

SETHU BHASKARA MATRIC HR. SEC. SCHOOL. (1)

COMMON QUARTERLY EXAMINATION - SEP-2022.ZOOLOGY - ANSWER KEY

Part-I

Class:- XIIIChoose the correct answer! -

15x1=15

- 1, c - Sexual.
- 2, c - Prolactin.
- 3, c - Sertoli cells
- 4, b - Syphilis, Chlamydia and Gonorrhoea.
- 5, b - inhibiting ovulation.
- 6, b - O
- 7, d - All of these.
- 8, b - Transcription.
- 9, c - UVV, Phenyl alanine.
- 10, a - Charles Darwin.
- 11, c - Devonian.
- 12, c - Chicken Pox.
- 13, a - Hallucination.
- 14, a - I g E.
- 15, d - Trichoderma Polysporum.

Part II

Answer any 6 questions. (Q.No. 24 is Compulsory).

(6 × 2 = 12)

16, (i) It is the Sexual union of young individuals produced immediately after the division of the adult Parent cell by mitosis. 2 mark.

17, (i) Elongated Pyramidal cells occurs in the wall of Seminiferous tubules. 1 mark.

(ii) Provide nourishment to developing Sperm. 1 mark.

18, (i) The mammary gland secrete a yellowish fluid called Colostrum. 1 mark.

(ii) It contains more Proteins, Vitamin A and minerals. It is rich in IgA helps to protect the infants digestive tract against infection. 1 mark.

19, (i) The delay of ovarian cycle during breast feeding is known as lactational amenorrhoea. 2 mark.

20, (i) Three or more alleles of a gene that control a particular trait occupy the same locus on the homologous chromosome of an organism. 2 mark.

21, (i) Any two differentiation 2 mark.

22, (i) Ammonia, methane, water vapour, hydrogen 2 mark.

- 23, 1 - Tertian, benign tertian - P. vivax.
 2 - Quartan malaria - P. malaria.
 3 - Mild tertian malaria - P. ovale.
 4 - Malignant tertian - P. falciparum. } 2 mark

- 24, (i) Penicillin. 1 mark
 (ii) It is used to treated the wounded Soldiers in World War-II. 1 mark

Part - III

Answer any 6 questions. (Q.No. 33 is Compulsory). (6x3=18)

- 25, (i) Complete Parthenogenesis. 1 1/2 mark
 (ii) In complete Parthenogenesis, 1 1/2 mark.

- 26, (i) The Scrotum is a sac of skin that hangs outside the abdominal cavity. 1 1/2 mark
 (ii) Viable Sperm cannot Produced inside the body cavity. So it is located outside the body cavity. 1 1/2 mark.

- 27, (i) Vasectomy → Male Sterilization. both vas deference cut and ligated. } 3 mark
 (ii) Tubectomy → female Sterilization. both fallopian tube cut and ligated.

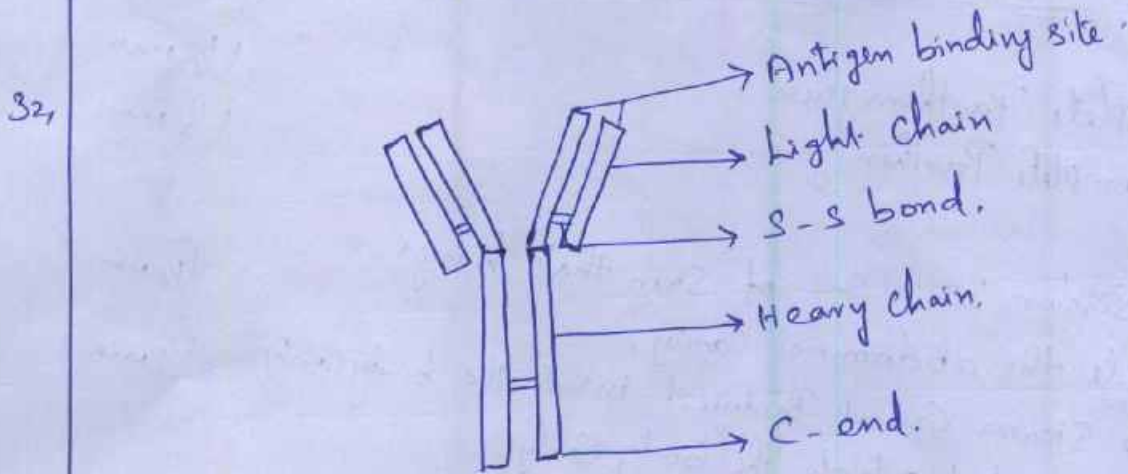
- 28, (i) Tall, obese, with long limbs, high pitched voice, under developed genitalia, feeble breast } 3 mark

- 29, (i) Any three Salient features of HGP. 3 mark.

30, (i) The experiments of George Beadle and Edward Tatum in the early 1940's on *Neurospora crassa* led them to propose one gene one enzyme hypothesis, which states that one gene controls the production of one enzyme. } 3 marks.

31, (i) Divergent evolution :-
 (i) Structurally similar, functionally different.
 (ii) Forelimbs of Man, horse, bat. } 3 marks.

(ii) Convergent evolution :-
 (i) Structurally dissimilar, functionally similar.
 (ii) Wings of birds and butterfly. }



33, (i) Explanation of MFC } 3 marks.
 (i) Biochemical system that derives an electric current by using bacteria
 (ii) MFC allowing bacteria for redox reaction in which electron is being moved

Part - IV

- 34 (a) (i) Menstrual Phase. 1 mark
 (ii) Follicular Phase [Proliferative]. 1 mark
 (iii) Ovulatory Phase. 1 mark
 (iv) Luteal (or) Secretory phase. 1 mark
 (v) diagrams. 1 mark.
- (b) (i) Juvenile Phase. 1 mark
 (ii) Reproductive Phase [Seasonal and Continuous breeder] 3 mark
 (iii) Senescent Phase. 1 mark.
- 35, (a) (i) Structure of human ovum 3 mark
 (ii) Diagram 2 mark.
- 36, (a) (i) Any five applications of Karyotyping 5 mark.
 (b) (i) Explanation. 4 mark
 (ii) Flow chart. 1 mark.
- 37, (a) (i) Extraction of DNA. }
 (ii) Polymerase Chain reaction. }
 (iii) Fragmenting DNA. }
 (iv) Separation of DNA by electrophoresis }
 (v) Denaturing DNA. }
 (vi) Blotting. }
 (vii) Using Probe to identify specific DNA, (viii) Hybridization with Probe. } 5 mark
 (ix) DNA finger Print.

37.

b)

- (i) Fraenkel - Conrat and Singer.
- (ii) Leslie Orgel, Francis Crick, Carl Woese
- (iii) Ribozyme.
- (iv) Chemical modification of RNA into DNA.

} 5 marks

38. (a)

- (i) Darwin finches.
- (ii) Australian Marsupials.

2 1/2 marks.

2 1/2 marks.

(b)

Active immunity	Passive immunity
1- Produced actively by host immune system.	No active host participation.
2, Produced due to contact with Pathogen.	Produced due to antibodies Produced from outside
3, durable and effective	transient and less effective
4, immunological memory present	absent.
5, Booster effect on subsequent dose is possible	Subsequent dose is less effective
6, immunity is effective only after short period.	immunity develops immediately.

Subject Teacher Signature :

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