2010 JSA NAVIGATION

ADVANCED TEST
SEAMANSHIP TEST
COMBINED BASIC/SEAMANSHIP TEST

JSA-LIS Advanced Navigation Syllabus

The JSA-LIS Big Boat Program includes an advanced navigation test. The test questions will include many, though not all, of the topics outlined on the attached syllabus. The emphasis is on traditional paper-and-pencil charting using lights, buoys, soundings, and published sources to find your boat's position, avoid hazards, choose courses wisely, help the crew do well in the race, and return to port safely.

The test is to be taken by:

- Any junior sailor who wishes to compete for the JSA Navigation Prize
- Any junior sailor who will be serving as a skipper, navigator or watch captain in a big boat event who did not score 80% or higher on the previous year's Advanced test
- Any instructor who will be serving as an advisor in a big boat event who did not score 80% or higher on the previous year's Advanced test

As indicated in the 2010 JSA Big Boat Manual pp 15-17, each person taking the test will need to bring:

- Calculator
- Pencils with erasers
- Dividers and parallel rules
- Chart 12363 for Western Long Island Sound *with no writing on it*
- Eldridge Tide and Pilot Book 2010

Junior sailors will need a program of instruction to prepare for the Advanced test. In past years, many clubs have struggled to develop and conduct that program of instruction. The JSA's Navigation Committee considered several alternative commercially available navigation courses. Two courses, both of which are available from the American Sailing Association, stand out both for their presentation of the materials and the availability of practice questions and answers that can be used to reinforce an understanding of the skills taught. Both of those courses go significantly beyond what junior sailors will need to know for the big boat program and the test, and will need to be modified to fit the time available to teach the material. In the syllabus below, the content of those two courses are compared with the US Sailing Coastal Navigation course. Clubs are free to use whatever curriculum they want. The Navigation Committee recommends that Clubs end up with a course that can be completed in 10 to 12 hours.

Those ASA courses are:

Coastal Navigation and Piloting, by Tom **Tursi**. This course includes a 110 page textbook, a workbook of problems and solutions, and a DVD. It does not assume any previous knowledge or experience in navigation. The course is copyrighted 2004, and copies are available from ASA at http://asastore.us/bookscharts.html, for $71.25. The course books, without the DVD, are available from the Maryland School of Sailing and Seamanship for $60 at http://www.mdschool.com/School%20Store/Store-books.htm#13.

Coastal Navigation: Advanced Cruising Techniques, by Captain Mike **Pyzel**. This course includes a 150 page book of text and problems, and a Power Point presentation on CD. It does assume a knowledge of basic navigation and some boating experience, but not much. The course is copyrighted 2008, and copies are available from ASA at http://asastore.us/bookscharts.html, also for $71.25.

The **US Sailing** *Coastal Navigation* book is less expensive but does not cover some important areas, and provides few practice problems. It is available for $20.95 at http://store.ussailing.org

JSA Advanced Navigation Syllabus Outline

Topic	Tursi	Pyzel	USSailing
The Globe & Charts			
• The Earth, Latitude and Longitude	1-2	A-1	2-8
• Projections, Distortions, Mercator and Alternatives	1-3	A-2	2-8
• Chart Construction and Legends	1-5	1-6	2-9
• Plotting Sheets	1-7		2-13
Navigation Aids			
• Rocks and Shoals		2-1	
• Lighthouses and Buoys	2-1	2-1/4	4-16/22
• Light Characteristics and other Chart Symbols	2-2/3	2-5/9	4-17,A-124
Navigation Tools			
• Plotting Tools	3-1	1-6	2-13
• Charts and Plotting Sheets	3-4	1-2	2-9
• Log Books	3-4		
• Steering Compass	3-8	4-1	
• Variation, Deviation, & Compass Calibration	3-12/14	B-1	5-23/25
• Hand Bearing Compass	3-17	4-1	
• Depth Sounder	3-18	7-1	5-30/31
• Distance, Speed, and Wind Instruments	3-20		5-28/9
• GPS and Chartplotters	3-22	Ch.8	11-66/71
• VHF and other Radios	3-26		
Basic Plotting			
• Latitude & Longitude	4-1	A-1	
• Lines of Direction	4-6	3-1	
• Distance-Speed-Time Calculations	4-9/10	3-4	
• Plotting Symbols	4-11	4-13	A-124
Dead Reckoning and Estimated Position			
• Laying out the Plan for a Cruise—or a Race	5-6/11-1	3-5	Ch.15-17
• Plotting the DR	5-3	3-1	8-45
• Estimated Position	6-14	4-4	9-55
• Logbook	5-1		9-54, A-110

