

**M.Sc. ZOOLOGY
SECOND SEMESTER
DEVELOPMENTAL BIOLOGY
MSZ-204**

**SET
B**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 1hr. 30 mins.

Full Marks: 35

(Objective)

Time: 15 mins.

Marks: 10

Choose the correct answer from the following:

1×10=10

- Epimorphosis is regeneration through:
 - The repatterning of existing cells as seen in hydra
 - The re initiation of division in existing cells, followed by patterning, as occurs in amphibians such as newts
 - The repatterning of existing cells as seen in amphibians
 - The re-initiation of embryonic growth from remaining cells as seen in Hydra
- Regeneration is similar to:
 - Autotomy
 - Differentiation
 - Cleavage
 - Division
- In which type of blastula, Blastomeres are structurally different?
 - Coeloblastula
 - Periblastula
 - Discoblastula
 - Amphiblastula
- Which one of the following cleavage pattern is Meroblastic?
 - Rational
 - Spiral
 - Superficial
 - Bilateral
- Which part of the mammalian Blastocyst takes part in placenta formation?
 - Syncytiotrophoblast
 - Cytotrophoblast
 - Inner cell mass
 - Blastocoel
- Regeneration of a limb or tail is an example of:
 - Epimorphosis
 - Epimorphogenesis
 - Autonomy
 - Morphallaxis
- Removal of thyroid rudiment at the tail bud stage results in:
 - Giant tadpole
 - Excitement
 - Monster
 - Death
- In *C. elegans* the self-fertilized eggs exit the body through:
 - Vulva
 - Valve
 - Blastula
 - Cell
- Which one of the following activities is not found during gastrulation?
 - Oxygen consumption increases
 - Cell division increases
 - New types of protein is formed
 - Rearrangement of cells occur

- Epidermal stem cells of adult is categorized under:
 - a. Totipotent
 - b. Pluripotent
 - c. Unipotent
 - d. Multipotent

(Descriptive)

Time : 1 hr. 15 mins.

Marks : 25

[Answer question no.1 & any two (2) from the rest]

1. Discuss briefly about the formation of vulva in *C.elegans* with neat labelled sketches. 5
2. Elucidate in detail about the phenomenon of metamorphosis in vertebrates citing suitable examples. 10
3. Discuss briefly about regeneration in animals citing suitable examples. 10
4. What are morphogenetic movements of embryonic cells? Describe the types of morphogenetic movements occur during gastrulation. 2+8=10
5. Write about the types of placenta found in mammals. Mention its functions. 8+2=10

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