

**II SEMESTER INTERNAL ASSESSMENT-II EXAMINATIONS
MOLECULAR GENETICS & DEVELOPMENT BIOLOGY QUESTION BANK**

I. Multiple choice questions

1. This phase in the development of sperm has no counter part in ovum – development(A)
a. Spermiogenesis b. Phase of multiplication c. Phase of growth d. Polar body formation
2. During this phase, the nuclear envelope begins to disappear (D)
a. Cytokinesis b. S phase c. Anaphase d. Prometa phase
3. In humans the number of ova & sperms that would be produced from 100 secondary oocytes & 100 secondary spermatocytes during gametogenesis is (C)
a. 50 ova, 100 sperms b. 100 ova, 100 sperms
c. 100 ova, 200 sperms d. 200 ova, 200 sperms
4. The undifferentiated primordial germ cells are larger in size & their chromatin rich nuclei are distinct in (B)
a. Growth phase b. Multiplication phase c. Maturation phase d. All of these
5. Typically in humans gametes are disease – free (or) even in other animals as (C)
a. Gametes are immune to diseases b. Germs can't attack gametes
c. Germplasm is segregated easily & not subjected to diseases from which somatic cells may suffer
d. None of these
6. The amount of yolk & its distribution are changed in the egg, this is affected (B)
a. Fertilization b. Cleavage pattern c. Zygote formation d. Number of blastomeres
7. Haemoendothelial placenta takes place in (A)
a. Rat & Rabbit b. Camel & deer c. Goat & cow d. Ape & man
8. Atretic follicles occur in (D)
a. Liver b. Testis c. Thymus d. Ovary
9. Phenomena that creates female gametes, oogenesis is ceased at prophase I up till puberty. This describes the DNA content of a female's gametes during her childhood (C)
a. 23 Chromosomes, 23 Chromatids b. 23 Chromosomes, 46 Chromatids
c. 46 Chromosomes, 92 chromatids d. 46 chromosomes, 46 Chromatids

10. Blotting Techniques are Types (A)
 a. 4 Types b. 3 Types c. 2 Types d. 5 Types
11. How many types of sexes are present in rotifers (C)
 a. Amictic b. mictic c. Dimictic d A & B
12. An example for complete parthenogenesis (B)
 a. Platyhelminthes b. Rotifers c. Wasps d. All
13. Honey bees are possessing what type of parthenogenesis (C)
 a. Alternative b. Complete parthenogenesis c. Incomplete parthenogenesis
 d. Cycle parthenogenesis
14. During cleavage the blastomeres do not move, so that the general shape of the embryo does not change except for the formation of a cavity call _____in the interior (B)
 a. Gastrocoel b. Blastocoel c. Blastula d. Morula
15. Cleavage occurs in _____ (B)
 a. Fertilized embryo b. Zygote c. Fertilized egg d. A b & c
16. An example for determinate cleavage (D)
 a. Tunicates b. Molluscs c. Annelids d) All
17. Cephalopods are showing what type of cleavage pattern (B)
 a. Spiral b. Biradial c. Radial d. Cyclic
18. Which animals are shows epaiuxesis type Gastrulation (D)
 a. Pisces b. Echinodermata c. Nematoda d. Amphibians
19. Microphthamia _____ (B)
 a. Big eye b. Small eye c. Instinct eye d. Compound eye
20. How many germ layers appears in the amphioxus early development of embryo (C)
 a. 1 b. 2 c. 3 d. 4

II. Fill in the Blanks

1. Southern blotting technique is also called as southern blot **hybridization**
2. Northern blotting Technique is also considered as **northern blot hybridization**
3. The process of **spermatogenesis** occurs in the male testes
4. The germinal epithelium cells are separated by **Sertoil cells**
5. Fertilizin is a **Glyo protein**

6. Anti fertilizing is a **Acid protein**
7. CNS **centrol Nervous system**
8. In insects metamorphosis is controlled by **Hormones**
9. **Thyroxin** Hormone plays an important role in the metamorphosis of life cycle of amphibians
10. TSH **Thyroid stimulin hormone**
11. Archenteron appears in the **Gastrula stage of embryonic development**
12. Oncogens are **Mutated genes**
13. Amphitoky means **A type of parthogenesis**
14. Based on yolk content, human eggs (ova) are **Alecithal**
15. Carbon particle marking staining method used by **developmental biology**
16. In the insect, Metamorphosis process adult is developing through **Pupa stage**
17. Which cells are shows mitosis division **diploid somatic cells**
18. Division of nucleate cell consists of two distinct but integrated activities, nuclear division is called **Karyokinesis and cytokinesis**
19. Dioecious **Having the Male & Female reproductive organs in separate individuals**
20. In the mammals, in the early development stage of embryo, the **PGC cells are arises Around the time of gastrulation**

III Answers the following questions

- (1) Gametogenesis
- (2) Vitellogenesis
- (3) Scope and importance of developmental biology
- (4) Neural tubule formation
- (5) Teratogenesis