



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 6th Semester Examination, 2021



ZOOACOR13T-ZOOLOGY (CC13)

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.*

1. Answer any **eight** questions from the following:

2×8 = 16

- What are totipotent cells? Give an example.
- What is spermiogenesis?
- What is the primary organizer? State its role in development.
- What is fertilization cone?
- Draw a neat diagram of the Fate map of chick blastoderm.
- What is discoblastula?
- State the location and function of vitelline envelope.
- What is capacitation?
- Define area pellucida and area opaca.
- In which type of egg the yolk is concentrated in the vegetal pole? Which type of egg is present in human?
- What are the functions of Leydig cells?
- Define Amniocentesis.

1+1

2. Answer any **three** questions from the following:

3×3 = 9

- Briefly explain spermiogenesis. What is the function of Sertoli cell?
- Classify eggs on the basis of distribution and amount of yolk.
- What is Fate map? Discuss about one technique used for fate mapping.
- Briefly describe any three morphogenetic movements during gastrulation.
- State the risks involved in In vitro fertilization (IVF).
- Write a note on Spemann's organizer.

2+1

3

1+2

1+1+1

3

3

3. Answer any *three* questions from the following.

5×3 = 15

- (a) Explain the steps of development of lens in vertebrate with diagram. 5
- (b) Classify teratogens based on their different types. Write an example of a most common notorious teratogenic agent. What are the malformations caused due to the effect of teratogenic agent on embryonic development? 2+1+2
- (c) What is the mechanism of 'fast block' to polyspermy? 5
- (d) Describe the role of yolk in determining the pattern of cleavage. 5
- (e) Classify placenta in mammals according to distribution of villi and intimacy between foetal and maternal tissue with example and diagram. 5
- (f) Give an account of the growth phase of oogenesis. 5

N.B. : Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.

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