INDIAN MARITIME UNIVERSITY CHENNAI CAMPUS

PATTERN & BLUE PRINT BNA014 NAVIGATION I

Maximum Marks: 70
Time : 3 Hours.

Two Sections – Section A Terrestrial and Celestial Navigation
Section B Chart Work

Section A – 35 marks. Six questions.
Section B – 35 marks. Four questions. All questions are compulsory. Use Srilanka Chart.

BLUE PRINT: Section A : Six questions.
Earth 2 marks.
Parallel & Plane Sailing 5 marks. One question
Mercator Sailing 4 marks. One question
    Day's Work 5 marks. One question
Concept of time 4 marks.
    Celestial Sphere & Equinoctial
System of coordinates 4 marks.
Horizon System 4 marks.
Sextant & Altitude Correction 5 marks. One question
Amplitude 2 marks. Balance two questions short answer type with not more than 8 sub questions.

Section B : Four questions.
 Chart Datum & Compass correction 12 marks. One question with not more than six sub questions.
    Position & Position line definitions 8 marks. One question with not more than 4 sub questions.
 Chart Work Plotting exercises – Two 10 marks & 5 marks each.
QUESTION PAPER SHOULD HAVE TWO SECTIONS:

SECTION A: ANSWER ANY 4 QUESTIONS OUT OF 6, FOR A TOTAL OF 40 MARKS

SECTION B: ANSWER ANY 3 QUESTIONS OUT OF 4, FOR A TOTAL OF 30 MARKS

NOTE: TOTALLY ANSWER ONLY 7 QUESTIONS IN BOTH THE SECTIONS FOR 70 MARKS.

THE PASSING PERCENTAGE IS 40% OVERALL IN BOTH SECTIONS.

BLUE PRINT

SECTION A: BRIDGE EQUIPMENTS AND WATCH KEEPING – 40 MARKS

BLOCK 1: UNIT NO 1: NAVIGATIONAL AIDS: 20 MARKS - 2 QUESTIONS OF 10 MARKS EACH

UNIT NO 2: CONDUCT OF VESSELS IN SIGHT OF ONE ANOTHER & IN RESTRICTED VISIBILITY

(LIMITED TO RULES 1-8 AND 11-19):

20 MARKS - 2 QUESTIONS OF 10 MARKS EACH

UNIT NO 3: LIGHT SHAPES AND SOUND SIGNALS (RULE NO 23 – 31):

20 MARKS - 2 QUESTIONS OF 10 MARKS EACH.

SECTION B: METEOROLOGY AND OCEANOGRAPHY - 30 MARKS

BLOCK 2: UNIT NO 4: METEOROLOGY: 30 MARKS - 4 QUESTIONS OF 10 MARKS EACH
1. A) Types of merchant ships & Cargoes  
   B) Loading, unloading, segregation & Separation
2. Basic Cargo Works Terms definitions
3. A) Cargo Care - Ventilation procedures  
   B) Ship Care - Methods to prevent Corrosion
4. Care of Fibre and Wire Ropes
5. Numerical to calculate loadable qty of cargo by giving Stowage Factor, Load Density

Section II

6. Load Line marks sketch and description
7. Safe Working Practices
8. Ship Construction- Principal & Hull dimensions
9. Numerical to Calculate Deadweight Aboard, Available Cargo giving TPC, DWA and drafts
**Indian Maritime University**

**Diploma in Nautical Sciences**

**English & Human Factors**

**Time:** 120 minutes  
**Max Marks:** 100

**Rubrics:** Attempt all questions.

**Notes:** Very Short Answer — includes Fill in the blanks, selection of right choice, Answer in one or two sentences.

Short Answer: writing paragraphs / Notes.

Application / Long answer: Comprehension passage, writing of letters, Essay type.

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<th>Very Short Answer</th>
<th>Short Answer</th>
<th>Application/Longer Answer</th>
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<td>Unit 5 Organisational Behaviour</td>
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IN extradate UNIVERSITY CHENNAI CAMPUS

QUESTION PAPER PATTERN & BLUE PRINT

BNA 022 NAVIGATION IV

ADVANCE BRIDGE EQUIPMENTS, WATCH KEEPING, METEOROLOGY & OCEANOGRAPHY

MAXIMUM MARK: 100

TIME: 2 HOURS

QUESTION PAPER SHOULD HAVE TWO SECTIONS:

SECTION A: ANSWER ANY 4 QUESTIONS OUT OF 6, FOR A TOTAL OF 40 MARKS

SECTION B: ANSWER ANY 3 QUESTIONS OUT OF 4, FOR A TOTAL OF 30 MARKS

NOTE: 1. TOTALLY ANSWER ONLY 6 QUESTIONS IN BOTH THE SECTIONS FOR 70 MARKS.

