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SUBJECT CODE NO:- 6046
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. IV Sem.
Examination March/April-2022 (To Be Held In June/July-2022)
Zoology
Developmental Biology-511

[Time: 3:45 Hours]

[Max. Marks: 80]

N.B Please check whether you have got the right question paper.

- N.B
- 1) Part A is compulsory
 - 2) Attempt any five questions from Part –B
 - 3) Draw neat labelled diagram wherever necessary

PART - A

Q.1 Multiple choice questions

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- 1) Bones of vertebrates are derived from -----
 - a) Ectoderm
 - b) Mesoderm
 - c) Epiderm
 - d) Endoderm
- 2) Cell specialization process is called
 - a) Cryptopreservation
 - b) differentiation
 - c) proliferations
 - d) gastrulation
- 3) Spermatogonia in male is -----
 - a) Diploid primary germ cells
 - b) Haploid primary germ cell
 - c) Haploid tertiary germ cell
 - d) Diploid secondary germ cell
- 4) Fertilization of ova in human takes place in ----
 - a) Ovary
 - b) uterus
 - c) ampulla
 - d) vagina
- 5) The polar body is -----
 - a) Another name of an egg cell
 - b) The cell produced when fertilization occurs
 - c) A precursor cell that becomes an egg cell
 - d) Non functional cell made at the same time as an egg cell .
- 6) The acrosome is formed from -----
 - a) Golgi complex of spermatid
 - b) Nucleus of spermatid

- c) Centrosome of spermatid
 d) Mitochondria of spermatid
- 7) Solid ball structure of cell produced by repeated cleavage is called ----
 a) Blastula b) gastrula c) morula d) neurula
- 8) Adult stem cells are described as -----
 a) Somatic stem cells b) koller's cells c) syngenic cells d) specialized cells
- 9) Which of the following is an active cell death process?
 a) Lysis b) necrosis c) senescence d) apoptosis
- 10) The splitting migration or one sheet of cells into two sheets as seen during hypoblast formation in bird embryogenesis is termed as -----
 a) Involution b) invagination c) delamination d) ingression

PART –B

- Q.2 Explain the process of fast and slow block to polyspermy in sea urchin 12
- Q.3 Describe the process of oogenesis in mammals 12
- Q.4 Explain the process of fertilization in mammals 12
- Q.5 Give the detail account of embryonic stem cells 12
- Q.6 Describe the different types of eggs 12
- Q.7 Describe the process of gastrulation in frog 12
- Q.8 Describe the process of axes and pattern formation in drosophila 12