COMMON P. G. ENTRANCE TEST - 2020

Test Booklet No.:

66079

DEPT. OF HIGHER EDUCATION, GOVT. OF ODISHA TEST BOOKLET

Subject Code 47

Subject

ZOOLOGY

Time Allowed: 90 Minutes

Full Marks: 70

: INSTRUCTIONS TO CANDIDATES :

- IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
- 2. You have to enter your **Hall Ticket No.** on the Test Booklet in the Box provided alongside. **DO NOT** write anything else on the Test Booklet.
- 3. YOU ARE REQUIRED TO FILL UP & DARKEN HALL TICKET NO. & TEST BOOKLET NO. IN THE ANSWER SHEET AS WELL AS FILL UP TEST BOOKLET SERIAL NO. & ANSWER SHEET SERIAL NO. IN THE ATTENDANCE SHEET CAREFULLY. WRONGLY FILLED UP ANSWER SHEETS ARE LIABLE FOR REJECTION AT THE RISK OF THE CANDIDATE.
- 4. This Test Booklet contains 70 items (questions). Each item (question) comprises four responses (answers). You have to select the correct response (answer) which you want to mark (darken) on the Answer Sheet. In case, you feel that there is more than one correct response (answer), you should mark (darken) the response (answer) which you consider the best. In any case, choose ONLY ONE response (answer) for each item (question).
- You have to mark (darken) all your responses (answers) ONLY on the separate Answer Sheet provided by using BALL POINT PEN (BLUE OR BLACK). See instructions in the Answer Sheet.
- 6. All items (questions) carry equal marks. All items (questions) are compulsory. Your total marks will depend only on the number of correct responses (answers) marked by you in the Answer Sheet. **There is no negative marking**.
- 7. After you have completed filling in all your responses (answers) on the Answer Sheet and after conclusion of the examination, you should hand over to the Invigilator the Answer Sheet issued to you. You are allowed to take with you the candidate's copy / second page of the Answer Sheet along with the Test Booklet, after completion of the examination, for your reference.
- 8. Sheets for rough work are appended in the Test Booklet at the end.

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

XL - 34/8

(Turn over)

1.	Amo	ebic dysentery is caused by:		ave off, amovefin	
	(A)	Amoeba proteus			(4)
	(B)	Entamoeba histolytica			
	(C)	Plasmodium vivax			
	(D)	Taenia solium		mempea ** E t	
2.	Ecd	ysone is :	gill sitts open intog saga	es action of a last section	
	(A)	BH			
	(B)	PTTH		reuintA.	
	(C)	PGH			
	(D)	JH CONTRACTOR			
3.	In sr	oonges, the cells surrounding th	ne osculum is :	eelijaa skii ism	
	(A)	Archaeocytes		a To anii biaqanA	
	(B)	Myocytes			
	(C)	Choanocytes			
	(D)	Gland cells		Synapsid line	
4.	Con	chology is the study of:	cisencelery have been		
	(A)	Coelenterate			(A)
	(B)	Mollusca			
	(C)	Shell of mollusca			
	(D)	Mentle of mollusca		AżU	
5.		cytial epidermis is found in :			
J.	(A)	Hydra		Periseodactyla	
	(B)	Ascaris		Artiodactyla	
	(C)	Earthworm			
	(D)	Starfish		esbiocenthi	
6.		totle's lantern present in :	al materiaco		
O.	(A)	Sea lillies			
	(B)	Sea cucumber		ansomboris.	
	(C)	Sea urchin		votena talo 3	
	(D)	Sea pea			
			(0)	/	
X	-34/		(3)	(lur	n over)

1.	ine	arthworm, the ovary is situated in the :	Amoebic dysentery is caused by:
	(A)	10 th segment	(A) Amodea proteue
	(B)	13 th segment	(B) Entamoeba historylica
	(C)	11 th segment	(c) Plasmodium vivax
	(D)	14 th segment	(D) Taggia solum
8.	In c	ephalochordates, gill slits open into:	Eddysoppis
	(A)	Pharynx	
	(B)	Atrium	
	(C)	Coelom	(0). POHe: N
	(D)	Heart	and the control of th
9.	Man	nmal like reptiles belongs to:	In aportgas, the calls surrounding that
	(A)	Anapsid line of evolution	(A) Archaebcytes
	(B)	Euryapsid line	(B) Myocyles
	(C)	Parapsid line	(O) Choannoyles
	(D)	Synapsid line	(D) Gland cells
10.	The	fossil record of Archaeopteryx have b	een discovered from :
	(A)	Britain	(A) Coelentairale
	(B)	Germany	paauloW. (8)
	(C)	France	(C)_Shall of mollusca
	(D)	USA	spawlemie etmeM 1/(0)
11.	Larg	est living land animals are included in	the suborder:
	(A)	Perissodactyla	(A)
	(B)	Artiodactyla	a roca (G)
	(C)	Probiscidea	(C) Earnwarm
	(D)	Hyracoidea	(D) Starffan (D)
12.	The	driving force of an ecosystem is:	n tessero memsi e'altotehA
	(A)	Biomass	(A) 499 (Res
	(B)	Producers	(8) Afea programmer
	(C)	Solar energy	a vividono/se \$91(0).
	(D)	Carbohydrates in producers	19 - 122-27 seq 2657 (E)
XL-	- 34/8	(4)	(Continued)

