

**Qualifying Entrance Test for
B. Tech Marine Engineering / B.Sc.Nautical Science
Degree Course
Sample Test Paper**

Date:-30/05/2010

Time - 2 Hrs

Total Marks - 150

INSTRUCTIONS & INFORMATION

1. A separate Answer Sheet is provided for answers.
2. You must write your name and form number as well as sign on the answer sheet.
3. All Questions carry **one mark each**. Marks will only be earned for correct answers. However, there will be **no negative marking** for wrong answers.
4. **Rough work** may be done on the last page of the Question Paper.
5. **Question Paper must be returned with the answer sheet.**
6. Answer the questions by properly darkening (preferably using HB pencil) the appropriate rectangle against the options given in the answer sheet as shown in the example below:-

Reference Question: - Hacking is a term related to_ _ _ _

- (a) chess (b) computers (c) cinema (d) journalism

a	b	c	d
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sample Questions:-

Below are given some sample questions for each of these sections. In actual test you may find questions on some or all these types and also questions on the type not mentioned here. All the questions are based on the 10+2 level syllabus.

SECTION-I :- (ENGLISH)

Note:-This is a test to see how well you know English. Your English language ability would be tested through questions on grammer, Vocabulary, sentence completion, synonyms, antonyms, comprehension of passage etc.

Directions: Choose the most effective word from the given words to fill in the blank to make their sentence meaningfully Complete.

1. Modern science has made ----- advance
(a) Incredible (b) illegible (c) legitimate (d) objective
2. He is fond of ----- jokes.
(a) throwing (b) boasting (c) cracking (d) suggesting
3. Without any warning ----- electricity went off.
(a) few (b) most (c) each (d) the
4. She is angry -----.
(a) about him (b) with him (c) from (d) to him
5. The army has been ----- to be ready to control the floods.
(a) warned (b) alerted (c) apprised (d) said

SECTION-II (PHYSICS)

Directions: Choose the correct alternative out of four options.

1. Triple point temperature is-

- (a) 273°C (b) 273 K (c) -273°C (d) -273 K
2. P – N junction diode consists of ----- junction
 (a) One (b) Two (c) Three (d) Zero
3. Which of the following is longitudinal wave?
 (a) Sound wave (b) Waves on plucked string (c) Water waves (d) Light waves
4. Emissivity of perfectly black body is
 (a) 1 (b) 2 (c) 5 (d) 0
5. In transistor emitter base junction is always
 (a) Forward biased (b) Reverse biased (c) Grounded (d) Unbiased

SECTION-III (CHEMISTRY)

Choose the correct alternative out of four options.

1. If a refrigerator's door is opened, then we get
 (a) room heated (b) room cooled (c) more heat is passed out (d) no effect on room
2. Piezoelectric crystals are used in
 (a) Radio (b) TV (c) Record player (d) Freeze
3. Which is the hardest substance?
 (a) Glass (b) Diamond (c) Corundum (d) Bauxite
4. The correct order of electropositive nature of Li, Na and K is
 (a) Li > Na > K (b) Li > K > Na (c) Na > K > Li (d) K > Li > Na
5. The number of unpaired electrons in chromium is.....
 (a) 2 (b) 3 (c) 5 (d) 6

SECTION-IV (MATHEMATICS)

Choose the correct alternative out of four options.

1. Which of the following integers equals the product of two prime numbers?
 a] 19 b] 58 c] 41 d] 30
2. An empty oil tanker was filled with oil at a uniform rate in t hours. What proportion of the tanker was filled during the first x hours if x < t?
 a] $\frac{x}{t}$ b] $\frac{t}{x}$ c] $\frac{x}{t-x}$ d] $\frac{t-x}{t}$
3. A bag contain 10 black and 10 white balls, the probability of drawing two balls of the same color is
 a] $\frac{9}{18}$ b] $\frac{9}{17}$ c] $\frac{9}{16}$ d] $\frac{9}{19}$
4. If $\vec{a} = \hat{i} + \hat{j}$ and $\vec{b} = \hat{j} + \hat{k}$ then angle between \vec{a} & \vec{b} is
 a] 30° b] 60° c] 90° d] 120°
5. $\int_0^\pi \sin^2 x \, dx = \text{-----}$
 a] $\frac{\pi}{2}$ b] π c] $3\frac{\pi}{2}$ d] 2π

SECTION-V (GENERAL KNOWLEDGE)

Choose the correct alternative out of four options.

1. I like to watch team games
 (a) Yes (b) Occasionally (c) No (d) both a and b
2. On ship, person must be fit

- (a) Physically & mentally (b) only physically (c) Only mentally
3. Longest River in the World?
(a) Nile (b) Hudson (c) Ganga (d) Brahmaputra
4. Which is most populated Country?
(a) China (b) India (c) Russia (d) S. Africa
5. Who got Bharat Ratna award 2008?
(a) Pt. Bhimsen Joshi (b) Lata Mangeshkar (c) Amartya Sen (d) Pt. Ravi Shankar