ADVANCED POWERBOAT COURSE & EXAM KNOWLEDGE CHECK

1 Preparation for sea

- Preparation of vessel
- Safety brief
- Stowing and securing gear for coastal passages
- Engine operations and routine checks, fuel systems, killcord
- Fuel system, bleeding, changing filters and impellors

Practical knowledge

2 Boat handling

- Hull forms and their handling characteristics, propeller configurations.
- Knowledge of action to be taken in rough weather
- Significance of tidal stream on sea conditions
- Steering and power control through waves
- Understanding and correct use of power trim and tabs
- Towing, under open sea conditions and in confined areas
- Strategy up and downwind and in heavy weather
- Awareness of the effects of wind and tide when manoeuvring, including
- Steering to transits and in buoyed channels
- Turning in a confined space
- All berthing and un-berthing
- Picking up and leaving a mooring buoy
- Anchoring
- Recovery of man overboard
- Awareness of ground speed and ability to hold the boat on station

Practical Knowledge

3 Responsibilities of skipper

- Can skipper the vessel with effective crew communication
- Preparing the vessel for sea and for adverse weather
- Tactics for heavy weather and restricted visibility
- Emergency and distress situations
- Customs procedures
- Courtesy to other water users

Practical Knowledge

4 Passage making and pilotage

Your chart work and theory knowledge should include:

- Charts, navigational publications and
- sources of navigational information

- Chart work, including position fixing and shaping course to allow for tide
- Tidal heights and depths
- Buoyage and visual aids to navigation
- Instruments, including compasses, logs, echo sounders, radio, navaids and chartwork instruments
- Passage planning and navigational tactics
- Importance of pre-planning
- High speed navigation, pre-planning and execution
- Use of electronic navigation - GPS (and Radar, if fitted)
- Pilotage techniques and plans for entry into or departure from harbour
- Use of leading and clearing lines, transits and soundings as aids to pilotage.
- Navigational records
- Limits of navigational accuracy and margins of safety
- Lee shore dangers
- You should be able to enter and depart from a charted port by day or night. Your Examiner will give you a pilotage exercise and ask you to explain your planning. You will need to be aware of the problems of collision avoidance and how to determine your position by night.

Example Questions:
1. If at 07.00, the bearing and distance to a waypoint at the centre of the compass rose to the west of Slade Island is 190°T 4.1M. Plot the vessel's position.
2. Two fixed lights in a vertical line would signify what?
3. What is the flash sequence of a safe water mark?
4. What does LAT mean?
5. You should understand and be able to complete a secondary port tidal calculation, e.g. what will be the height of the tide at 1502 Summer time at Itchenham on 10th June?
6. Course to steer: The position of the yacht by GPS is 45°42.8'N 06°18.37'W. What is the course to steer to reach the Quaker Safe Water buoy (45°40.7'N 06°13.81'W), if the boat's speed is 3.9Kn and the tide is 180°T at 1.5Kn?

5 <u>Meteorology</u>

- You should be able to use weather and tidal information to predict likely sea conditions and make passage planning decisions.
- Definition of terms including the Beaufort scale, and their significance to small craft.
- Sources of weather forecasts
- Weather systems and local weather effects
- Interpretation of weather forecasts, synoptic charts, barometric trends and visible phenomena
- Ability to make passage planning decisions based on forecast information

Example Questions:
1. What factors affect wave height?
2. What do the following terms mean; imminent, soon, later, moderate, rough, very rough?
3. What is a sea breeze and what causes it?

6 Rules of the road

- Application of the International Regulations for Preventing Collisions at Sea.
- You should have a working knowledge of IRPCS as well as an understanding of their application. In addition to the "rules of the road" your knowledge should include all lights, shapes and sound signals.

Example Questions:

1. What should be displayed when your vessel is at anchor?
2. What are the rules concerning lookout?
3. Two motorboats meet head on, what action is required?
4. What lights should be displayed by a fishing boat, fishing at night?
5. What is the definition of 'under way'?

7 Safety

Candidates will be expected to know what safety equipment should be carried on board the vessel, based either on the recommendations in the RYA Boat Safety Handbook (G103), or the Codes of Practice for the Safety of Small Commercial Vessels. In particular, candidates must know the responsibilities of a skipper in relation to:

- Fire prevention and fighting
- Safety briefs
- Hull damage/watertight integrity
- Medical emergency
- Towing and being towed
- VHF emergency procedures
- Explanation of helicopter rescue procedures
- Use of flares
- Man overboard
- Search patterns
- Lifejackets
- Life rafts
- Awareness of risks to passengers and crew through shock and vibration caused by operating at speed
- Awareness of strategies to mitigate risk of injury caused by shock and vibration
- Candidates should be familiar with all the equipment on board the vessel, as they may be asked to use this during the examination

Example Questions:

1. *List five items of safety equipment you would consider taking with you on a boat?*
2. *What colour pyrotechnic would you use to warn other vessels of your position?*
3. *What flares would you find in a coastal flare pack?*