THE PASSING PERCENTAGE IS 40% OVERALL IN BOTH SECTIONS.

2. SHIP WEATHER CODE TABLES FOR CODING/DECODING IS TO BE PROVIDED BY THE INSTITUTE.

BLUE PRINT

SECTION A: BRIDGE EQUIPMENTS AND WATCH KEEPING – 40 MARKS

BLOCK 1: UNIT NO 1: BRIDGE EQUIPMENTS & NAVIGATIONAL AIDS: 15 MARKS

1 QUESTION WITH SUB DIVISION A & B OF 7.5 MARKS EACH

UNIT NO 2: BRIDGE TEAM WORK & MANAGEMENT: 20 MARKS

2 QUESTIONS OF 10 MARKS EACH

UNIT NO 3: WATCH KEEPING PRINCIPLES AND DUTIES: 15 MARKS

1 QUESTION WITH SUB DIVISION A & B OF 7.5 MARKS EACH

UNIT NO 4: COLLISION, SAFE SPEED AND REMEDIES: 5 MARKS

1 SAQ OF 5 MARKS

UNIT NO 5: TRAFFIC SEPERATION SCHEMES AND NARROW CHANNELS – 5 MARKS

1 SAQ OF 5 MARKS
SECTION 8: METEOROLOGY AND OCEANOGRAPHY - 30 MARKS

BLOCK 2: ENVIRONMENTAL SCIENCE

UNIT NO 6: CONDENSATION AND PRECIPITATION: 10 MARKS - 1 QUESTION OF 10 MARK

UNIT NO 7: PRESSURE WINDS AND STORMS: 10 MARKS - 1 QUESTION OF 10 MARK

UNIT NO 8: WEATHER REPORTING: 10 MARKS - 1 QUESTION OF 10 MARK

UNIT NO 9: OCEANOGRAPHY: 10 MARKS - 1 QUESTION OF 10 MARK

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Question Paper Pattern:

Maximum Marks: 70
Time : 2 Hours
Question paper consists of 2 Sections. Section A of 30 marks consists of only two questions – First question has 10 Sub questions each of 2 marks and Second question with 5 Sub questions each of 2 marks. Total marks 10×2 + 5×2 = 30
Section B of 40 marks consists of 4 questions each with 2 sub questions i.e 4 × 2 = 10 questions. Marks = (5+5) × 4 = 40.

Blue Print:

Section A Consists of 2 questions. Question No. 1 consists of:
- Tanker 4 Sub questions each question of 2 marks
- Containers 2 Sub questions each of 2 marks
- Bulk Cargo 1 sub question of 2 marks
- Multipurpose 3 Sub question each of 2 marks
Question No. 2 consists of 5 sub questions on Safe Working Practices, each of 2 marks.

Section B Consists of 4 questions:
- Tanker – 2 Sub questions of 5 marks each i.e. 5 × 2 =10
- Chemical/ Gas carrier 5 marks
- Containers 5 marks
- Bulk carriers 2 sub questions of 5 marks each i.e. 5 × 2 = 10
- General cargo 5 marks
- Ro Ro Vessel 5 marks.
Indian Maritime University – Chennai Campus

Question Paper Pattern and Blue Print

BNA 024 – Ship Operations

Maximum Marks: 70

Time: 2 hours

Question Paper Pattern:

Question paper should have 2 sections

Section-A: Answer any 4 questions out of 6 for a total of 40 marks.

Section-B: Answer any 3 questions out of 5 for a total of 30 marks.

Note: Totally answer 7 questions in both sections for 70 marks. Passing percentage is 40% overall.

Blue Print:

Section-A: Ship construction and Stability

Block 1- Hull structure, Stresses and Hull fittings ---- 10 x 2 = 20 marks

Stational stability, List and Trim ---- 10 x 2 = 20 Marks

Total = 40 Marks

Section-B: Environmental Protection and Basic Marine Engineering and GMDSS

Block2: Environmental Protection 10 x 1 = 10 marks

Basic Marine Engineering 15 x 1 = 15 Marks (3 sub divisions X 5 marks each

GMDSS 5 x 1 = 5 Marks

Total = 30 marks
INDIAN MARITIME UNIVERSITY
EXAMINATION PATTERN & BLUE PRINT
DNS SEMESTER II
BNA-025 MARITIME HISTORY & COMMERCE

Max Marks: 100  Time: 2 hours

Total No. of Questions : 7 (Each Carry 20 Marks)
To be Attempted : 5 (1 Compulsory question)

Blue Print:

1. Significance of NMD (Compulsory Question)
2. Growth of Indian Shipping
3. Various types of ports (Manmade, Natural etc.,)
4. Types of trade – Liner, Tramping
5. Article of agreement & Role of Shipping Master
6. Various International Organizations relating to Maritime Industry
7. Relation between Charterer, Shipper etc.,