Topic	Tursi	Pyzel	USSailing
Fixing Position			
• Lines of Position	6-1	4-2	10-60
• Light Ranges	6-3	4-9/12	10-61
• Bearings to NavAids	6-5	4-1	10-62
• Position Fixes	6-6/8	4-2	10-59
• Running Fixes	6-9/13	4-5	10-64
• Relative Bearings	6-15	4-6	
• Position Quality	6-20	4-13	
• Danger Bearings	6-20	4-6	12-77
Wind, Current & Tide			
• Leeway	7-1	3-6	8-46
• Current	7-3	6-1	Ch 7
• Current Tables and Charts – Eldridge, etc	7-6/8-2	6-4/7	7-41
• Causes of Tides		6-2	6-1\32
• Tide Tables	7-12	6-2	6-33, A-112
• Current Speed & Tide Height at Any Time	7-11/14	6-11	6-36
Plotting Practice	10-1	E-1	A-110
Weather Considerations			
• Clouds, and the Winds Near Them			
• Low and High Pressure Systems	12-3		
• Cold Fronts and Thundersqualls	12-4		
• Fog		Ch.7	14-89/91
Racer's Questions to the Navigator			
• What's the direction to steer to the next mark?		13-86/88	
• What's the apparent wind after the next mark?			
• Are we ahead of that competitor over there?			

JSA Advanced Navigation Test

PRACTICE VERSION using Chart 12363 Long Island Sound - Western part

This test has been designed to simulate the job that you would have to perform as navigator on a race like the Beach Point Overnight race. During this test, you will actually navigate your way around a course on western Long Island Sound. Your race starts at 1600 one afternoon and finishes sometime the next morning. Along the way you must answer a number of questions to help get your boat (a J/35) to the finish line both quickly and safely.

The Course

Start	Bell "R42"	"Scotch Caps" off Mamaroneck Harbor
Mark 1	Gong "G21"	Matinecock Point (eastern approach to Hempstead Harbor)
Mark 2	Bell "R32"	"The Cows" off Stamford Harbor
Mark 3	Bell "R2"	Just south of Stratford Shoal Lighthouse ("Middle Ground")

Right now, before you start the test, it's OK to write these numbers next to each mark.

Unless otherwise stated in the test problems:
– Assume there is no current.
– Assume all bearings are given in magnetic and all distances in nautical miles.
– Assume your boat makes no leeway, and there is no deviation in your compass.
– Assume all wind velocities and directions given represent your "sailing wind." That is, they include the true wind plus the effects of any current.
– Assume the rise and fall of the tide on race day is 7.0 feet. High tide is 1800; low tide about 0030.

When selecting or writing your answers:
– There is no penalty for choosing incorrect answers to the multiple choice questions.
– For distances, give your answer to the nearest 0.1 nautical miles.
– For speeds, give your answer to the nearest 0.1 nautical miles per hour.
– Express all bearings as magnetic to the nearest degree.
– For times, give your answer to the nearest minute.
– For longitude and latitude, give your answers to the nearest 0.1 minutes.
– There will be a certain margin of error allowed for each fill-in-the-blank answer.

