Code No.	N - 3565
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En	tranc	e Examination	on for A		sion to tments		G. Coui	rses in	the Te	aching
					CSS					
			AP	PLIED	AQUA	CULTU	<u>RE</u>			
				<u>Gener</u>	al Instru	<u>ctions</u>				
1.		Question Pape criptive type (40		ing two	Parts —	Part 'A'	Objecti	ve type	(60%) 8	Part 'B'
2.	-	ective type ques			•			e (✔) 'tio	ck marke	ed' in the
3.	8 qu	estions are to b	e answe	red out o	of 12 que	stions ca	arrying 5	marks	each in F	Part 'B'.
4.		<u>ative marking</u> art 'A'.	: 0.2	5 mark	s will k	oe dedu	icted fo	or each	wrong	answer
Tim	e : 2 l	Hours						N	Max. Maı	'ks : 100
То	be fill	ed in by the Car	ndidate							
	gister	in Figures								
Nur	mber	in words								
				E	PART – /	۸				
				-	jective T	-				
Char	oco or	opropriate answ	or from t				os Ono	mark aa	ch	
CHO	use ap	ppropriate answ	ei iioiii i	пе орио	115 111 1116	questioi	is. One) marks)
1.	Prot	ozoan with Ch	loroplas	st is				-		-
		Paramecium	F - 200		b)	 Eugle	na			
	c)	Amoeba			d)	All the	e above	:		

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- 2. Canal system is found in _____.
 - a) Coelentrata

b) Ascidians

c) Porifera

- d) Echinodermata
- 3. Nauplius is the larva of the phylum _____.
 - a) Mollusca
 - b) Echinodermata
 - c) Arthropoda
 - d) Colenterata

4.	Bal	anoglossus belongs to		
	a)	Annelida	b)	Urochordata
	c)	Hemichordate	d)	Cephalochordata
5.	Vel	iger is the larva of		
	a)	Mollusca	b)	Echinodermata
	c)	Crustacea	d)	Coelenterate
6.	Syr	nsacrum is found in		
	a)	Fishes	b)	Aves
	c)	Amphibians	d)	Reptiles
7.	Car	rtilaginous bone is the characterist	ic fea	ture of
	a)	Reptilia	b)	Amphibia
	c)	Teleostei	d)	Elasmobranchi
8.	Em	bden Meyerhoff Pathway is the al	ternat	e name of
	a)	Glycolysis		
	b)	Glycogenolysis		
	c)	Krebs Cycle		
	d)	Krebs urea cycle		
9.	The	e pathway of fatty acid metabolism	in wh	nich ω - Carbon is oxidised
	a)	Beta oxidation		
	b)	Omega oxidation		
	c)	Alpha oxidation		
	d)	Hydroxyl oxidation		

10.	Ecc	lysone is a		
	a)	Steroid hormone	b)	Peptide hormone
	c)	Amino acid	d)	Glycopeptide
11.	Ske	eletal muscle is a		
	a)	Striated muscle	b)	Non striated muscle
	c)	Cardiac muscle	d)	None of the above
12.		e change in electrical potential as		ated with the passage of an impulse
	a)	Neural impulse	b)	Reflex arc
	c)	Reflex action	d)	Action potential
13.		•	-	are removed from amino acids and te amino acid version of a keto acid is
	a)	Deamination	b)	Transamination
	c)	Omega oxidation	d)	Beta oxidation
14.	Mel	lanocyte stimulating hormone (M	SH)	in lower vertebrates is secreted by
	a)	Pancreas	b)	Pars distalis of pituitary
	c)	Pars intermedia of pituitary	d)	Adrenal gland
15.		gram depicting the lines of evolut	ionar	y descent of different species from a
	a)	Phyogenetic tree	b)	Pie diagram
	a) c)	Phyogenetic tree Bar diagram	b) d)	Pie diagram All the above

16.	Am	nino acids are transferred by		_·
	a)	Ribosomes	b)	Ribozyme
	c)	r- RNA	d)	t-RNA
17.	Ар	rotein needed for initiation of transo	criptic	on in bacteria is,
	a)	globulin	b)	Albumin
	c)	Sigma factor	d)	Lactose
18.	As	section of DNA that is wrapped	arou	und a core of proteins is called as
	a)	Nucleolus	b)	Nucleosome
	c)	Nucleoid	d)	Histone
19.	Am	ount of picograms of DNA cor 	ntaine	ed within haploid nucleus is called
	a)	C value	b)	Pictogram
	c)	gametes	d)	Haploid genome
20.	An	isolated cell that is able to produce	a fer	tile adult individual is
	a)	Pleuropotency	b)	Reproductive potency
	c)	Totipotency	d)	Penetrance
21.		nethod of species identification us	ing a 	short section of DNA from a specific
	a)	DNA sequencing	b)	DNA Barcoding
	c)	DNA fragmentation	d)	All the above

