Exercise Questions – Adventure Sports

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I. Long Answer Questions:

1. Write down the use of a Variometer in paragliding.

Ans: Paragliding is the recreational and competitive adventure sport for flying paragliders. Paragliding is an engine-less or motor-free sport and practiced by adventurous people. This type of sport needs courage and needs to be decisive.

The main purpose of a variometer is to help a pilot find and stay in the 'core' of a thermal to maximise height gain and, conversely, to indicate when a pilot is in sinking air and needs to find rising air. A variometer also indicates the climb rate or sinkrate with short audio signals (beeps, which increase in pitch and tempo during ascent, and a droning sound, which gets deeper as the rate of descent increases) or a visual display. It also shows altitude — either above takeoff, above sea level or flight level at higher altitudes. A variometer is a device used by paraglider pilots at competitions. It informs the pilot of the rate of descent or climb. A variometer records data such as speed, altitude, and climb rate, and can send this data over Bluetooth or USB to a smartphone, a tablet, or an e-reader.

2. Explain 'tow- surfing'.

Ans: Tow-in surfing is a surfing technique which uses artificial assistance to allow the surfer to catch faster-moving waves than was traditionally possible when paddling by hand. Tow-in surfing was invented by surfers who wanted to catch big waves and break the 30 ft (9 m) barrier. It has been one of the biggest breakthroughs in surfing history. Tow-in surfing was pioneered by Laird Hamilton, Buzzy Kerbox, Dave Kalama, and others in the mid 1990s. A surfer is towed into a breaking wave by a partner driving a personal watercraft (PWC, commonly known by the brand name Jet Ski) or a helicopter with an attached tow-line.

The use of a helicopter for tow-in surfing started to appear in the mid 2000s, and has several advantages over the use of a personal watercraft. The pilot, positioned high above the surfer, is able to spot large waves from farther away and position the surfer accordingly. A helicopter can go faster, and is not affected by the ocean surface like a watercraft, but is much more expensive to operate.

3. Discuss the safety measures to keep in mind during paragliding.

Ans: The security and safety of the gliders and surfers have to be kept in mind as there is high risk involved during these adventure sports. Safety measure should be followed and observed by the individuals taking adventure sports.

(i) A paraglider should be certified and highly skillful before taking adventure sports.

(ii) A paraglider should keep all type of safety instruments before going for paragliding. These instruments are Virometer, Global Positioning System and Radio to get updates about all kinds of dangers.

(iii) During practice, proper safety equipment like helmet, knee guards, chest guards and other protective equipment should be worn.

(iv) Gliding should not be permitted without proper assistance (licensed personnel).

(v) A surfer should recognise the wave current flowing in sea to keep himself in the safe zone.

(vi) A surfer should also be able to recognise the deep face of the moving wave that can be dangerous sometimes to the surfer.

(vii) Surfer should practise his surfing skills in the artificially created waves before introducing himself in the deep sea.

(viii) Paragliders should inspect their paraglide breaks and other necessary lining for safety measures regularly.

(ix) Enough practice should be done before taking a long route paragliding.

(x) Fitness standard (physical and mental) should be maintained, which is considered as the key factor that helps in meeting out and taking quick decisions during any untoward situation.

4. Briefly explain Sea beds and Rip Currents.

Ans: **Seabed:** The seabed can pose danger for surfers. If a surfer falls while riding a wave, the wave tosses and tumbles the surfer around, often in a downwards direction. At reef breaks and beach breaks, surfers have been seriously injured and even killed because

of a violent collision with the sea bed, the water above which can sometimes be very shallow, especially at beach breaks or reef breaks during low tide.

Rip currents: Rip currents are water channels that flow away from the shore. Under the wrong circumstances, these currents can endanger both experienced and inexperienced surfers. Since a rip current appears to be an area of flat water, tired or inexperienced swimmers or surfers may enter one and be carried out beyond the breaking waves. Although many rip currents are much smaller, the largest rip currents have a width of forty or fifty feet. However, by paddling parallel to the shore, a surfer can easily exit a rip current.

5. How does Global Positioning System work?

Ans: GPS is a necessary accessory while flying in competitions. The recorded GPS track of a flight can be used to analyse the flying technique or can be shared with other pilots. GPS is also used to determine drift due to the prevailing wind when flying at altitude, providing position information to allow restricted airspace to be avoided and identifying one's location to aid the retrieval teams after landing out in unfamiliar territory.

GPS trackers connect to a series of satellites to determine location. The tracker uses a process called trilateration which uses the position of three or more satellites from the Global Navigation Satellite System (GNSS) network and its distance from them to determine latitude, longitude, elevation, and time. GPS uses a lot of complex technology, but the concept is simple. The GPS receiver gets a signal from each GPS satellite. The satellites transmit the exact time the signals are sent. By subtracting the time the signal was transmitted from the time it was received, the GPS can tell how far it is from each satellite.

II. Short Answer Questions:

1. Name the person who invented paragliding.

Ans: Domina C. Jalbert was the person who invented paragliding.

2. Name the two flying techniques in paragliding.

Ans: **Flying techniques in paragliding:**

(i) Forward launch: In low winds, the wing is inflated with a forward launch, where the pilot runs forward with the wing behind so that the air pressure generated by the forward movement inflates the wing.

(ii) Reverse launch: In higher winds, a reverse launch is used, with the pilot facing the wing to bring it up into a flying position, then turning around under the wing and running to complete the launch.

3. Classify the categories of adventure sports.

Ans: **The categories of adventure sports are:**

(i) Adventure water sports.

(ii) Adventure land sports.

(iii) Adventure air sports.

4. In which year, the first world championship for surfing was held?

Ans: The first World Surfing Championship was held in 1964.

5. What are the different types of surfing?

Ans: **The different types of surfing are:**

(i) Stand-up Surfing.

(ii) Body Surfing or Bodyboarding.

(iii) Surf Matting.

(iv) Tow-surfing.