About this test:
– You will have a maximum of 90 minutes to work on the test.
– Be sure to "label" your answers.
– This test is somewhat longer and more challenging than other JSA Navigation tests in the past. Don't worry if you can't figure out some of the problems or if you are unable to finish in time. If you get stuck on a problem, consider moving on to the next one.
– You must work entirely on your own. Be aware that there is more than one version of this test, so your neighbor will likely have a different answer key than you.

1) Two days before you start the overnight race, your skipper gives you a copy of the sailing instructions and asks you to write out the magnetic bearings and distances for each of the six legs of the course you

will be sailing. You agree it's a good idea to do this ahead of time, so you create the following chart, which you post in the cockpit for all crewmembers to see:

Leg	**Bearing** (magnetic) (2 points each)	**Distance** (nautical miles) (2 points each)
Start to Mark 1	_____	_____
Mark 1 to Mark 2	_____	_____
Mark 2 to Mark 3	_____	_____

2) As you head out to the starting line an hour before the start, it is quite foggy, so you decide to check out the position of the starting line. What is the latitude of Bell "R42" Scotch Caps?

A. 74° 42.1' W B. 41° 55.5' N C. 73° 42.1' W D. 40° 55.5' N (1 pt)

3) As you get close to the start, you note that the wind direction is a steady 125° and the velocity is about 10 knots. The race committee anchors their boat to set a starting line with Bell "R42" as the pin end. You ask your skipper to sail outside the committee boat end so you can sight down the line. The bearing from the boat toward the pin end is 025°. Which end of the line is farther upwind? (3 pts)

A. Boat end B. Pin end (R42) C. They're even D. Can't tell from this info

4) The first leg is upwind to Mark 1 (Gong "21"). If the wind doesn't shift during this leg, will you spend more time on port tack or on starboard tack? (2 pts)

A. Port tack B. Starboard tack C. They're equal D. Can't tell from this info

5) If you are sailing a course of 085° on starboard tack and you have 3° of leeway, what course will you be making good over the bottom (with no current)?

A. 082° B. 085° C. 088° D. Other (2 pts)

6) Before the start, you found that your boat's tacking angle in 10 knots of wind was 80°. That is, the difference in heading between port tack and starboard tack is 80°. If you come off the starting line on starboard tack and keep sailing straight, what will be the approximate magnetic bearing of Mark 1 when you reach the port-tack layline (*the wind direction is still 125°*)? (2 pts)

A. 145° B. 155° C. 165° D. 175°

Mark 1 You round Gong "G21" at 1650 and bear off on a course directly toward Mark 2 (Bell "R32"). Your speed on Leg 2 is a steady 6.0 knots. The tide is high and current is slack.

7) What was the longitude of Gong "G21"? (1 pt)

A. 73° 38.2' E B. 73° 41.8' W C. 40°54.6' N D. 73° 38.2' W E. 41° 55,4' N

8) The next boat in your class rounds Gong "G21" at 1655. How far are they behind you? (3 pts)

A. 1/4 mile B. 1/2 mile C. 3/4 mile D. Can't tell from this info

9) A little while later your helmsperson asks you to estimate the time at which you will round Mark 2 (Bell "R32"). What do you tell her? (2 pts)

A. 1800 B. 1807 C. 1815 D. 1827 E. 1850

10) About half way from Mark 1 to Mark 2, you look toward the southeast and notice a fixed red light in Oyster Bay. You watch this light for about 10 minutes and then suddenly it becomes a fixed white light.

10.1 From this position, how far is it to Mark 2? _____ (1 pt)

10.2 Why is there a navigational aid that changes color depending on where you are? (3 pts)

_____

Mark 2 As you get close to Bell "R32" at The Cows, two things happen: 1) The wind shifts to the left so it is now blowing directly from the east (090°), still at 10 knots; and 2) The current has just begun to ebb and is flowing at 0.5 knots directly against the wind. You must now sail upwind toward Bell "R2" off Stratford Shoal.

11) After you round Mark 2, you head up to a closehauled course on starboard tack. What approximate course will you be steering upwind on starboard tack (your tacking angle is still about 80°)?

