

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
B.Sc., Summer 2017-18 Examination

Semester: 5
Subject Code: 11102308
Subject Name: Developmental Biology

Date: 29/05/2018
Time: 02:00 pm to 04:30 pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1 A) Essay type (Each of 04 marks) (08)**
 Explain fertilization and process of early development in humans
- Q.1 B) Answer the following questions (Any two)**
- (a) Describe the process of gastrulation in mammals (04)
 (b) Write a short note on types of cleavage (04)
 (c) What are main events of Neurulation? (04)
- Q.2 A) Answer the following questions.**
- (a) Write a short note on Drosophilla axes formation (04)
 (b) Describe Vulva formation in *C.elegans* (04)
- Q.2 B) Answer the following questions (Any two)**
- (a) Short note (Each of 01 marks) (03)
1. Define: Blastula
 2. What is differentiation?
 3. Define: Totipotency
- (b) Why *C. elegans* is used as a model organism? (03)
 (c) Write a concise note on Gastrulation (03)
- Q.3 A) Essay type (Each of 04 marks) (08)**
 Explain types of stem cells and stem cell therapy
- Q.3 B) Answer the following questions (Any two)**
- (a) Write scope of Clinical embryology (04)
 (b) Draw diagram of human embryonic development stages (04)
 (c) Write a short note on Applications of stem cell therapy (04)
- Q.4 A) Answer the following questions.**
- (a) Discuss in brief: Life cycle of Angiosperms (04)
 (b) Explain: Floral development in plants (04)
- Q.4 B) Answer the following questions (Any two)**
- (a) Multiple choice questions. (Each of 01 marks) (03)
1. How many genes are there in drosophila?

(A) 3	(B) 6
(C) 4	(D) 5
 2. Fertilized egg is known as _____

(A) Oocyte	(B) Embryo
(C) Blastula	(D) Zygote
 3. Stem cell therapy cannot be used for

(A) SCID	(B) Leukemia
(C) Parkinsons	(D) Malaria
- (b) Discuss in very brief: Root apical meristem (03)
 (c) Write a brief note on Assisted reproduction (03)