SECOND YEAR HIGHER SECONDARY MODEL EXAMINATION, FEBUARY-2020

QN.No	ZOOLOGY- ANSWER KEY SCORING KEY					
	Answer any 3 questions from 1 to 5					
1	Sertoli cell					
2	Endemism	1				
3	Typhoid	1				
4	4. AI (artificial insemination)					
5	5. UTRs	1				
	Answer any 9 questions from 6 to 16					
6	a) Semi conservative method b) Watson & Crick	1 1				
7	Homologous organ organAnalogousOrgan Divergent evolution evolution Flippers of Whale & Forelimbs of cheetahConvergent Eyes of octopus & Eyes of octopus &	1 1/2 1/2				
8	. a) Cyclosporin A & Statin b) Cyclosporin A – Immunosuppressive agent Statin _ Blood cholesterol lowering agent	1 1/2 1/2				
9	 a) It is an evolutionary process in which different species starting from a common point in a geographical area radiate to other geographical areas. b) Eg: placental mammals & Australian Marsupials 	1				
10	. a) Progesterone / Progesterone –estrogen combination b) Saheli c) Vasectomy – Male & Tubectomy - female	1 1 1/2 1⁄2				
11	 A- Nitrogen bases in two strands are paired through hydrogen bonds forming basepairs. B- Two chains are coiled in right hand fashion / the plain of one base stacks over the other in a double helix provide stability 					
12	. a) Blastocyst	1⁄2				
	b) A- Inner cell mass B- Trophoblast	1/2				

	c) differentiated into embryo	1			
13	A B				
	1. Malaria d) plasmodium 2. Common cold a) Rhino virus	1⁄2			
	3. Filariasis b) Wuchereria	1/2			
	4. Ring worm c) Trichophyton	1/2 ½			
14	yes Advantage: No side effect				
	Advantage: No side effect Disadvantage : effective only upto a maximum period of 6 month	1			
	after parturition				
15	a) X-body/ X- chromosome	1			
	b) Henking				
	c) When the two sex chromosomes are XX- offspring is female	1			
16	Side effects of anabolic drugs	1			
	In male : Breast enlargement, mood swings, increased aggressiveness, infertility, Acne, Depression, Reduction of size of testicles, Decreased sperm production, premature baldness, enlargement of prostrate gland				
	In female : excessive hair growth in face & body, Increased aggressiveness, masculinisation, Mood swings, Abnormal menstrual cycle, Enlargement of clitoris, Deepening of voice (any 2 response)				
	Answer any 3 Questions from 17 to 20				
7	a) Nucleosome	1			
	 b) Eukaryotic chromosome is made of DNA & Histone and non histone proteins. Negatively charged DNA is wrapped around positively charged histone proteins. Beads on string structure in chromatin fibers, and this chromatin fibers coiled and condensed to form chromosome during cell division. 				
8	1. More solar energy is available in tropics	1			
	2. environment is more constant , less seasonal & predictable	1			
	3. Temperate region undergo frequent glaciations but tropics reain un disturbed for millions of years.	1			

19	 a) m RNA, tRNA, rRNA b) mRNA- Bring genetic information for protein synthesis, Act as template for DNA synthesis tRNA- act as adaptor molecule, transfer amino acid to the site of protein synthesis rRNA- forms the structure of ribosome, act as catalyst (any one function for each) 				
20	A B C				
	Downs syndrome	44 A +XX/XY	Furrowed tongue, short stature with small round neck, partially open mouth, palm is broad with characteristic palm crease, physical, psychomotor and mental development is retarded	1	
	Kleinfelters syndrome	44 A + XXY	Posses feminine characters , Gynaecomastia, sterile , Feminine pitched voice, poor beard growth ,	1	
	Turners syndrome	44 A + XO	rudimentary ovary,underdeveloped feminine character, short stature, webbed neck, poorly developed breast, mental retardation, lack of secondary sexual characters		

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