A. 040° B. 045° C. 050° D. 055° (2 pts)

12) When the current is running to windward (against the wind), you usually have rougher seas than when it runs with the wind.

True False (1 pt)

13) About an hour after rounding Mark 2, you look toward Long Island and you can see the fixed white light of Eaton's Neck. Directly in line with it, and closer to you, is a green flashing buoy. Toward Connecticut you can see the white and red light of Greens Ledge lighthouse, which bears 293°.

13.1 If you turn on your fathometer, what will be the water depth? (*remember tide!*) (2 pts)

A. 49 feet B. 54 feet C. 60 feet D. 66 feet E. 75 feet

13.2 What is the distance to the next mark ("R2" at Stratford Shoal)? _____ (1 pt)

13.3 What is the magnetic bearing to the next mark ("R2")? _____ (1 pt)

13.4 From your current position, which tack is longer to the next mark? (2 pts)

A. Port tack B. Starboard tack C. They're equal D. Can't tell from this info

14) As darkness falls, the wind is still blowing from the east (090°) and you are sailing upwind on starboard tack toward Mark 3. Your closest competitor is another J/35 that rates exactly the same as you. You can see this boat's bow light to windward and astern. You take a bearing on the light and find that it bears 186°. At this moment, how are you doing with this boat? (2 pts)

A. You're ahead of them B. You're behind C. You're dead even D. Can't tell from info

Mark 3 As you round Bell "R2" to port and head for Mark 4 (Bell "R18") you note the following: The time is 2140. The wind is still blowing from the east at 10 knots. The current is now running at 0.75 knots, still directly into the wind. Your boatspeed on this leg is a steady 6.0 knots.

15) If you want to sail down the rhumbline directly toward Mark 4, what approximate magnetic course should you steer to compensate for the current? (3 pts)

A. 333° B. 340° C. 347° D. 353° E. 001°

16) Your bowperson is thinking ahead about the next maneuver and asks what time you will round Mark 4 (Bell "R18"). You tell him you will get there at approximately:

A. 2214 B. 2222 C. 2229 D. 2237 (2 pts)

17) On your J/35, you know that when you have a true wind angle of 100° or greater your boat is faster with a spinnaker than a genoa. Which sail should you tell your crew to set on this leg? (1 pt)

A. Spinnaker B. Genoa C. Equally fast either way D. Can't tell from info given

18) As you sail past Stratford Shoal lighthouse, you look up at its flashing light.

18.1 What color is the light? A. Red B. Green C. White D. Other (1 pt)

18.2 How high above the <u>existing</u> water surface is the light? (1 pt)

A. About 56 feet B. About 60 feet C. About 64 feet

18.3 In clear weather, you can see the light on Stratford Shoal from 12 miles away. True False (1 pt)

2010 Basic Navigation Test

TRAINING AND RESOURCES

Every effort should be made to prepare sailors to take the Basic Test in support of the JSA Big Boat Program. The Navigation Committee would encourage you to include your sailors taking the Basic Test in the same class as those taking the Advanced Test. There is no need to offer multiple classes. Though they will not be tested on some of the concepts taught, (e.g. plot courses or use the navigator's tools) their exposure to the advanced materials today will only make it easier for them next year. Should you have questions, please contact the JSA office and we will connect you with someone who can help.

IMPORTANT INFORMATION

This exam will make use of the training chart 1210 TR. The front of the chart covers the area from Pt Judith to Martha's Vineyard. The backside contains a detailed explanation of chart symbols. Sailors should be familiar with the information contained on both sides of the chart. In 2009, the JSA distributed the 1210TR charts to clubs with big boat programs. We have a few charts remaining on hand, so email info@jsalis.org and first come-first served you may receive them at the Safety at Sea Seminar at Larchmont YC on July 16. Additional training charts may be purchased for approximately $3.00 from local chart agents including Landfall Navigation in Stamford, CT http://www.landfallnavigation.com/noaamisc.html and others listed at this government site http://www.naco.faa.gov/agents.asp .

