

**PARUL UNIVERSITY**  
**FACULTY OF APPLIED SCIENCE**  
**M.Sc. Summer 2022-23 Examination**

**Semester: 4**  
**Subject Code: 11218258**  
**Subject Name: Developmental and Behavioral Genetics**

**Date: 20-03-2023**  
**Time: 2:00pm to 4:30pm**  
**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/ Brief note (4x2) (Each of 04 marks) (08)**  
 (a) What can you say about the role of animal models in deciphering the studies of human development  
 (b) Write a brief note on transgenic animals
- Q.1. B) Answer the following questions (Any two) (04)**  
 (a) Short notes (2x2) (Each of 02 marks)  
 1. Errors in Sex differentiation  
 2. Process of Patterning  
 (b) Short note on Oogenesis (04)  
 (c) Describe in brief how IQ differs ethnically. (04)
- Q.2. A) Answer the following questions. (04)**  
 (a) Short note (2x2) (Each of 02 marks)  
 1. The process of Axis Specification  
 2. Genes and proteins involved in development  
 (b) Describe the importance of twin studies in behavioural genetics research. (04)
- Q.2. B) Answer the following questions (Any two) (03)**  
 (a) Short note/ Multiple choice questions. (Each of 01 marks)  
 1. Define Chromosomal aberration  
 2. Define Embryo  
 3. What is Developmental genetics  
 (b) Enumerate the Genetics of psychiatric disorders. (03)  
 (c) Short note on behavioural genetics and affective disorder (03)
- Q.3. A) Essay type/ Brief note (4x2) (Each of 04 marks) (08)**  
 (a) Short note on Genetics and alcoholism  
 (b) Short note on process of Fertilization
- Q.3. B) Answer the following questions (Any two) (04)**  
 (a) Short note on Genome imprinting (04)  
 (b) Differentiate between behavioural vs developmental genetics  
 (c) Write a note on development of birth defects in human.
- Q.4. A) Answer the following questions. (04)**  
 (a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) (04)  
 1. Explain the role of Chromosomes in mental retardation  
 2. What is Schizophrenia (04)  
 (b) List out some of the fundamental concepts in development of a organism.
- Q.4. B) Answer the following questions (Any two) (04)**  
 (a) Short note/ Multiple choice questions. (Each of 01 marks) (04)  
 1. Define genetics  
 2. Define gastrulation (03)  
 3. Define cytogenetics  
 (b) Write in brief about the process of Organogenesis  
 (c) Short note on early phase of embryonic development (03)

(03)  
 (03)