13. The term ecotype was coined by:	ya bellomroost aloy, ila J (A)
(A) GoteTuresson	(A) Profesiyas at cyclin dep
(B) Mc Millan	
(C) Korringa	
(D) Elton	eniloxa to slevilosife (C) (C)
	20. Which of the tollowing blochen
(A) Tansley	
(B) Warming	opliskos (A)
(C) Kark Mobius	(8) Plasphoplation
(D) None of these	alor meanytheid (Q)
15. Which of the following is not a limiting factor f	or photosynthesis?
	21 Isotopas used for ground serve
(A) Oxygen	(A) N ¹¹ and P ¹¹
(B) Carbon di oxide	
(C) Chlorophyll	
(D) Light	because which one of the
Receptor mediated endocytosis from plasm following coat proteins?	a membrane requires which say
(A) Clathrin	exselounova 'à et's' (A).
(B) SNARE	
(C) Arrestin	(C) ONA polymerades
(D) Glycoprotein	(D) PINA palymenase iii e
17. The protein that is responsible for the slidir one another to produce ciliary binding is:	ng of outer microtubule doublets against
	(A) The large amount of repitit
	(B) The size of the total genom
- 1 1-	norto laubi ibni la esis eli (O).
(D) None of these	
18. Which of the following protein targeting n and chloroplast organelles?	nechanisms is common for mitochondria
(A) Co-translational	HELL AME IN SHOULD SUBSECT VO
(B) Post-translational	HEAD SEVED SERVICE SERVICE CO.
(C) Co-translational and post-translation	nal lags parsivals associate (0)
(D) de-novo protein synthesis	
XL - 34/8 (5)	(Turn over)
AL - 57/6	AND STREET HOUSE IN THE COURT OF STREET STREET, NO. 10 10 10 10 10 10 10 10 10 10 10 10 10

	19. Cell	cycle is controlled by:	a anglant di
	(A)	Proteolysis of cyclin dependent kinase	aug A.
	(B)	Phosphorylation of cyclins	Majel (4)
	(C)	Dephosphorylation of cyclin	(O) (A)
	(D)	Proteolysis of cyclins	
		ich of the following biochemical reactions is most commonly ut ropagate intracellular signals?	lized by living cells
	(A)	Acylation	mavv (8) Vvam
	(B)	Phosphorylation	(C) Kark
	(C)	Methylation	acrold (C)
	(D)	Decarboxylation Section Sectio	ti lo daidW .Et
	21. Isot	opes used for proving semiconservative replication of DNA a	re:
	(A)	N ¹⁴ and P ³¹	(B) Ca(f)
	(B)	N ¹⁴ and N ¹⁵	
	(C)	N ¹⁴ and C ¹⁴	mg(J (Q)
	(D)	24	16 Recessor n
	22. In p	prokaryotes, the lagging primers are removed by:	
	(A)	3' to 5' exonuclease	rusiO (A)
	(B)	DNA ligase	
	(C)	DNA polymerase I	
	(D)	DNA polymerase III	
is let		nen the human genome draft sequence was released, whice	ch of the following
	(A)	The large amount of repititive DNA	reservicy
	(B)	The size of the total genome	CAST PS
	(C)	The size of individual chromosomes	mod ren
	(D)	The small number of protein-coding genes ·	the Herrital Ch
	24. Ph	otoreactivation:	
	(A)	Repairs dimers in DNA using an endonuclease	t e0 (A)
	(B)	Uses light to activate repair enzymes	(8) Post
	(C)	Removes alkylating agents from bases	160 (0)
	(D)) Deaminates bases	n-sh (0)
	XL-34	/8 (6)	(Continued)