22.	Sel	ection pressure leads to		
	a)	Evolution	b)	Sewall Wright effect
	c)	Genetic drift	d)	All the above
23.		e ratio of number a specified allele netic locus is called as		population to the total of all alleles at it
	a)	Genotype	b)	Genotypic frequency
	c)	Gene frequency	d)	Frequency distribution
24.	The	e function of vector in genetic engir	neerir	ng is to
	a)	Cut DNA into many fragments	b)	Carry DNA to a new cell
	c)	Link together fragment of DNA	d)	Make gene expression
25.		mall molecule that stimulates the purpose in a large carrier molecule		ction of antibody molecules only when
	a)	Antigen	b)	Antibody
	c)	Biotin	d)	Hapten
26.	The	e cells that actually release antibod	lies a	re
	a)	Helper T ells	b)	Cytotoxic T cells
	c)	Plasma cells	d)	Supressor cells
27.	The	ere is no immunization against		
	a)	Measles	b)	Amoebiasis
	c)	Small pox	d)	Polio

Whi	te Blood cells that non specific kille	ers of	microbes are
a)	Phagocytes		
b)	Beta cells		
c)	Killer T cells		
d)	Helper T Cells		
Whi	ich of the following antibodies initia	tes a	n allergic reaction
a)	Ig A	b)	lg E
c)	lg G	d)	lg M
Cell	mediated immune responses are		
a)	Enhanced by depletion of comple	ment	
b)	Suppressed by cortisol		
c)	Enhanced by depletion of T Cells		
d)	Suppressed by anti histamine		
Age	ency for promoting the developmen	t of a	quaculture in Kerala is
a)	ADAK		
b)	MPEDA		
c)	CIFA		
d)	Matsyafed		
PUF	A us found rich in		
a)	Fish	b)	Rice
c)	Wheat	d)	Egg
	a) b) c) d) White a) c) d) Age a) b) c) d) PUI a)	a) Phagocytes b) Beta cells c) Killer T cells d) Helper T Cells Which of the following antibodies initia a) Ig A c) Ig G Cell mediated immune responses are a) Enhanced by depletion of comple b) Suppressed by cortisol c) Enhanced by depletion of T Cells d) Suppressed by anti histamine Agency for promoting the developmen a) ADAK b) MPEDA c) CIFA d) Matsyafed PUFA us found rich in a) Fish	b) Beta cells c) Killer T cells d) Helper T Cells Which of the following antibodies initiates a a) Ig A b) c) Ig G d) Cell mediated immune responses are a) Enhanced by depletion of complement b) Suppressed by cortisol c) Enhanced by depletion of T Cells d) Suppressed by anti histamine Agency for promoting the development of a a) ADAK b) MPEDA c) CIFA d) Matsyafed PUFA us found rich in a) Fish b)

33.	Soli	d Carbon dioxide is also called		
	a)	Freon	b)	Frost
	c)	Ice formation	d)	Dry ice
34.	Whi	ch of the following is not an air bre	athin	g fish
	a)	Channa	b)	Clarias
	c)	Anabas	d)	Etroplus
35.	Trar	nsparency of water is measured by	usir	ng
	a)	Plankton net		
	b)	Grab sampler		
	c)	Secchi disc		
	d)	None of the above		
36.	Cag	e culture is an example of		e.
	a)	Extensive culture		
	b)	Semi intensive culture		
	c)	Intensive culture		
	d)	All the above		
37.	And	rogenesis is the technique used in		·
	a)	Mono species culture		
	b)	Monosex culture		
	c)	Polyculture		
	d)	Composite culture		

38.	Нур	oophysation is the technique used i	in	·
	a)	Induced breeding		
	b)	Overcoming hypoxia		
	c)	Fish feeding		
	d)	All the above		
39.	Whi	ich of the following is not the synor	nym c	of Cyprinus Carpio
	a)	Grass carp		
	b)	Mirror carp		
	c)	Common carp		
	d)	Leather carp		
40.	Whi	ite spot syndrome in shrimps is cau	used	by
	a)	Virus	b)	Fungus
	c)	Bacteria	d)	Parasite
41.	Whi	ich among the following is not extra	acted	from a seaweed
	a)	Chitin		
	b)	Carragenen		
	c)	Algin		
	d)	Agar		
42.	Tila	pia (Oreochromis mossambicus) b	elono	gs to the family
	a)	Anabantidae		
	b)	Channidae		
	c)	Cyprinidae		
	d)	Cichlidae		

43.	Duc	ck cum fish culture is an example	for						
	a)	Composite fish culture							
	b)	Polyculture							
	c)	c) Monospecies culture							
	d)	Integrated farming							
44.	'Pol	kkali fields" is the traditional aqua	culture	e system in					
	a)	Tamil nadu							
	b)	Andhra pradesh							
	c)	Kerala							
	d)	Karnataka							
45.	Whi	ich of the following is not a carp							
	a)	Catla	b)	Rohu					
	c)	Tilapia	d)	Mrighal					
46.	Fish	n widely used in monosex fish cul	ture is						
	a)	Channa	b)	Catla					
	c)	Common carp	d)	Tilapia					
47.	Rig	or mortis is caused by							
	a)	Temperature	b)	Salinity					
	c)	Dissolved oxygen	d)	Death					
48.	Whi	ich of the following is a fish?							
	a)	Silver fish	b)	Silver carp					
	c)	Star fish	d)	Giant prawn					

