

ANSWER KEY

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SECOND YEAR HIGHER SECONDARY EXAMINATION ... MARCH 2024

PART-I/II/III

SUBJECT: ... ZOOLOGY

CODE NO: SY 526

VERSION: ... S ...

30 SCORES


... 1 ... HOURS

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
<u>I</u>		Answer any Three questions from 1-5 Each carries ONE Score.		
1.		Alleles / Allelomorphs	1	1
2.		Transcription	1	1
3.		Saheli	1	1
4.		Foresterin / prepuce	1	1
5.		Edward Wilson	1	1
<u>II</u>		Answer any 9 questions from 6-16. Each carries 2 scores.		
6.		Analogous organs - Organ with same function and different structure / Convergent evolution. Example: Wings of butterfly & birds / Eye of octopus and mammals / flippers of dolphins and penguins / sweet potato and potato (Homologous organs: Organs with same structure and different function / divergent evolution Eg: Forelimbs of mammals / Vertebrate teeth ^{teeth} / brain / Thorn and tendril of Bougainvillea & cucurbita.	1/2 1/2 1/2	2

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
7.		A - Vas deferens B - Urethra / Urinogenital duct C - Epididymis D - Rete Testis	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	2
8.	a b.	Gonorrhoea / Syphilis / genital herpes / Chlamydiae / genital wart / AIDS / Trichomoniasis / Hepatitis-B / HIV infections (Any two) Avoid sex with unknown partners / multiple partners. Always try to use condom during coitus In case of doubt, one should go to a qualified doctor for early detection and get complete treatment if diagnosed with infection. (Any two)	$\frac{1}{2} + \frac{1}{2} = 1$ $\frac{1}{2} + \frac{1}{2} = 1$	2
9.		A - Down Syndrome B - Klinefelters Syndrome C - 44A + XXY / XXY / 47 XXY / 44 XXY D - Rudimentary ovaries / Lack of 2 ^o sexual characters / sterile / short stature / underdeveloped feminine characters.	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	2
10.		Physical barriers - Eg; skin / mucous coating of epithelial lining of the respiratory, gastrointestinal & urogenital tracts. Physiological barriers - Eg; Acid in stomach / Saliva in mouth / tears from eyes	$\frac{1}{4} + \frac{1}{4} = \frac{1}{2}$ $\frac{1}{4} + \frac{1}{4} = \frac{1}{2}$	

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
		Cellular barriers: Eg: Leukocytes/monocytes/neutrophils/macrophages/WBC/PTMNL/lymphocytes/natural killer cells. Cytokine barriers: Interferons (Any one example for each)	$\frac{1}{4} + \frac{1}{4} = \frac{1}{2}$ $\frac{1}{4} + \frac{1}{4} = \frac{1}{2}$	2
11		A - Ramapithecus B - Homo habilis C - Homo erectus D - Homo sapiens	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	2
12	a b.	a Male - Vasectomy Female - Tubectomy b. CuT, CuT, Multiloop 375 (Any Two)	$\frac{1}{2}$ $\frac{1}{2}$ } 1 $\frac{1}{2}$ $\frac{1}{2}$ } 1	2
13	a b c.	a Incomplete Dominance b 1RR: 2Rr: 1rr 1:2:1 1Red: 2pink: 1white 1:2:1 c. Snapdragon / Dog flower/ Antirrhinum sp or any relevant example	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ } 1 $\frac{1}{2}$	2
14		A - Transcription B - Translation	1 1	2
15		A Clostridium butylicum Aspergillus niger Acetobacter aceti Lactobacillus B Butyric acid Citric acid Acetic acid Lactic acid	$4 \times \frac{1}{2}$	2

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
16	a. b. c.	No ELISA Sexual contact with infected person / by transfusion of contaminated blood and blood products / by sharing infected needle / from infected mother to her child through placenta / (Any relevant answer) (Any two points)	$\frac{1}{2}$ $\frac{1}{2}$ $2 \times \frac{1}{2} = 1$	2
III		Answer any 3 questions from 17-20. Each carries 3 scores.		
17	a. b. c.	A - Estrogen B - Progesterone C - Corpus luteum Function - Secrete progesterone / maintenance of endometrium during pregnancy. (Any One function) LH / Luteinising hormone	$\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ 1 $\frac{1}{2}$	3
18.		1. Isolation of DNA 2. Digestion of DNA by restriction endonucleases 3. Separation of DNA fragments by electrophoresis 4. Transferring (blotting) of separated DNA fragments to synthetic membranes such as nitrocellulose or nylon 5. Hybridisation using labelled VNTR probe 6. Detection of hybridised DNA fragments by autoradiography (each correct step carries $\frac{1}{2}$ mark)	$6 \times \frac{1}{2}$	3

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
19		<p>a. Habitat loss and fragmentation Over-exploitation Alien species invasion Co-extinction</p> <p>b. In situ conservation (on site) and Ex situ conservation (off site)</p> <p>c. Specialisation / less seasonal, more constant and predictable / more solar energy is available which contributes to higher productivity (Any two relevant points)</p>	<p>$4 \times \frac{1}{4} = 1$</p> <p>$2 \times \frac{1}{2} = 1$</p> <p>$2 \times \frac{1}{2} = 1$</p>	3
20	a	<p>A - Autosomal dominant trait / Myotonic dystrophy</p> <p>B - Autosomal recessive trait / Phenylketonuria / Thalassemia / Sickle cell anaemia.</p> <p>b </p> <p>c. Analysis of traits in several generations of a family / Any relevant definition</p>	<p>$\frac{1}{2}$</p> <p>$+$</p> <p>$\frac{1}{2}$</p> <p>1</p> <p>1</p>	3
		7		

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
		1) Mohammed Ibrahim.T 9400933976		
		2) Elizabeth Teresia 8921602492		
		3) RAJESH KUMAR.R 8281493163		
		4) Mubarak.M 9846261324		
		5. MANIKANDAN.M 9447439310		
		6. Umikrishnan.K.R 9447993653		
		7. GOKULADAS.G 9961663311		
		8. Jaya Mathew 9495811161		
		9. Vinu.V.Dav 9447247615		
		10. Saji Kumar 9847360789		
		11. Sheeba Jacob 9746104155		
		12. Rekha.K 9447968299		
		13. Tiji Thomas 9961990919		