**SAMPLE QUESTIONS**

**B.SC. ZOOLOGY (H) - PAPER : DEVELOPMENTAL BIOLOGY (VI SEM)**

**Question number 1 :** Discuss the various methods employed in the construction of Fate map. Add a note on its significance.

**Question number 2** : Explain embryonic induction and enumerate the functions of primary organiser.

**Question number 3** : Define morphogenetic movements. Describe its various types with reference to frog gastrulation.

**Question number 4** : What is the role of primitive streak in chickl gastrulation.

**Question number 5** : Outline the various phases of the period of growth during oogenesis and mention its importance in embryonic development.

**Question number 6** : Discuss the changes that takes place during the the three main phases of amphibian metamorphosis. Explain the hormonal control in each one of them.

**Question number 7** : With the help of suitable diagram describe various types of placenta on histological basis.

**Question number 8** : Illustrate the development of amnion and allantois in chick with suitable diagrams and discuss their function.

**Question number 9** : Elaborate on the basic steps involved in IVF. Add a note on amniocentesis.

**Question number 10** : What is polyspermy ? and why should it be blocked? What are the various means that serve to block it?

**Question number 11** : What is the critical period in gestation that is vulnerable to teratogens and why ? Detail the ill effects of retinoic acid, thalidomide and heavy metals causing teratogenesis in foetus.

**Question number 12**: Explain regeneration by morphallaxis with a suitable animal model. Add a line on how it differs from epimorphosis.

**Question number 13** : Discuss the process involved in converting a spermatogonium into a mature spermatozoa . Add information on the role of non-germinal cell in support.

**Question number 14** : How many patterns of metamorphosis are seen in insects. Give one example each. Give a a flow chart of the role of various hormones controlling insect metamorphosis ; explain in detail the experimental proof supporting the role of each hormone.

**Question number 15** : What are the three principal phases in amphibian metamorphosis and the changes seen in each there of ?

**Question number 16** : Enumerate various causes of ageing. Discuss any two of them.

**Question number 17** : Difference between pro-metamorphosis and pre-metamorphosis. Discuss hormonal control in different phases of amphibian metamorphosis.