKS: 100

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NOTES:

9. Question 1 is compulsory
  10. Attempt any FOUR questions from the remaining questions.
  11. All questions carry equal marks. i.e. 20 marks each.
  12. Draw suitable sketches/ diagrams wherever considered necessary
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Q1. ORGANIC CHEMISTRY and PHYSICAL CHEMISTRY

- a) ORGANIC CHEMISTRY
- b) PHYSICAL CHEMISTRY

Q2. PHYSICAL CHEMISTRY and INORGANIC CHEMISTRY

- a) PHYSICAL CHEMISTRY
- b) INORGANIC CHEMISTRY

Q3. PHYSICAL CHEMISTRY and ORGANIC CHEMISTRY

- a) PHYSICAL CHEMISTRY
- b) ORGANIC CHEMISTRY

Q4. INORGANIC CHEMISTRY and ORGANIC CHEMISTRY

- a) INORGANIC CHEMISTRY
- b) ORGANIC CHEMISTRY

Q5. PHYSICAL CHEMISTRY and INORGANIC CHEMISTRY

- a) PHYSICAL CHEMISTRY
- b) INORGANIC CHEMISTRY

Q6. PHYSICAL CHEMISTRY and INORGANIC CHEMISTRY and ORGANIC CHEMISTRY

a) PHYSICAL CHEMISTRY

b) INORGANIC CHEMISTRY

c) ORGANIC CHEMISTRY

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# GOVERNMENT OF INDIA

## SECOND MATE FOUNDATION

### PAPER: NAUTICAL ELECTRICITY & ELECTRONICS

**TIME: 2 HOURS**

**PASS MARKS: 50**

**MAX. MARKS: 100**

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#### NOTES:

- 13. Question 1 is compulsory
  - 14. Attempt any FOUR questions from the remaining question.
  - 15. All questions carry equal marks. i.e. 20 marks each.
  - 16. Draw suitable sketches/ diagrams wherever considered necessary
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#### Q1. ELECTRICITY

- a)
- b)

#### Q2. RADIO and ELECTRONICS

- a)
- b)

#### Q3. ELECTRICITY

- a)
- b)

#### Q4. ELECTRICITY , RADIO and ELECTRONICS

- a)
- b)

#### Q5 ELECTRICITY , RADIO and ELECTRONICS

- a)
- b)

#### Q6. ELECTRICITY , RADIO and ELECTRONICS

- a)
- b)

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