Basic and Advanced test takers can undergo the same training, however, the Basic Navigation Test will not require sailors to plot courses or use the navigators tools: parallel rules, dividers, etc. The Basic Course should also include the Rules and Regulations for JSA Big Boat Events, and familiarity with reading Eldridge current charts.

DATE AND TIME

The exam will be offered as an open book, on-line as a combined Basic Navigation/Seamanship test. The test site will be open for one week ending beginning on July 26 and ending August 2.

FORMAT

Sailors will be allowed 1 hour to take this Basic Navigation/Seamanship exam. The test will be taken *individually on the honor system.* As sailing is a self-policing sport, so too is the taking of this exam. For 2010 each sailor will be given a specific code that will enable him or her to access the on-line site. Answers will be multiple-choice questions requiring the use of chart 1210 TR, both front and back. Dividers and parallel rulers are not required.

RESOURCES

The American Sailing Association Coastal Navigation and Piloting materials provide a very thorough resource including a large number of test questions and answers. See Advanced Navigation for purchasing information.

2010 BASIC COMBINED NAVIGATION/SEAMANSHIP

CURRICULUM AND SAMPLE QUESTIONS

Use training chart TR1210 Martha's Vineyard to Block Island

(Please refer to the Advanced Navigation Syllabus for specific chapter references)

Aids to Navigation

- Know and be able to recognize aids to navigation especially as they pertain to Long Island Sound
- Understand their significance and what action they require of you
- Be able to identify and determine their characteristics on a chart

Sample questions:

Unlighted safe water (mid-channel) buoys are:

A) in the shape of a can or a nun
B) painted vertical green and white stripes
C) painted vertical red and white stripes
D) banded

Lighthouse Buzzards Tower is labeled: "Fl 2.5 sec 101ft 22M HORN R Bn 314"
What does this mean?

Charts and Chart Work

- Be able to read and use a chart
- Understand the information found on a chart
- Understand the basics of latitude and longitude
- Know that Latitude is measured from 0° to 90° North or South of the equator
- Know that Longitude is measure from 0° to 180° East or West of the Greenwich Observatory, London, England
- Understand that 1° = 60 minutes and that 1 minute of LATITUDE = 1 nautical mile (≈ 2000 yards)
- Both are measured in degrees, minutes, and tenths of a minute
- Know the appropriate written format, latitude always first
- Be able to find a position given its latitude and longitude
- Be able to find the latitude and longitude of a position
- Understand contour lines, depth readings, and color designations
- Understand the information provided by the compass rose

Sample Questions:

What are the characteristics of the buoy located at: ……

Locate the buoy "R2" south of Point Judith, what is its approximate location in terms of latitude and longitude?

What is the approximate distance between two buoys?

Charts of tidal water areas always show vertical clearances of overhead objects from

A) mid-tide
B) low water
C) a reference plane decided by town authorities
D) mean high water

24 Hour Clock

- Know the difference between the conventional clock and the 24 hour clock
- Know how to convert times and determine elapsed times with 24 hour clock

Sample Questions:

A time of 15 minutes past 3 p.m. would be properly labeled as

A) 3:15
B) 13:15
C) 1515
D) 0315

If you depart your mooring at 0856 and arrived at your destination at 1427, how long was your trip?

A) 5 hours 31 minutes
B) 6 hours 11 minutes
C) 6 hours 31 minutes
D) 7 hours 31 minutes

Logbook

- Know what a logbook is and how to use it. Understand its significance for safety
- Know what is required of the logbook for successful completion of the BPOR

Direction

- Understand the concept of a 360° circle
- Understand reciprocals
- Know how to use a compass
- Know the cardinal points of North, East, South and West
- Understand how to take bearings

Time, Speed and Distance Calculations

- Know how to calculate and use these measurements in planning and charting, and why they are useful.

