

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI

FIRST SEMESTER 2016-17

BIO F341 DEVELOPMENTAL BIOLOGY

Mid Semester Examination

Maximum Marks: 30

Time: 90 min

Date: 05/10/16

Group-A

(Answer Group-A and B in separate answer sheet)

1.
 - a. How developmental biologists identified functions of various genes involved in development?
 - b. Draw the structure of a Drosophila egg chamber and label its different parts.
 - c. What would happen if more of cell adhesion molecules are injected in the anterior follicle cells of Drosophila oocyte. What would be the effect if calcium is chelated from the same cells later on.
 - d. How is early blastodermal division in Drosophila different from Xenopus?
 - e. Does Sog act as a morphogen in patterning and determining polarity in Drosophila embryo?

(3+3+3+3+3=15)

2.
 - a. What are Weismann's nuclear determinants?
 - b. What is a Henson's node?
 - c. What is the role of cortical rotation in Xenopus?
 - d. Differentiate between Nieuwkoop centre and Dorsal Organizer.
 - e. What is the role of inner cell mass in embryo development of vertebrates.

(3+3+3+3+3=15)
