SECOND YEAR HIGHER SECONDARY EXAMINATION MARCH 2018

SUBJECT : ZOOLOGY - II Year CODE. NO: 9017

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
I				
1.		Interstitial cells / Leydig cells	1	1
2.		Saheli / (b)	1	1
3.		Exocoms / (c)	1	1
II				
4.		Chromosome pattern of human female is XX and male is XY. Haploid gamates is produced by female contains only X while male produces either X or Y. Hence father determines sex OR Expression :- XX-XY type of sex determination / Heterogametic individual determines sex	2	2
5.		a) Natural methods - Periodic Abstinence Withdrawal / coitus interruptus Lactational amenorrhoea / Absence of menustration. (Any two carries 1 marks	1	2
		b) Barrier methods Condoms, Diaphragms, cervical cap, Vaults (Any two carries 1 mark	1	

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
6.	a)	Negatively charged DNA wrapped around positively charged histone octamer / Nucleosomes are chromatin beaded on string / DNA + Histone octamer / labelled diagram of nucleosomes.	1	
	b)	Euchromatin - chromatin region loosely arranged, transcriptionally active / lightly stained (Any one response)	½	2
		Heterochromatin - Chromatin region densely packed, transcriptally inactive / darkly stained (Any one response)	½	
7.	a)	Incomplete dominance	1	
	b)	Definition of Incomplete dominance / Blending of colours or genes / Gene interaction / Abnormal or less efficient enzymes / Non functional enzyme / No enzyme at all [Any one response]	1	2

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
8	A	Homologous Organs	½	2
	B	Divergent evolution	½	
	C	Analogous organs	½	
	D	Convergent evolution	½	
9		1) Gene migration / Gene flow 2) Genetic drift 3) Mutation 4) Genetic Recombination 5) Natural selection [Four correct responses]	4 × ½	2
10		1) Physical barriers Skin / mucous coating in respiratory system, Urinogenital system and gastro intestinal system 2) Physiological barriers Acid in stomach / saliva / tear 3) Cellular barriers PMNL / Natural killer cells / Monocyte Macrophages		

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
		4) Cytokine barriers – Interferons [4 barriers / 2 barriers with their appropriate examples]	4 × ½	2
11.	A	Salmonellae / salmonella typhi	½	2
	B	Common cold / cold	½	
	C	Plasmodium falciparum / plasmodium	½	
	D	Elephantiasis / filariasis	½	
12		Drop in academic performance / Lack of interest in personal hygiene / Absent from schools / Isolations / Withdrawal symptoms / Depression / Fatigue / Aggressive and rebellious behaviour / loss of interest in hobbies / change in sleep and eating habit / fluctuation in weight and loss of appetite [four correct response]	4 × ½	2

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
13.		1) OH groups / hydroxyl groups of RNA is reactive and hence easily degradable 2) RNA is catalytic and hence reactive 3) Mutated at faster rate 4) Presence Uracil makes RNA less stable. 5) RNA is single stranded while DNA is double stranded [Two correct responses]	2×1	2
14.	A	Aspergillus niger	4×½	2
	B	Bacterium		
	c.	Cyclosporin A / Cyclosporin		
	d)	Monascus purpureus		
15.	a)	S - Species richness A - Area z - Slope of line / Regression coefficients c - Y intercepts	4×½	

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total
	b)	Alexander Von Humboldt	1	3
16	a)	Lactose Switch off lac operon as inducer / Lactose binds with the repressor undergoes structural modification hence can't bind with operator	1	
	b)	A. Repressor mr. RNA / Repressor / Regulator gene B. B galactosidase / lac Z / Structural gene C Permease / lac Y / Structural gene D Trans acetylase / lac a / Structural gene.	4 × ½ = 2	3
17.	a)	Gonorrhoea / syphilis / Genital herpes / Genital warts / Trichomoniasis / Chlamydiasis / Hepatitis-B / AIDS [Any two]	2 × ½ = 1	

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total
	b.	1) Avoid sex with unknown/ multiple partner 2) Always use condoms during coitus. 3) In case of doubt early detection by doctor (correct two responses)	2x1 = 2	3
18.	a)	Mendelian disorder, determined by alteration or mutation in the single gene / point mutation / Gene mutation	1	
	b)	Phenyl keto neuria Autosomal recessive trait in which lack of enzyme to convert phenylalanine to tyrosine / Accumulation of Phenyl pyruvic acid in brain and excreted through urine.	2	3

1 Jose John M.M.M HSS kuttayi Tirur 9447536565

2. Dr. P.P. Varghese, Santhi H.S.S. Avanoor

3. Ratheeshkumar. P CHSS Chattanchal Kasargod

4 Ajithkumar. N MGM NSS HSS lakkattoor

5 Basheer. S LMHSS Alappuzha

6. Joju Wilson. A HSS Chalavara,

7. JOHNSON. A St. Mary's H.SS Trivandrum

8. Dr. G.K. Suresh HCHMKMVHSS, Vallakkadavu, TVPM

9. Musthapha. A - ST. John's V.H.S.S, Ummannoor - Kollam

10. Sajiv. C.D, NIRMALA H.S.S, Chemperi, Kannur

11. John George. C. St. Joseph's B.H.S.S Calicut

12. Jayasree. R. Kaimal. SMSN VHSS Vaikom

13 Sreelethakunjamma. R, NVT in Zoology, PUMVHSS, pallickal Nooranad.p.o PTA (Dist)

14. Kurian Jacob. A. NVT - Biology, SSMVHSS - Edakkazhiyur

15. Anitha. M.A, NVT. Biology, GVHSS. Malampuzha

16 MINIMOL FRANCIS, SGHSS KATTAPPANA - IDUKKI (DE)

17. Sathyajith. K.Y HSST Zool 3037 SNDP HSS Muttathukonam PTA 9447479997

18 MEENAMMA. P.A. CARDINAL H.SS. THRIKKAKARA 07046

19 SUJATHA. KU. ST MARY'S H.S.S MULLENKOLLY. 12014 wayanad

20. Saji kumar. G.S VHSS. Panedam. Kollam 2040.