25.	Posit	tion effect is the result of:
	(A)	Mutations
	(B)	Deletions (8)
	(C)	Inversions (Ox
	(D)	Transversions
26.	The	perineurium is the connective tissue layer:
	(A)	Surrounding an entire nerve
	(B)	Surrounding individual axons in the CNS
	(C)	Surrounding individual axons in the PNS
	(D)	Surrounding fascicles of axons in the PNS
27.	The is:	most important factor in determining the percent oxygen saturation of haemoglobin
	(A)	The partial pressure of oxygen
	(B)	Acidity
	(C)	The partial pressure of carbon dioxide
	(D)	Temperature
28.	Real out b	bsorption of chloride ions from the glomerular filtrate in the kidney tubule is carried by:
	(A)	Osmosis 9009 (G)
	(B)	Diffusion and provide and provide sequence of Diffusion and provide and provid
	(C)	Active transport
	(D)	Brownian movement
29.	The	gastric gland cell whose absence could lead to pernicious anaemia is the :
	(A)	Chief cell
	(B)	Goblet cell
	(C)	Mucous neck cell
	(D)	Parietal cell
30.	Allt	he hormones of the adrenal cortex are synthesized from:
	(A)	Tyrosine (8)
	(B)	Glycoproteins
1.	(C)	Cholesterol (memoiro) (10)
	(D)	Fats
VI	_34/	(Turn over)

.

31	. The	e primary target organ of aldosterone action is:
	(A)	
	(B)	Pancreas
	(C)	Kidney
	(D)	Heart englatevanis (1)
32.	The	bacteriophage M13 contains as its genetic material :
	(A)	Single stranded RNA
	(B)	Double Stranded RNA 2NG and release is upwiber an induction (2)
	(C)	Single stranded DNA
	(D)	Double stranded DNA
33.	Wha	at is number of hydrogen bonds in B-DNA of 1000 base pairs with the proportion
	of b	ases C, A and T in one of the strands corresponding to 60%,30% and 10%
	resp	ectively?
	(A)	2600 SURE TO SURE TO SURE THE
	(B)	2400
	(C)	2200
	(D)	2000 XI
34.		anger's method of DNA sequencing, the growing DNA chains are terminated use:
	(A)	DNA polymerase is not very processive
	(B)	A radioactive nucleotide is incorporated
	(C)	The substrates become limiting
	(D)	A phosphodiester bond cannot be made
35.	Gluc	ose and galactose are two isomeric monosaccharides known as :
	(A)	Anomers more parties at the adrenal conex are synthesized from aremone.
	(B)	Epimers engage (A)
	(C).	Enantiomers anistoropoyro (8)
	(D)	Conformers (3)
XI _	34/8	(D) Fats
No.	0110	(8) (Continued)

36.	Assur	ming they all had the same number of carbon atoms, which of the following rumber of C. H bonds ?	owing has
		naximum number of C-H bonds?	
	()	An unsaturated fat	
		A polyunsaturated fat	
		A polysaccharide	
		A saturated fat	
37.	Whic	ch of the following cofactor is essential for the activity of acetyl-CoA cart	ooxylase?
ising .	(A)	NAD* (State Shummi ar slot) replacement and (State) are replaced shum	
	(B)	Biotin	
	(C)	TPP	
	(D)	Vitamin B ₆	(0) /ms
38.	Abzy	ymes are:	
: be	(A)	Enzymes that are highly specific like antibodies	. 44 (1)
	(B)	Antibodies that have catalytic activities	(A)
	(C)	Also referred to as zymogens	
	(D)	Enzymes that hydrolyze antibodies	(0)
39.	Whi	ich of the following statement is true about non-competitive inhibition	?
	(A)	K _m increases	(Maj. 184)
	(B)	K _m decreases	
	(C)	V _{max} increases	
	(D)		(0)
40		nich of the following compounds is a positive allosteric regulator of truvate carboxylase?	
	(A)	Adenosine tri phosphate	
	(B)	Acetyl Coenzyme A	
	(C)) Biotin	
	(D)) Phosphoenolpyruvate	
4	l. p5	3 protein is associated with all of the following except:	J 47. Cyco
	(A)) Tumor suppression	
	(B)) Programmed cell death	18
	(C	c) Transcription	(3)
	(D) Post translational modifications	
X	L-34	4/8 (9)	(Turn over)

