



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
- (a) What are totipotent cells? Give an example.
 - (b) What is spermiogenesis?
 - (c) What is the primary organizer? State its role in development.
 - (d) What is fertilization cone?
 - (e) Draw a neat diagram of the Fate map of chick blastoderm.
 - (f) What is discoblastula?
 - (g) State the location and function of vitelline envelope.
 - (h) What is capacitation?
 - (i) Define area pellucida and area opaca.
 - (j) In which type of egg the yolk is concentrated in the vegetal pole? Which type of egg is present in human? 1+1
 - (k) What are the functions of Leydig cells?
 - (l) Define Amniocentesis.
2. Answer any **three** questions from the following: 3×3 = 9
- (a) Briefly explain spermiogenesis. What is the function of Sertoli cell? 2+1
 - (b) Classify eggs on the basis of distribution and amount of yolk. 3
 - (c) What is Fate map? Discuss about one technique used for fate mapping. 1+2
 - (d) Briefly describe any three morphogenetic movements during gastrulation. 1+1+1
 - (e) State the risks involved in In vitro fertilization (IVF). 3
 - (f) Write a note on Spemann's organizer. 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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