

Communication Skills Exam

Name:

Group:

PART I : Insert the following words in the gaps: (8 marks)

1- RATE • ECHOES • FREQUENCIES • PERIODICALLY • WAVES • RANGE • PER • SERIES

It is well known that bats use a sonar system to navigate, that is to say, that they emit sound WAVES which are reflected back as ECHOES. These waves are emitted Periodically and are in the 20-50 kilohertz RANGE. As the bat gets nearer to its target, the RATE increases, finally reaching several hundred emissions PER second. Faced with such a predator some butterflies have undergone a SERIES of genetic mutations, developing more sensitive hearing organs which enable them to detect the acoustic FREQUENCIES used by bats.

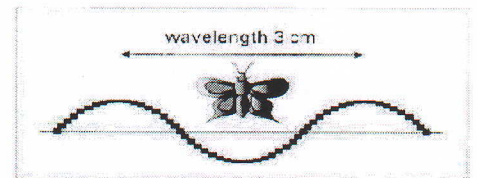
Insert the following words in the gaps: (7marks)

2- RANDOM • USUALLY • WAVELENGTH • DAILY • PROPORTION • PULSES • PATTERN

Jens Rydell of the University of Aberdeen and Raphael Arlettaz of the University of Lausanne have shown that a certain European bats search for their prey using much lower PULSES than those USUALLY used by other bats. The 12 kHz frequency corresponds to a WAVELENGTH of 3 cm.

Rydell and Arlettaz concluded that the feeding PATTERN of the European bats would therefore be different from that of other bats and their diet would not include insects with a wing span smaller than 3 cm, except for RANDOM catches, as these would be too small to detect.

Rydell and Arlettaz carried out an experimental study to check this hypothesis. Over a period of 3 weeks, they made a DAILY examination of samples of bat droppings. Rydell and Arlettaz found the PROPORTION of large insects was significantly higher, ranging from 68.3 to 86.8% of the total diet.

**Part II (5 marks)**

-Which are the true meanings of the following sentences?

a-He goes to the hospital for a check-up every three months;

- He goes to the hospital 12 times per year.
- ✓ • He goes to the hospital each three months.
- ✓ • He goes to the hospital 4 times a year.

b- Two out of three road accidents are caused by alcohol.

- ✓ • 2/3 road accidents are caused by alcohol;
- 3/2 road accidents are caused by alcohol;
- ✓ • Two in three of road accidents are caused by alcohol.

c-Escherichia coli cell divides to give two daughter bacteria each 20 minutes.

How many divisions does it perform hourly?

3 divisions

Good luck