

SEAT No. _____

No. of Printed Pages: 02

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SARDAR PATEL UNIVERSITY
M. Sc. (Integrated) Biotechnology – Fourth Semester Examination
Wednesday, 27th March, 2019

10:00 a.m. to 01:00 p.m.

PS04CIGB27: DEVELOPMENTAL BIOLOGY

Note: (1) Figures to the right indicate marks.

(2) Draw diagram wherever necessary.

Total marks: 70

Q – 1 Choose the most appropriate alternative for the following:

(08)

- Flower without stalk is known as _____.
(a) sessile (b) complete
(c) pedicellate (d) filament
- Tree species are _____ in angiosperm.
(a) annual (b) biannual
(c) perennial (d) none of these
- The endosperm of the nucleus is _____.
(a) haploid (b) triploid
(c) tetraploid (d) none of these
- Formation of fruit without fertilization is called _____.
(a) pentothency (b) parthenocarp
(c) polyembryony (d) follicidocy
- The cells which produce the spermatozoa are called _____.
(a) interstitial cells (b) primordial germ cells
(c) seminiferous tubules (d) sertoli cells
- Fertilizin is secreted by _____.
(a) acrosome (b) mitochondria
(c) mature eggs (d) leydig cells
- _____ is hollow, spherical and non epithelial thick embryonic stage.
(a) blastula (b) morula
(c) gastrula (d) neurula
- _____ is a movement in which a layer of epithelial cells spread during development.
(a) cleavage (b) blastula
(c) epiboly (d) emboly

Q – 2 Attempt ANY SEVEN from the following:

(14)

- Sketch and label the life cycle of angiosperm showing alternation of generation.
- Define : Herbs and Shrubs.
- What is embryology?
- What is polyembryonic condition in angiosperm?
- Write about teleocithal eggs.
- What is parthenogenesis?
- Give the significance of cleavage.
- Define infertility.
- What is teratogenesis?

(P.T.O)

- Q-3 (a) Justify compound leaf is advanced than simple leaf. (06)
(b) Explain evolution of seed through heterospory in detail. (06)
OR
(b) Distinguish between monocot and dicot plants in angiosperms. (06)
- Q-4 (a) Discuss the types of ovules. (06)
(b) Explain the structure and development of microsporangia. (06)
OR
(b) Write a short note on parthenocarpy. (06)
- Q-5 (a) Write a note on spermatogenesis. (06)
(b) Give an account on egg membranes. (06)
OR
(b) Discuss kinds of fertilization in brief. (06)
- Q-6 (a) Describe the patterns of cleavage with suitable diagrams. (06)
(b) Write a note on : Emboly. (06)
OR
(b) Give an account on kinds of cleavage. (06)

*****X*****

(2)