Sample Question:

You have caught a perfect breeze and have been averaging 5.5 knots of speed every hour for the last 3hours without tacking once. When you started this tack, you had 21 miles to go. Assuming no current or tide effects, how much farther do you have to go on this leg?

A) 5.2 nm
B) 3.5 nm
C) 6.0 nm
D) 4.5 nm

Dead Reckoning (DR)

- Know how to calculate and use DR plotting in planning and charting
- Understand why it is useful and the need for consistency

Estimated Position (EP)

- Know that an estimated position adjusts a DR for Leeway and current
- Using this information to determine course to steer

Sample Question:

You have been steering your sailboat 065 magnetic for a while and you figure your leeway angle is 6 degrees. The wind is a steady 15knot northerly. What compass course should you steer to achieve 055 course made good through the water?

A) 071
B) 061
C) 049
D) 059

Tides

- Understand what tides are, what affects them and how they affect the boater
- Be familiar with the rule of Twelfths

Sample Question:

Answer the following question based on the information in the table below:

Approximate Tidal Differences (Based on Old Saybrook)	
at Stonington	less 1 hour, 43 minutes
at Noank	less 1 hour, 33 minutes
at Norwich	less 1 hour, 25 minutes
at Milford Harbor	plus 26 minutes
at Bridgeport	plus 33 minutes
at Cos Cob Harbor	plus 38 minutes
at South Norwalk	plus 45 minutes

If it is high tide at Old Saybrook at 0615, what time is it high tide at Cos Cob Harbor?

Currents

- Understand what currents are, what affects them and how they affect the boater.
- Be familiar with a current chart/table and be able to predict where the strongest current will be given a particular time/date.

Bearings, LOP and Fixes

Understand what they are, how to take, plot, label and read them on a chart.

The Compass

- Understand the relationship of True, Variation to Magnetic, Deviation, to Compass headings

- Understand that there is a difference between the "magnetic" North Pole and the "true" geographic North Pole (called Variation)
- Variation—See *Coastal Navigation* p. 23 for basic definition
- Be able to update variation using information on compass rose
- Know that this predictable difference is determined by where you are on the earth
- Deviation—See *Coastal Navigation* p. 24 for basic definition
- Know that this is a function of the magnetic interference your compass experiences specific to the conditions on your boat
- Understand the difference between variation and deviation as sources of error
- Know which heading is used to steer a boat
- Know the definition of a lubber line

Sample Questions:

If your deviation is 6°E and your variation is 11 W, what do you tell the helmsman to steer when your true course is 065°?

A) 082
B) 070
C) 060
D) 048

Direction can be expressed as:

A) up or down
B) right or left
C) this way, or that way
D) true north, magnetic north, compass north

Electronics

- GPS, Radar, Chart Plotter
- Be familiar with what these instruments are and can do, their applications and related strengths and weaknesses
- Know the basic functions of a GPS. Waypoint, Course made good, MOB, etc.

Sample Question:

GPS is most safe and helpful when used

A) on its own without other interference
B) without looking around at so as not to get confused
C) only in emergencies
D) in conjunction with a chart and DR plot

SEAMANSHIP

Marlinspike USSAILING Basic Keelboat

- Lines, knots: types and uses (bowline, square, figure 8 knot and clove hitch)

Sample Questions:

A square knot is commonly used to

A) to attach sheets to the clew
B) on the ends of a sheet to prevent slipping
C) to join 2 small lines
D) to tie line to an object temporarily

When heaving a line, how much of the coil do you hold in your throwing hand?

A) 10%
B) Half of the coil
C) All of it
D) 90%

Weather Basic Keelboat, Coastal Navigation

- Sources for forecasting; preparation; dealing with weather; Gale/Storm/Hurricane –what it looks like on the water, prep, etc; Fog: Lightning; Heavy weather/seas

Sample question:

It is your job to find out the weather forecast for your big boat race tomorrow. What 2 places could you go to for accurate local marine weather forecasting?

