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BG—25—2016

FACULTY OF SCIENCE

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

OCTOBER/NOVEMBER, 2016

(Revised Course)

INTEGRATED BIOTECHNOLOGY

Paper (BTT-5.4)

(Animal and Plant Development)

(Friday, 25-11-2016)

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

Time—3 Hours

Maximum Marks—80

N.B. :— (i) Attempt All questions.

(ii) Draw neat well labelled diagram whenever necessary.

1. (a) Describe in detail the process of fertilization blastulation and gastrulation in animals. 10

(b) Give detailed information about shoot and root patterning. 10

2. (a) What are the abnormal development and teratogenesis in plants and animals ? 8

(b) Describe apoptosis cell death. 7

Or

(a) Give information about cell lineages in plants and animals. 8

(b) What are the roles in genes in patterning and development ? 7

3. (a) Embryogenesis in Dicotyledons. 8

(b) Describe in detail male and female gametophyle. 7

Or

(a) Embryogenesis in monocotyledons. 8

(b) Give detailed information about gametogenesis and fertilization in plants. 7

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4. (a) Describe cloning in mammals : Dolly and other mammals. 8
- (b) What is Embryo Culture and Preservation ? 7
- Or*
- (a) What is developmental plasticity in animal and plants ? 8
- (b) Give detailed information about the transgenic technology in animals and application. 7
5. Write short notes on (any *three*) : 15
- (a) Hybrids and GMO's
- (b) Seedling development : photomorphogenesis
- (c) Stem cells
- (d) Type of cleavages
- (e) Differentiation and Re-differentiation.

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