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Part III — ZOOLOGY

(English Version)

Time Allowed: 3 Hours] [Maximum Marks: 150

PART - I

Note: i) All the questions are to be answered.

ii) Choose and write the correct answers in the answer-book.

 $30 \times 1 = 30$

- 1. Sickle-cell anaemia is due to
 - a) autosomal mutant allele
- b) sex chromosomal mutant allele
- c) vitamin deficiency
- d) hormone imbalance.
- 2. In human karyotype the chromosomes in Group G are
 - a) Telocentric

b) Acrocentric

c) Metacentric

- d) Sub-metacentric.
- 3. cDNA library contains only
 - a) chromosomal fragments
 - b) DNA fragments
 - c) RNA molecule fragments
 - d) DNA molecules for genes.

I Turn over

4.	Wh	ich is commonly considered as a	"biol	ogists' paradise" ?
	a)	Gulf of Mannar Biosphere Rese	erve	
	b)	Nanda Devi		Part III
	c)	Great Nicobar		
	d)	Nilgiri Biosphere Reserve.		e Allowed: 3 Hours]
5.	One	e of the beehive products used for	or ap	therapy is
	a)	Beeswax	b)	Royal jelly
	c)	Bee venom	d)	Pollen.
6.	Wh	ich among the following fracture	s occ	urs in the young bones of children?
	a)	Stress fracture	b)	Pathological fracture
	c)	Green stick fracture	d)	Closed fracture.
7. Circulation of clotted blood in the circulatory system is called				tory system is called
	a)	Embolus	b)	Bolus
	c)	Blood coagulation	d)	Thrombus.
8. The volume of cerebrospinal fluid in human is			an is	
	a)	150 ml	b)	170 ml
	c)	200 ml	d)	220 ml.
9.	In C	GIFT method, the fertilized ova ar	re int	roduced into the
	a)	Fallopian tube	b)	Fallopian funnel
	c)	Uterus	d)	Cervix.
10.	In t	he stomach, HCl is secreted by		almentari stonetom AVSI (p
	a)	Beta cells	b)	Alpha cells
	c)	Oxyntic cells	d)	Interstitial cells.

11.	The	e duration of QRS complex in E0	CG is	about				
	a)	0·1 second	b)	0.08 second				
	c)	0.3 second	d)	0.4 second.				
12.	In s	In silkworm muscardine disease is caused by						
	a)	virus	b)	bacteria				
#	c)	fungi	d)	protozoan.				
13.	Mil	k of which of the following cows	is cha	aracterised by high carotene content?				
	a)	Haryana	b)	Gir				
	c)	Jersey	d)	Sindhi.				
14.	Wh	ich of the following is rich with	mine	erals, vitamins, trace elements and bio-				
	acti	ive substances ?	As a	enotilen CS3 (5				
	a)	Oysters	b)	Sea weeds				
	c)	Marine fishes	d)	Lobsters.				
15.	Ide	Identify the zoological name for 'Koduva':						
	a)	Ostrea edulis	b)	Scylla serrata				
	c)	Lates calcarifer	d)	Penaeus indicus.				
16.	Inta	ake of less amount of protein lea	ds to	the deficiency disease called				
	a)	Beri-beri	b)	Rickets				
	c)	Anaemia	d)	Marasmus.				
17.	Nyo	Nyctalopia is due to the deficiency of						
	a)	Vitamin A	b)	Vitamin D				
	c)	Vitamin E	d)	Vitamin K.				
A				[Turn over				

18.	Wh	nich of the following methods	disinte	grates stones in the bladder by focusing	
	sho	ock waves on them?		Phone 10 b	
	a)	Endoscopy	b)	Cystoscopy	
	c)	Lithotripsy	d)	Ureterorenoscopy.	
19. The enzyme tyrosinase converts the amino acid called tyrosine into				no acid called tyrosine into	
	a)	Melanin	b)	Ergosterol	
	c)	Black pigment	d)	White pigment.	
20.	The	e total number of rod cells pre	sent in	the eye is	
	a)	60 millions	b)	80 millions	
	c)	120 millions	d)	160 millions.	
21.	21. According to Evolution more importance is given to				
	a)	organ of use and disuse		c) Martine Balton	
	b)	theory of abiogenesis		15. Harntly the zoological state for the	
	c)	special creation		elizabis partieto (e	
	d)	origin of species.		espression artists 13	
22.	Wh	en a disruptive selection p	roduces	more than one phenotype within a	
	pop	ulation, the phenomenon is k	nown as		
	a)	selective pressure	b)	bottleneck effect	
	c)	polymorphism	d)	founder principle.	
23.	The	optimum temperature of the	artificia	l brooder during the first 3 days is	
	a)	30°C	b)	28°C	
	c)	33°C	d)	32°C.	