42.		nen heterozygous black pigs are inter crossed then what is the chan o offspring being black?	ce of the first		
	(A)	46			
	(B)	56			
	(C)	66			
	(D)	76			
43.	Toll	l like receptors (TLRs) play an important role in immune defence by	recognising:		
	(A)				
	(B)	(B) Conformational difference in antigenic protein			
	(C)				
	(D)		154)		
44.	The	e macrophage rich mass found at the site of injection of an adjuvan	t is called :		
	(A)		oth 105		
	(B)	Granuloma arrandoma arrand	(9)		
•	(C)	Adjuvant activated lymphoma	rai		
	(D)	None of these			
45.	Majo	or variability of MHC is found in :			
	(A)	Alpha chain			
	(B)	β ₂ microglobulins			
	(C)	Amino terminus región			
emysi	(D)	Domains and scale systems is at abrucomos provoted and to as	MW DA		
46.	The	e predominant antibody in saliva is :	inya		
	(A)	IgG			
	(B)	IgA			
	(C)				
35.	(D)	IgD specific and a second specific and a sec			
47.	Cyto	okines are not :	41, p53		
	(A)	Able to induce increased blood vessel permeability	(A)		
	(B)	Antigen specific	(6)		
	(C)	Made in response to bacterial antigens	(0)		
	(D)	Signals from one cell that affects the behaviour of another cell			
XI -	- 34/8	8 (10)	Continued)		

48.	Type	I hypersensitivity is known as:
	(A)	Anaphylaxis
	(B)	Agglutination .
	(C)	The transfusion reaction
	(D)	Contact hypersensitivity
49.	In m	yasthenia gravis blocking antibodies bind to:
	(A)	Acetylcholine
	(B)	Dopamine Land (A)
	(C)	Acetylcholine receptor
	(D)	Axons
50.	Wh	ich of the following is an epigenetic factor for gene expression in eukaryotes?
	(A)	Recombination
	(B)	DNA methylation
	(C)	Protein phosphorylation
	(D)	DNA protein interaction
51.	Wh	nich of the following is a post-zygotic-isolating mechanism in speciation?
	(A)	Behavioural isolation
	(B)	Seasonal isolation
	(C)	Fertilization failure
" emisi	(D)) Hybrid sterility
52	. Th	e phenomenon of genetic drift is most likely to occur in population that are :
	(A)) Small and inbred
	(B) Undergoing gene flow
	(C) Allopatric
	(D	
53	. Th	ne first vertebrates appeared in which one of the following periods of the Palaeozoic
	er	а?
	(A	A) Ordoviçian
	(E	3) Silurian
	((C) Evonian
	([O) Mississippians
X	L-3	4/8 (11) (Turn over)

	Court of the Carlo Court		ested artifolic
54.	Chaperone proteins help in:		
	(A) Protein folding and assem	bly	
	(B) Protein stability		(C) Phetraesh
	(C) Both (A) and (B)		307 (0120) xifi baland (0)
. Dei	(D) None of these		
55.	Deviation from the Hardy-Wein results in :	nberg assumption of infinite	ely large population size
	(A) Genetic lethal		
	(B) Heterozygote advantage		
	(C) Consanguinity		
100	(D) Genetic drift		RIQ CONTROL DATE OF THE LOCAL
56.	In a population that is in equilibrit trait at a given locus having two the population is:	allele is 84%. The frequency	of the recessive allele in
	(A) 0.40		reford AIACL (Ca)
	(B) 0.30		
	(C) 0.20		ENJOHENSM (A)
	(D) 0.16		6.16.106.060 (G)
57.	The folding of sheets of cells, the	ne migration of cells and cell o	death are all mechanisms
	(A) Cleavage division		rone lend. (A)
	(B) Pattern formation	wolf areg	pniograhnu (5)
	(C) Morphogenesis		(C) Alapatia
	(D) Differentiation	odremia.	g bris eggs.) y (Q).
58.	The process by which develo		tional, mature identity as
	(A) Cleavage division		histolycoc=7. (A)
	(B) Pattern formation		(B) Silurian
	(C) Morphogenesis		
	(D) Differentiation		
		(40)	(Continued)

