**NORTH POINT SENIOR SECONDARY BOARDING SCHOOL; RAJARHAT**

**CLASS : XII SCIENCE**

**SUBJECT : BIOLOGY**

**ASSIGNMENT​ OF CHAPTER 13 : ORGANISMS​ AND POPULATIONS​**

**Answer the following questions:**

**1. Define the term Ecology.**

**2. What do you mean by Ecosystem?**

**3. What are higher levels of Organisations in Ecology?**

**4. Differentiate between:**

**a) Eurythermal and Stenothermal**

**b) Euryhaline and Stenohaline**

**c) Osmoregulator and Thermoregulator**

**d) Osmoconformer and Thermoconformer**

**e) Aestivation and Hibernation**

**f) Immigration and Emigration**

**g) Natality and Mortality**

**5. Define Homeostasis.**

**6. Which two factors of light some activities like foraging, reproduction and migration depends?**

**7. Write any 7 features of soil on which the types of vegetation depends.**

**8. Give one example of migration to avoid the adverse environment.**

**9. Give an example of Diapause.**

**10. How "Suspension" is done by some species to avoid stressful Environmental conditions?**

**11. Define the term Adaptation and write its three types along with the examples of each type of one plant and of one animal.**

**12. What are two ways by which, North American Kangaroo rat adapt itself in deserts?**

**13. Mention any three methods of desert plant adapting in xerophytic climate.**

**14. What do you mean by Allen's Rule?**

**15. What is the significance of "Blubber"?**

**16. Give three symptoms of altitude sickness.**

**17. Give one example each of:**

**a) Human physiological adaptation**

**b) Behavioural adaptation**

**c) Co-evolution**

**d) Co-extinct**

**e) Co-exist**

**18. Determine the birth rate of 30 deer population last year and 10 new young deer got birth.**

**19. Calculate the death rate of 20 pea plant in a given area, of which 5 dies.**

**20. What are the age pyramids and how it reflects the growth status of the given place?**

**21. Along with the number of species, Biomass of the species should also be considered to measure Population density (Population size). Justify.**

**22. How the tiger censes is done in National Parks and Tiger Reserves?**

**23. Mention the formula to calculate population density (N) in a given time.**

**24. Differentiate between two growth model on the basis of curves, formula and examples.**

**25. Derive the integral form of exponential growth equation from dN/dt = rN.**

**26. What is the significance of "K" (Carrying Capacity)?**

**27. Make a note of all the examples you read of various types of population interactions.**

**28. Why do you think the Monarch butterfly is distasteful to its predators and how the butterfly got this special Chemical?**

**29. What does Competitive Exclusion Principal states?**

**30. What do you know about:**

**a) *Calotropis***

**b) Phytophagous**

**c) Brood parasitism**

**d) Sexual deceit and Pseudocopulation**