



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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