59.	Whic	h of the following cell organelle actively participates in animal apoptosis?
	(A)	Vacuoles Vacuoles
	(B)	Chloroplast (b)
	(C)	Nucleus Parker Control of the Contro
	(D)	Mitochondria 4 2000 Mitochondria
60.	Aspe	ecies facing an extremely high risk of extinction in the immediate future is called:
	(A)	Vulnerable
	(B)	Rare vosnet et net/1 (8)
	(C)	Endangered Noone Studge O. (D)
	(D)	Link species
61.		ch of the following zones in a lake suffers from lack of light and therefore limited osynthesis is able to take place?
	(A)	Littoral
	(B)	Profoundal
	(C)	Pelagic Snitch (C)
	(D)	Euphotic (4) the capabilities between advantages of variance of the
62.	In w	hich year Wildlife Protection Act was implemented in India?
	(A)	1952
	(B)	1962
	(C)	1972
	(D)	a 1982 com la nonconcretim entre la tratación ene elevio ACT, e acembra estrito IIA.
63.	The	part of the brain that has been shown to function like a 'Biological clock' is the :
	(A)	Nucleus of the solitary tract
	(B)	Suprachiasmatic nucleus
	(C)	Gigantocellular tegmental field
	(D)	Optic chiasm
64	. Wh	ich hormone is secreted by placenta?
	(A)	ACTH
	(B)	Progesterone Application of the Progesterone Application of th
	(C)	GH
	(D)	Gastrin
XI	_ 34/	(13) (Turn over)

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Iden	tify fish group which excretes urea as the	primary nitrogenous end product	
(A)	Teleost fishes	39(0):0917 (2	
(B)	Lung fishes	7250000000	
(C)	Elasmobranch fishes		
(D)	None of these	C (C	
Indu	ced breeding technique is used in:	species facing an extremely mun	
(A)	Culture fishery	y skiller - skillerenti. V skille	
(B)	Marine fishery	Faire State	
(C)	Capture fishery	С Впоапделен и под С	1
(D)	Inland fisheries). Link species	
Whi	ch of the following is an imino acid?	that of the following zenes in a lar	V.
(A)	Hystidine	aptracynthesis is able to take olac	
(B)	Glycine	Jaidi. (/	
(C)	Cysteine	Bolovidal	
(D)	Proline) Pelagic	
Prot	eins may be separated according to size	e by:	
(A)	Reverse phase chromatography	which year Wilding Protection Ac	
(B)	Ion exchange chromatography	5903 (
(C)	Molecular exclusion chromatography	1982	
(D)	Isoelectric focussing	1972	3)
Allo	of the enzymes of TCA cycle are located	n the mitochondrial matrix except	l:
(A)	Citrate synthatase	neou seri trai nierd edi lo hed e	
(B)	Alpha keto glutarate dehydrogenase		
(C)	Succinate dehydrogenase		
(D)	Fumarase	Giganiscelluler leghjente heb	
. To b	e a cloning vector, a plasmid does not re	equire:	a)
(A)	An origin of replication	Approvidence of the Control of the Control	
(B)	An antibiotic resistance marker		
(C)	A restriction site	Chrystolerania (ar +
(D)	To have a high copy number	HO I	
		- Ossion	
34/	8 (14)	(Contir	nued
	(A) (B) (C) (D) Indua (A) (B) (C) (D) White (A) (B) (C) (D) Prot (A) (B) (C) (D) To be (A) (B) (C) (D)	 (A) Teleost fishes (B) Lung fishes (C) Elasmobranch fishes (D) None of these Induced breeding technique is used in : (A) Culture fishery (B) Marine fishery (C) Capture fishery (D) Inland fisheries Which of the following is an imino acid? (A) Hystidine (B) Glycine (C) Cysteine (D) Proline Proteins may be separated according to size (A) Reverse phase chromatography (C) Molecular exclusion chromatography (C) Molecular exclusion chromatography (D) Isoelectric focussing All of the enzymes of TCA cycle are located in (A) Citrate synthatase (B) Alpha keto glutarate dehydrogenase (C) Succinate dehydrogenase (D) Fumarase To be a cloning vector, a plasmid does not refer (A) An origin of replication (B) An antibiotic resistance marker (C) A restriction site (D) To have a high copy number 	(B) Lung fishes (C) Elasmobranch fishes (D) None of these Induced breeding technique is used in: (A) Culture fishery (B) Marine fishery (C) Capture fishery (D) Inland fisheries Which of the following is an imino acid? (A) Hystidine (B) Glycine (C) Cysteine (D) Proline Proteins may be separated according to size by: (A) Reverse phase chromatography (B) Ion exchange chromatography (C) Molecular exclusion chromatography (D) Isoelectric focussing All of the enzymes of TCA cycle are located in the mitochondrial matrix except (A) Citrate synthatase (B) Alpha keto glutarate dehydrogenase (C) Succinate dehydrogenase (D) Fumarase To be a cloning vector, a plasmid does not require: (A) An origin of replication (B) An antibiotic resistance marker (C) A restriction site (D) To have a high copy number