1. A-1 A-5 1

3

The Jurassic version of jumbo jets is a mystery of dinosaur-era flight. In the age of the dinosaurs, huge creatures weighing hundreds of kilograms were able to fly. Now scientists are trying to understand how things so big got off the ground. A Johns Hopkins University biologist thinks he has figured out the answer. "What people think of as 'flying dinosaurs' but are technically giant reptiles didn't launch into the air like birds. They leaped into the air off all four legs," said Mike Habib, of the university's Center for Functional Anatomy and Evolution.

The flying creatures are called pterosaurs. They were a group of flying reptiles that could weigh more than 225 kg and had bus-size wingspans. Last year, researchers tried to figure out how they got off the ground by looking at the largest bird now flying, the albatross. They concluded that anything much bigger couldn't get off the ground the same way. But Habib said pterosaurs shouldn't be compared to birds. "The catch is that they are not built like birds," Habib said in a telephone interview. In birds the hind legs are stronger than the front and in some pterosaurs the front legs were several times stronger than the hind ones. "It's a lot like a leapfrog," Habib said, describing how he figures the pterosaurs got off the ground. "They kind of pitch forward at first, the legs kick off first, then the arms take off."

Pterosaur expert David Unwin, from the University of Leicester, praised the study for relying more on physical tests than theory. However, he said he is not quite convinced because there aren't any preserved tracks that help prove Habib's explanation. He believes that the pterosaurs may not have been so heavy, lessening the mystery of their flight. However, Unwin agrees with Habib that scientists should stop comparing pterosaurs with birds or other living creatures.

Jurassic   dinosaur   reptile   pterosaur   albatross   pitch forward

A-1 Which of the following is the best summary of the Johns Hopkins University research?

　1. The researchers believe that 'flying dinosaurs' were very similar to some birds alive today.

　2. The research team suggest that the pterosaurs used their legs to start flying.

　3. They believe that the pterosaurs were giant reptiles that did not fly at all.

A-2 What did Habib's research conclude after studying the flight of the albatross?

　1. The albatross is probably related to the pterosaur.

　2. The albatross is probably the largest creature that has ever flown.

　3. It is probably impossible for anything larger than an albatross to take off in the same way as a bird.

A-3 How were the legs of pterosaurs different from those of birds?

　1. The legs of pterosaurs were more like those of frogs than birds.

　2. In some pterosaurs the front legs were much stronger than the hind legs, which is the opposite of birds.

　3. Most pterosaurs had very strong hind legs but hardly used their front legs.

A-4 What does the expert, David Unwin, think of Mike Habib's theory?

　1. He is impressed by Habib's research but does not completely believe the explanation.

　2. He believes that the research has completely solved the mystery of how pterosaurs flew.

　3. He criticizes the research because it uses too many physical tests.

A-5 What suggestion does David Unwin offer regarding the flight of the pterosaurs?

　1. Unwin believes that the flight of the pterosaurs will always be a mystery because there are no preserved tracks.

　2. Unwin suggests that scientists need to do more research comparing pterosaurs with birds and other living creatures.

　3. Unwin suspects that pterosaurs may have been lighter than is usually believed.

2. **A-6** **A-9**

A-6 Stations having a requirement to transmit information to all stations likely to intercept should preface such transmission by the general call ALL STATIONS, followed by the identification of the calling station.

( ) When a station needs to send information to all stations, at what point in the transmission should the general call ALL STATIONS be made?
  1. The general call ALL STATIONS should come at the very beginning of a transmission.
  2. The general call ALL STATIONS needs to be made after the station identifies itself.
  3. The general call ALL STATIONS should be used only when the calling station cannot provide identification.

A-7 Stations of the international aeronautical telecommunication service shall extend their normal hours of service as required to provide for traffic necessary for flight operation.

( ) What is required of stations of the international aeronautical telecommunication service in order to provide for traffic necessary for flight operation?
  1. Stations of the international aeronautical telecommunication must remain open at all times.
  2. Stations must remain open beyond their normal service hours when necessary.
  3. Stations are not obliged to extend their normal hours of service at any time.

A-8 It is permissible for verification for the receiving station to read back the message as an additional acknowledgement of receipt. In such instances, the station to which the information is read back should acknowledge the correctness of readback by transmitting its call sign.
     verification

( ) What should a station having information read back by a receiving station do in order to acknowledge the correctness of the readback?
  1. Receiving stations are not permitted to read back the contents of a message.
  2. The transmitting station should once again read the whole message to the receiving station.
  3. A station should confirm that readback was correct by transmitting its call sign.

A-9 When an aeronautical station is called simultaneously by several aircraft stations, the aeronautical station shall decide the order in which aircraft shall communicate.

( ) How should an aeronautical station respond when it is called simultaneously by several aircraft stations?
  1. Aircraft must not call aeronautical stations at the same time as other aircraft.
  2. The aeronautical station should decide the order of communication when receiving calls from more than one aircraft.
  3. When an aeronautical station receives calls from several aircraft, the aircraft must inform the station of the order of communication.

3. **B-1**

1　9

B-1 500 800

　　When I travel (　　　) air, I always wonder (　　　) an airplane of 500 tons of metal can fly (　　) speeds of (　　　) 800 kilometers an hour. It remains (　　　) miracle to me.

1. a major	2. a minor	3. at
4. by	5. how	6. less than
7. more than	8. whether	9. with

4. **B-2**

1　9

B-2

CO_2

　　Some European airports (　　　) a new landing technique in (　　　) the plane reduces thrust (　　　) possible in flight and then descends smoothly (　　　) a glider. This is said to be effective (　　　) reducing fuel consumption and CO_2 emissions.

1. as many as	2. as much as	3. for
4. have introduced	5. have invested	6. like
7. look like	8. to	9. which

5. **B-3**

1　9

B-3

　　Urgency traffic shall comprise all radiotelephony messages (　　　) the urgency conditions. Urgency conditions (　　) as a condition concerning the safety of an aircraft or other vehicle, or of some person (　　) board or (　　　), but which does not require (　　) assistance.

1. above	2. are defined	3. are required
4. direct	5. immediate	6. on
7. out of sight	8. relative to	9. within sight