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## COMMON QUARTERLY EXAMINATION - 2023

## MODEL QUESTION PAPER – 2

SUBJECT: ZOOLOGY

TIME: 3:00 hrs

CLASS: XII

MAX-MARKS: 70

## Instructions:

- Check the question paper for fairness of printing.
- If there is any lack of fairness, inform the Hall Supervisor immediately.
- Use blue or black ink to write and underline and pencil to draw diagrams.

## SECTION – A

Choose the most suitable answer from the given four alternatives and write the option code and the corresponding answer. 15 x 1 = 15

1. Match the Following:
 

1) Simple binary fission	A) Ceratium
2) Transverse binary fission	B) Euglena
3) Longitudinal binary fission	C) Paramecium
4) Oblique binary fission	D) Amoeba
a) 1 – A, 2 – B, 3 – C, 4 – D	b) 1 – B, 2 – C, 3 – A, 4 – D
c) 1 – C, 2 – B, 3 – A, 4 – D	d) 1 – D, 2 – C, 3 – B, 4 – A
2. Identify the correctly matched answer
 

1) Periodic abstinence	A) condoms
2) Lactational amenorrhea	B) Jellies creams
3) Chemical barrier	C) High prolactin prevent menstrual cycle
4) Mechanical barrier	D) rhythm method
a) 1 – A, 2 – B, 3 – C, 4 – D	b) 1 – D, 2 – C, 3 – B, 4 – A
c) 1 – B, 2 – A, 3 – D, 4 – C	d) 1 – D, 2 – A, 3 – C, 4 – B
3. A few statements with regard to sexual reproduction are given below:
  - i) Sexual reproduction does not always require two individuals
  - ii) Sexual reproduction generally involves gametic fusion
  - iii) Meiosis never occurs during sexual reproduction
  - iv) External fertilization is a rule during sexual reproduction
 Choose the correct statements from the options below:
 

a) i and iv	b) i and ii	c) ii and iii	d) i and iv
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4. Pick out the correct statements:
 

A) Haemophilia is a sex-linked recessive disease	b) B and D are correct
B) Down's syndrome is due to aneuploidy	d) A, B and C are correct
C) Phenylketonuria is an autosomal recessive gene disorder	
D) Sickle cell anaemia is an X-linked recessive gene disorder	
a) A and D are correct	
c) A, C and D are correct	
5. These glands reduce the cracking of the skin of the nipple of mammary gland is called
 

a) Areolar glands	b) skene's glands
c) bartholin's glands	d) vestibular glands
6. The substance that is added to arrest cell division during mitosis in the preparation of karyotype is
 

a) Colchicine	b) formaline	c) Ethanol	d) none of these
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7. Select the incorrect statement.
  - a) LH and FSH trigger ovulation in ovary
  - b) LH and FSH decrease gradually during the follicular phase
  - c) LH triggers secretion of androgens from the Leydig cells.
  - d) FSH stimulates the sertoli cells which help in spermiogenesis

8. **Assertion A: A statutory ban is imposed on amniocentesis.**  
**Reason R: It is being misused to determine the sex of the foetus.**  
 a) Both 'A' and 'R' are true and 'R' is the correct explanation for 'A'.  
 b) Both 'A' and 'R' are true but R is not the correct explanation for 'A'  
 c) A is true but 'R' is false  
 d) both 'A' and 'R' are false
9. One gene – one enzyme hypothesis was given by  
 a) G.Beadle and E-Tatum  
 b) O-Avery, C-macleod  
 c) M.Mccarty, Sutton  
 d) W.Johannsen
10. A molecule that can act as a genetic material should have the property of  
 a) Self replication  
 b) stability  
 c) Information storage  
 d) all these
11. An operon is a  
 a) Protein that suppresses gene expression  
 b) Protein that accelerates gene expression  
 c) cluster of structural genes with related functions  
 d) gene that switched other genes on
12. Identify correct sequence of periods in the Palaeozoic era.  
 a) Cambrian → Ordovician → Silurian → Devonian  
 b) Devonian → Cambrian → Carboniferous → Permian  
 c) Ordovician → Silurian → Devonian → Cambrian  
 d) Silurian → Ordovician → Cambrian → Devonian
13. Which is the correct order of human evolution  
 a) *Hominid* → *H.habitis* → *Homo erectus* → *Homo sapiens*  
 b) *Homo habilis* → *Homo erectus* → *Hominids* → *Homo sapiens*  
 c) *Homo erectus* → *Homo habilis* → *Hominids* → *Homo sapiens*  
 d) *Homo habilis* → *Hminids* → *Homo erectus* → *Homo sapiens*
14. A chronic memory disorder due to alcohol misuse is  
 a) Korsakoff syndrome  
 b) liver cirrhosis  
 c) Euphoria  
 d) drowsiness
15. This is an applied science which deals with the biochemical process of fermentation and its practical uses  
 a) Oenology  
 b) zymology  
 c) fermentation  
 d) none of these

### SECTION - B

Answer any SIX of the following in about 30 words each: Q. NO: 24 is compulsory. 6 X 2 = 12

16. How do sea anemones reproduce by fragmentation or pedal Laceration?  
 17. What are Sertoli cells and state their functions?  
 18. What is the importance of POCSO act?  
 19. Write short notes on: pedigree Analysis.  
 20. What is bursa of Fabricius? Mention its role in immunology.  
 21. State the importance of statins.  
 22. How are microbes useful in the preparation of enzymes?  
 23. Differentiate epitope and paratope.  
 24. In corona virus, RNA is the genetic material. How did it occur in many strains in a short period of time? Give reasons.

### SECTION - C

Answer any six the following in about 50 words each. Q. NO: 33 are compulsory. 6 X 3 = 18

25. Zygote is not formed during the conjugation of paramecia, but we call it as sexual reproduction why?  
 26. Name the extra embryonic membranes found in human beings. Mention their functions.  
 27. Name the risk factors of cervical cancer and the methods of diagnosis.  
 28. What is karyotyping? state its applications.  
 29. Draw the schematic structure of a transcription unit. Mention the components of transcription units.  
 30. How do vestigial organs at as evidences for evolution?  
 31. Compare: Relative and Absolute dating of fossils.  
 32. Write short notes on: Amoebiasis.



33. A man with "A" blood group marries women with "B" blood group. The offsprings got has "O" blood group. How is it possible? Explain with a flowchart.

**SECTION – D**

Answer all the questions in brief.

5 X 5 = 25

34. Describe how microorganisms are involved in bio remediation.

(Or)

Give an account of innate immunity, types and mechanisms.

35. Describe asexual mode of reproduction in plasmodium.

(Or)

List the objections to Darwinism.

36. Describe the Goals and methodologies of Human Genome Project.

(Or)

How did Hershey and chase's experiment on T2 Bacteriophage prove that D.N.A is the genetic material?

37. A Rh+ve Man marries a Rh-ve women. What will be the Rh factor present in the first and second offsprings? What type of effect will occur in the offsprings? Mention which offspring will be affected in this case? How can we prevent it?

(Or)

In a male, each spermatogonia forms four sperms at the end of spermatogenesis. In case of females an oogonia forms only a single ovum during oogenesis. Give reasons.

38. Give an account of ART. (any five methods)

(Or)

What is Binary fission? Explain with diagrams the types of binary fission.