A) Your dog
B) The car radio
C) Your favorite Website such as weatherbug, or wunderground
D) Weather channel on TV

Skipper's Responsibilities (May be shared responsibilities on big boat events)

- Aid to those in distress
- Copy of Rules of the Road (Inland Nav Rules Act of 1980)
- Collision Avoidance
- All safety equipment present and operational (Lights, radio; pfd's; MOB equipment; life lines; jacklines; first aid kit)
- Coast Guard boardings-possible
- Know your crew-medications, fears, abilities, special concerns, appropriate clothing & gear
- Float Plan-what is it, why and where is it filed

Sample Question:

Harnesses are worn

A) under your pfd and attached to lifelines
B) over your pfd and attached to jacklines

C) clipped to the D ring on your pfd and the closest metal object
D) with a loop around each leg and your waist and clipped to the lifelines

Boat Handling and Elementary Seamanship USSAILING Basic Keelboat

- Docking & Undocking; Moorings; First Aid; Anchors & Anchoring

Required Equipment, Regulations, Safe Operation USSAILING Basic Keelboat, USCG

- Pfd's; fire extinguishers (types, uses); distress signals; thru-hulls; USCG rules
- Knowledge of equipment required on Beach Point Overnight race

Night Sailing Considerations

- Stopping distance (Half your visibility)
- Red lighting available to protect night vision
- Jacklines checked and rigged in advance
- MOB gear checked for position and function. Everyone must know!
- Watch system established
- Maintain logbook and radio communication
- Radar checks for weather, if available and in forecast
- Pay attention to fatigue, damp or chilly conditions—affect judgment and skill/timing.
- All gear stowed safely above and below. Leeboards/cloths in place.
- Identifying vessels by lights at night, required lights (Chapman's, www.navcen.uscg.gov/mwv/navrules/rotr_online.htm)
    - Lights for Sailing Vessels over 20 feet
    - Lights for a tug towing a barge less than 200 meters overall and greater than two hundred meters overall
    - Vessels engaged in trawling or fishing
    - A motor vessel over 50 meters
    - A small powerboat under 12 meters

Emergencies Basic Keelboat, Chapman's

- MOB drills and Recovery
- Quick stop maneuver
- Groundings
- Kedging
- Towing
- Fire-extinguishers, fire blanket, radio;
- Flooding
- Basic First Aid –Shock, burns, cuts, hypothermia, heat exposure, carbon monoxide
- Abandon Ship

Sample Question:
In order to get a person back on board, you might consider

A) a line over the side with a series of loops tied at intervals so they can help climb back on board
B) a block and tackle rigged to a hoisted halyard used to help hoist the victim
C) a bowline tied in the end of a line to act as a stirrup
D) all of the above

Radio Communication

- Safety communications –talking to tug and tow regarding intentions etc
- General Operating Communications
- Commercial Communications-between ships, tugs, bridges
- Emergency Communication-How to's; channels used; specifics for Beach Point Overnight Race

Sample Questions

Match the VHF channel with its appropriate use

Channel 13	*Local NOAA info*
Channel 16	*Channel for role call during BPOR*
Channel 68	*Bridge to bridge communication for towing vessels*
Channel WX 1	*International Distress, safety and calling channel*
Channel 69	*Local yacht club usage*

Specific Beach Point Overnight Race Rules and Safety at Sea Information

JSA website, JSA Big Boat Manual, JSA Safety at Sea Seminar

- Involvement of instructor, owner's rep, use of equipment, safety requirements
- Required equipment

Sample Question:

By JSA and YRA of LIS rules, the following is/are required on the BP Overnight Race

A) 1 manual bilge pump operable with all cockpit seats, hatches and companionways closed
B) 2 buckets of stout construction each with a minimum of 2 gallon capacity and a lanyard
C) Man overboard pole or "MOM" 8 or 9 or comparable
D) Minimum of 2 flashlights, 1 compass, 1 spare compass and 1 emergency tiller
E) All of the above
F) C and D