| LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034   |                             |           |  |                  |
|--|-----------------------------|-----------|--|------------------|
| Sc. DEGREE EXAMINATION -ADVANCED ZOOLOGY AND BIOTECHNOLOGY<br>THIRD SEMESTER - APRIL 2018<br>16UZO3MC03- DEVELOPMENTAL BIOLOGY |                             |           |  |                  |
|  | 08-05-2018<br>09:00-12:00   | Dept. No. |  | Max. : 100 Marks |
| PART – A   |                             |           |  |                  |
| ANSWER ALL QUESTIONS: $(10 \times 2 = 20)$   |                             |           |  |                  |
| Define the following:  |                             |           |  |                  |
| 1.   | Organizers                  |           |  |                  |
| 2.   | Spermatogenesis             |           |  |                  |
| 3.   | 3. Involution               |           |  |                  |
| 4.   | Epiboly                     |           |  |                  |
| 5.   | 5. Morphogenesis            |           |  |                  |
| б.   | 6. Extra embryonic membrane |           |  |                  |
| 7.   | Stem cell                   |           |  |                  |
| 8.   | Regeneration                |           |  |                  |
| 9.   | Cojoined twins              |           |  |                  |
| 10. Multiple births  |                             |           |  |                  |
| PART - R   |                             |           |  |                  |

## ANSWER ANY FOUR IN BRIEF:

- 11. Describe the fertilization in sea urchin.
- 12. Write a paragraph the development of placenta.
- 13. Explain the role of stem cell in regeneration and development.
- 14. Describe the congenital malformations with examples,
- 15. Explain the process of regeneration and aging.
- 16. Elaborate the history of developmental biology.

## PART – C

## ANSWER ANY TWO IN DETAIL:

- 17. Give an account on Oogenesis with suitable diagram.
- 18. Write an essay on Gastrulation in frog and chick with suitable sketch.
- 19. Describe the process of regeneration in hydra.
- 20. Explain the IVF techniques and its applications.

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 $(4 \times 10 = 40)$ 

(2 X 20 = 40)

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