24.	The	The fish which is having accessory respiratory organs is			
	a)	Channa marulius	b)	Tilapia mosambica	
	c)	Labeo rohita	d)	Cirrhina mrigala.	
25.	. Guppy is an exotic variety of ornamental fish originating from				
	a)	Africa	b)	Thailand	
	c)	Central America	d)	Japan.	
26.	The	disease Syphilis is caused by the	e ba	cteria called	
	a)	Salmonella typhi	b)	Yersinia pestis	
	c)	Vibrio cholerae	d)	Treponema pallidium.	
27.	Inn	ate immunity through 'Phagocyto	osis' i	s provided by	
		S variolderall or a	4.5	ned -II-Tarenet zuriharnen eilt estu ordiw. 1.8	
	a)	Erythrocytes	b)	Thrombocytes	
	c)	Leucocytes	d)	Immunogens.	
28.	Thy	mus is a		Or What is Project Mail Bunk Y	
	a)	peripheral lymphoid organ	b)	tertiary lymphoid organ	
	c)	primary lymphoid organ	d)	secondary lymphoid organ.	
29.	Ski	n represents which type of barri	er?	Notes to anthus of Piene soy bro-dyn	
	a)	Anatomical barrier	b)	Physiological barrier	
	c)	Phagocytic barrier	d)	Inflammatory barrier.	
30.	0. A superior method for identification of urine sugar is				
	a)	Haemocytometer method	b)	Thin layer chromatography method	
	c)	Manometer using method	d)	Electronic test method.	

PART - II

Note: Answer any fifteen questions.

 $15 \times 3 = 45$

- 31. What are the functions of lipids?
- 32. What are the causes of peptic ulcer?
- 33. What are the symptoms of rickets in children?
- 34. What is Plasmaphoresis?
- 35. Write the limiting factors for heart transplantation.
- 36. What is Corpus albicans?
- 37. What is presbiopia? How is it rectified?
- 38. What are the contributions of Robert Koch to Microbiology?
- 39. How does Xenograft differ from Isograft?
- 40. What is Protein Data Bank?
- 41. Mention the uses of Karyotyping.
- 42. Define rain water harvesting.
- 43. What is Anthrax? Write any two symptoms of it.
- 44. Write a short note on Chittagong.
- 45. State the viral diseases of honeybees.
- 46. What are the advantages of artificial insemination in cattle?
- 47. What is Endoscopy?

- 48. What is meant by gene pool?
- 49. What is called 'Hapa'? Mention its uses.
- 50. Why is the freshwater prawn, Macrobrachium rosenbergii most suitable for culturing?

PART - III

Note: Answer any seven questions including Question No. 56 which is compulsory. $7 \times 5 = 35$

- 51. Give an account of root canal therapy.
- 52. What are the functions of cerebrospinal fluid?
- 53. Write short notes on pathogenicity and control measures of Ascaris lumbricoides.
- 54. Explain the different methods by which the gene transfer takes place in bacteria.
- 55. Write a note on graft rejection.
- 56. Write about the measures to prevent ozone layer depletion.
- 57. "Hydrogen is a main source of power for future." Comment.
- 58. Enumerate the clinical significance of Haemocytometer.
- 59. Explain the formation of silk.
- 60. Write short notes on the various types of premating isolation.
- 61. Give an account of the factors to be considered for locating a fish pond.
- 62. Mention the environmental and public health concern related to aquaculture.

PART - IV

Note: Answer any four questions.

 $4 \times 10 = 40$

- 63. Describe the mechanism of breathing with diagram.
- 64. Write an essay on the physiological effects of the hormones of pancreas.
- 65. Describe the different types of hearing loss and the correcting measures adopted.
- 66. Write a detailed account on cultivation of animal viruses.
- 67. Give an account on human genome project.
- 68. Explain the management of non-hazardous solid waste.
- 69. Give an account on dairy breeds.
- 70. Describe the bionomics of fresh water cultivable fishes and prawns.