

FAKIR CHAND COLLEGE  
INTERNAL EXAM 2021  
**SEMESTER-6**  
ZOOLOGY HONOURS

Paper- CC-13 (Developmental Biology)

FM-10

Answer any Ten (10) : 10x1

1. Write the difference between invagination and involution?
2. What is superficial cleavage?
3. Write one function of resact?
4. What is Koller's sickle?
5. What is Nieuwkoop center?
6. What is amniotic raphe ?
7. Write the role of allantois .
8. Define - haemochorial placenta .
9. What is syncytiotrophoblast ?
10. Write a name of a placental protein hormone.
11. What is the difference between Totipotent and Pluripotent cell?
12. What is the molecular inductors for brain development in chick embryo?
13. How many hours of incubation is needed for lens development in chick embryo?
14. Which is the stem cell used for cartilage regeneration?
15. Name the stages of IVF.

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Paper- CC-14 (Evolutionary Biology)

FM-10

Answer any Ten (10) : 10x1

1. What is RNA world hypothesis?
2. What was the drawback of Darwin's theory of natural selection?
3. What is industrial melanism?
4. What is the difference in Lamarkism and Darwinism with respect to evolution of Giraffe's neck?
5. What is Neodarwinism?
6. Why is carbon dating not possible from the origin of Earth?
7. What is the significance of half-life of Carbon in fossil dating?
8. Name the invertebrate fauna that were extinct after the Precambrian period.
9. What is the relationship between, era, eon and period in Geological timescale?
10. What is the immediate hominid ancestor of modern man, *Homo sapiens* ?
11. What is the difference between hominids and primate characters?
12. Name one isolating mechanism each of pre and post gametic situation?
13. What is genetic drift?
14. Give an example of adaptive radiation in evolution.
15. What are mass extinctions?

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Paper- DSEA2 (Animal Biotechnology)

FM-10

Answer any Ten (10) : 10x1

1. What are the maternal effect gene ?
2. What is the role of type IV restriction enzyme ?
3. Write two features of shuttle vector.
4. What is the difference between genomic and cDNA library.
5. Write the principle of gel electrophoresis.
6. Write two uses of RAPD.
7. Define - transgenic animal .
8. Write two applications of transgenic animal in production of pharmaceuticals.
9. What is knock out mice ?
10. Why PBS treatment is followed by two times in adherent cell culture ?
11. Why sickle cell anemia is considered as a molecular disease ?
12. Define - Cooley's anemia .
13. What is the genetic cause of cystic fibrosis ?
14. Write the basic principle of cloning.
15. What is retroviral method ?

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Paper- DSEB2 (Fish and Fisheries)

FM-10

Answer any Ten (10) : 10x1

1. What is the major difference between physostomous and physoclistous swim bladder?
2. What is aspect ratio of caudal fin?
3. Write one major difference between placoid and ctenoid scales.
4. Write one difference between heterocercal and homocercal caudal fin.
5. Write one advantage of remote sensing in fisheries.
6. What is the causative organism of saprolegniasis?
7. Write one treatment method of freshwater white spot disease in fish.
8. What is the causative organism of columnaris disease in fish?
9. What is hypophysation technique?
10. Why zebra fish is chosen as model organism? (1 attribute)
11. Write one example of surface feeder and one column feeder.
12. Write one difference between pen and cage culture.
13. What is semi intensive culture of fish?
14. Write one way how to solve problem during microinjection in constructing transgenic fish.
15. Write one advantage of polyculture system.