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**NB—16—2023**

**FACULTY OF SCIENCE AND TECHNOLOGY**

**B.Sc. (Third Year) (Fifth Semester) EXAMINATION**

**NOVEMBER/DECEMBER, 2023**

**(New Course)**

**BIOTECHNOLOGY**

**Paper-CCBT-2E**

**(Developmental Biology)**

**(Tuesday, 05-12-2023)**

**Time : 10.00 a.m. to 1.00 p.m.**

*Time—3 Hours*

*Maximum Marks—75*

**N.B. :—** (i) All questions are compulsory.

(ii) Each question carries equal marks.

1. What is development ? Describe in detail neurulation process in frog. 15

*Or*

(a) Explain in detail gastrulation. 8

(b) Write in brief about redifferentiation, transdifferentiation with an example. 7

2. Describe in detail abnormal development and teratogenesis in plants and animals. 15

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Or

- (a) Explain in detail cancer biology. 8
- (b) What is progenitor cells ? Explain cell lineages in plant. 7
3. Describe in detail meristem structure and activity. 15
- Or
- (a) Write a note on photomorphogenesis. 8
- (b) Explain in brief seedling development. 7
4. Describe in detail embryo culture and preservation 15
- Or
- (a) Describe in detail developmental plasticity in animal. 8
- (b) What is cloning in mammals ? Explain “dolly”. 7
5. Write short notes on the following (any *three*) : 15
- (i) Fertilization
- (ii) Ageing
- (iii) Floral Patterning in Arabidopsis
- (iv) Hybrids
- (v) Test Tube Baby.

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