

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2022  
(Sixth Semester)

Branch – BIOTECHNOLOGY

ANIMAL BIOTECHNOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 1 = 10)

- The production of gametes is called
  - Vitellogenesis
  - Biogenesis
  - Oogenesis
  - Gametogenesis
- \_\_\_\_\_ is the union of spermatozoon and egg resulting in the formation of zygote.
  - Oogenesis
  - Spermatogenesis
  - Fermentation
  - Spermiogenesis
- Animal cell/tissues are usually grown in glass wares, it is also known as
  - Invivo culture
  - Parthenogenesis
  - Invitro culture
  - None of these
- The blood plasma that lacks fibrinogen is called
  - Blood clot
  - Blood platelets
  - Haemoglobin
  - Blood serum
- A small excised portion of an animal's body used for culture is known as
  - Explant tissue
  - Explant
  - Organ
  - Both (i) and (ii)
- Tissue disaggregation using trypsin is called
  - Trypsinogen
  - Cold trypsinization
  - Warm trypsinization
  - Culture
- The organism from which gene is removed is called
  - Knockout organism
  - Knockout gene
  - Tissue engineering
  - None of these
- Which of the following is the most commonly used markers in yeast?
  - His 3
  - Ura 3
  - Trp 1
  - All of these
- The process of injecting a vaccine into the body is known as
  - Vaccine
  - Vaccination
  - Natural immunity
  - Cell mediated immunity
- Dolly was born on 22<sup>nd</sup> February \_\_\_\_\_.
  - 1948
  - 1985
  - 2010
  - 1997

Cont...

**SECTION - B (25 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 5 = 25)

11. a) Write a brief note on semen Banking.  
(OR)  
b) Briefly explain the Role of Maternal contribution in early embryonic development.
12. a) Discuss about the pluripotency.  
(OR)  
b) Give a brief account of balanced salt solution and its uses.
13. a) Write short notes on Production of artificial cartilage for tissue engineering.  
(OR)  
b) Give a brief account of Cell banking procedure.
14. a) Describe the selection of markers.  
(OR)  
b) Write short notes on gene targeting.
15. a) Briefly explain the somatic cell genetics.  
(OR)  
b) Write an account of transgenic fish.

**SECTION - C (40 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 8 = 40)

16. a) Write a detailed account of Spermatogenesis.  
(OR)  
b) Explain the Patterns of cleavage.
17. a) Discuss about the essential equipment for animal cell culture.  
(OR)  
b) Give a detailed account of History of animal cell culture techniques.
18. a) Explain the Biology of cultured cells.  
(OR)  
b) Discuss about the disaggregation of explants.
19. a) Describe the Animal vector for transfection.  
(OR)  
b) Write an account of Physical method of transfection.
20. a) Write a detailed account of Production of dolly.  
(OR)  
b) Discuss about the Ethical issues in animal biotechnology.