1. Ref: Ice, Concentrations
   Ice concentration is measured in tenths. What concentration range of ice corresponds to "Close Pack"?
   A. 9 - 10 tenths
   B. 7 - 8 tenths
   C. 4 - 6 tenths
   D. 1 - 3 tenths
   [Choice B]

2. Ref: Ice, Concentrations
   Ice concentration is measured in tenths. What concentration range of ice corresponds to "Open Pack"?
   A. < 1 tenth
   B. 1 - 3 tenths
   C. 4 - 6 tenths
   D. 7 - 8 tenths
   [Choice C]

3. Ref: Ice, Concentrations
   Ice concentration is measured in tenths. What concentration range of ice corresponds to 1- 3 tenths?
   A. Very Open Pack
   B. Open Pack
   C. Close Pack
   D. Very Close Pack
   [Choice A]

4. Ref: Ice, Concentrations
   In general, a reinforced vessel can safely navigate in ice provided the concentration does not exceed how many tenths?
   A. 1-2 tenths
   B. 3-4 tenths
   C. 5- 7 tenths
   D. 8- 9 tenths with ice breaker assistance
   [Choice C]

5. Ref: Ice, Concentrations
   In general, an un-reinforced vessel can safely navigate in ice provided the concentration does not exceed how many tenths?
   A. 9 - 10 tenths
   B. 6 - 8 tenths
   C. 4 - 6 tenths
   D. 1 - 3 tenths
   [Choice D]

6. Ref: Ice, Great Lakes, Shore Ice
   On which of the Great Lakes would shore ice be the most pronounced?
   A. Lake Michigan
   B. Lake Superior
   C. Lake Huron
   D. Lake Erie
   [Choice B]

7. Ref: Ice, Hazard
   Which is NOT a potential hazard of approaching close to an iceberg?
   A. The brash ice in the vicinity may clog sea intakes.
   B. The berg may calve with the bergy bit hitting the vessel.
   C. There may be underwater rams extending out from the berg.
   D. The berg may suddenly tilt or capsize due to uneven melting and hit the vessel.
   [Choice A]

8. Ref: Ice, Ice Blink
   "Ice blink" is __________.
   A. the dark appearance of the underside of a cloud layer due to reflection of a surface of open water
   B. the soft light appearance on the underside of a cloud layer due to reflection from a surface of open water
   C. the yellowish-white glare on the underside of a cloud layer
   D. "water sky"
   [Choice C]

9. Ref: Ice, Polar Navigation
   In polar regions you should NOT expect to see __________.
   A. mirage effects
   B. sea smoke
   C. extensive snowfall
   D. false horizons
   [Choice C]

10. Ref: Ice, Proximity
    The proximity of pack ice may be indicated by __________.
    A. changes in seawater salinity
    B. glare on clouds on the horizon
    C. changes in air temperature
    D. icebergs
    [Choice B]

11. Ref: Ice, Proximity
    What is NOT an indication that pack ice may be nearby?
    A. The presence of icebergs
    B. Ice blink
    C. Absence of wave motion
    D. Sighting a walrus in the Arctic
    [Choice A]
12 1597 Ref: Ice, Proximity
What should NOT be used as an indicator that ice may be nearby?
A. A dark appearance of the sky
B. A gradual drop in sea water temperature to below 32°F
C. A yellowish glare in the sky
D. The presence of seals or certain type birds

13 1469 Ref: Ice, Reports
What is NOT a form used by ice support services to disseminate information?
A. Ice Analyses              C. Ice Outlooks
B. Ice Forecasts            D. Ice Bulletins

14 1435 Ref: Ice, Type, Bergy bit
What form of ice is of land origin?
A. Shuga                    C. Spicule
B. Floe                     D. Bergy bit

15 2116 Ref: Ice, Type, Growlers
Which type of ice is a hazard to navigation?
A. Ice rind                 C. Frazil ice
B. Pancake ice              D. Growlers

16 844 Ref: Ice, Type, Hummocky
Small floes of rough, hummocky sea ice capable of damaging a vessel __________.
A. can usually be detected by radar in a smooth sea at a range of 4 to 6 kilometers
B. are indistinguishable from sea return on the PPI
C. are invisible to radar when covered with a thick layer of snow
D. are usually seen at night before they are close enough to provide a radar echo

17 1722 Ref: Ice, Type, Icebergs
When operating in an area where sea ice and icebergs are present, which statement is TRUE?
A. Icebergs may travel in a direction many degrees different from the sea ice.
B. Both icebergs and sea ice will move in approximately the same direction and at the same speed.
C. Icebergs and sea ice will move in the same direction, but at different speeds due to the sail effect of the berg.
D. Icebergs and sea ice will move in the same direction, but the iceberg will move slower because of its underwater bulk.

18 734 Ref: Ice, Type, Multi-year
Multi-year ice is the hardest sea ice and should be avoided if possible. It is recognizable because of what tone to its surface color?
A. Greenish             C. Grey
B. Bluish               D. Grey-white

19 2117 Ref: Ice, Type, Pack slush ice
Which type of ice is the most difficult to combat and presents the greatest hazard to shipping on the Great Lakes during the winter months?
A. Icebergs            C. Slow ice
B. Fast ice            D. Pack slush ice

20 489 Ref: Ice, Whiteout
During a period of "whiteout", you should expect which of the following?
A. Snowfall or blowing snow
B. Lack of ability to estimate distance
C. Harsh contrast between sun-illuminated snow cover and the background
D. Hazy horizons with extensive mirage effects

21 846 Ref: Ice, Whiteout
Snow has obliterated surface features and the sky is covered with uniform, altostratus clouds. There are no shadows and the horizon has disappeared. What is this condition called?
A. Ice blink            C. Water sky
B. Whiteout            D. Aurora reflection