49.	49. Central Inland Fisheries Research Institute (CIFRI) is located in				
	a)	Cochin	b)	Chennai	
	c)	Kolkata	d)	Mumbai	
50.	Scro	oll valve is found in			
	a)	Frog	b)	Shark	
	c)	Calotes	d)	All the above	
51.	Whi	ch of the following organism do no	t hav	e radial symmetry?	
	a)	Sea anemone	b)	Sea urchin	
	c)	Sea bass	d)	Jelly fish	
52.	The	organism capable of respiration th	roug	h lungs and skin is	
	a)	Fish	b)	Frog	
	c)	Calotes	d)	Crocodile	
53.	Fish	that can tolerate low oxygen level	(hyp	oxia) is	
	a)	Murrels	b)	Carps	
	c)	Milk fish	d)	Mullets	
54.	Trav	wling prohibited months in Kerala is	S	·	
	a)	November – December			
	b)	December – January			
	c)	June – July			
	d)	August – September			

55. Which of the following is not a method of chilling in processing fish?				
	a)	Iced storage		
	b)	Deep freezing		
	c)	Chilled sea water storage		
	d)	Cold air storage		
56.	Whi	ch of the following is not a crustac	ean?	
	a)	Prawn	b)	Sepia
	c)	Crab	d)	Lobster
57.	The	ecological factor not to be cons	sidere	ed in the site selection of a pond is
	a)	Soil	b)	Water
	c)	Topography	d)	Wind direction
58.	Whi	ch of the following is not sedentary	/?	
	a)	Balanus	b)	Sea lilly
	c)	Sea anemone	d)	Sea bass
59.	Gor	mbusia affinis is a fish widely used	for	
	a)	Aquaculture		
	b)	Paddy cum fish culture		
	c)	Biological control		
	d)	Integrated farming		
60.	Miss	s Kerala is also known as		
	a)	Denison barb	b)	Tiger barb
	c)	Aplocheilus	d)	Amblypharyngodon

ANSWER SHEET — PART – A

1	Α	В	С	D	Е	21	Α	В	С	D	Е	41	Α	В	С	D	Е
2	Α	В	С	D	E	22	Α	В	С	D	E	42	Α	В	С	D	E
3	Α	В	С	D	Е	23	Α	В	С	D	Е	43	Α	В	С	D	Е
4	Α	В	С	D	Е	24	Α	В	С	D	E	44	Α	В	С	D	E
5	Α	В	С	D	Е	25	Α	В	С	D	Е	45	Α	В	С	D	Е
6	Α	В	С	D	Е	26	Α	В	С	D	Е	46	Α	В	С	D	Е
7	Α	В	С	D	E	27	Α	В	С	D	Е	47	Α	В	С	D	Е
8	Α	В	С	D	Е	28	Α	В	С	D	Е	48	Α	В	С	D	Ε
9	Α	В	С	D	Е	29	Α	В	С	D	Е	49	Α	В	С	D	Ε
10	Α	В	С	D	Е	30	Α	В	С	D	Е	50	Α	В	С	D	Е
11	Α	В	С	D	Е	31	Α	В	С	D	Е	51	Α	В	С	D	Е
12	Α	В	С	D	Е	32	Α	В	С	D	Е	52	Α	В	С	D	Е
13	Α	В	С	D	Е	33	Α	В	С	D	Е	53	Α	В	С	D	Е
14	Α	В	С	D	Е	34	Α	В	С	D	Е	54	Α	В	С	D	Е
15	Α	В	С	D	Е	35	Α	В	С	D	Е	55	Α	В	С	D	Е
16	Α	В	С	D	Е	36	Α	В	С	D	Е	56	Α	В	С	D	Е
17	Α	В	С	D	Е	37	Α	В	С	D	Е	57	Α	В	С	D	Е
18	Α	В	С	D	Е	38	Α	В	С	D	Е	58	Α	В	С	D	Е
19	Α	В	С	D	E	39	Α	В	С	D	E	59	Α	В	С	D	Е
20	Α	В	С	D	Е	40	Α	В	С	D	Е	60	Α	В	С	D	Е

APPLIED AQUACULTURE

PART - B

(Descriptive Type)

Answer **any eight** questions.

 $(8 \times 5 = 40 \text{ Marks})$

- 1. Write down the general characters of fishes.
- 2. Write an account on crustacean larvae.
- 3. Write an account on invertebrate hormones.
- 4. Write an account on gene mapping.
- 5. Describe regulation of cell cycle.
- 6. Write an account on MHC Complex.
- 7. Discuss the importance of wetlands in fisheries resource management.
- 8. Describe the role of MPEDA in marine product export from India.
- 9. Write an account on selection of species for aquaculture.
- 10. Write an account on monosex fish culture.
- 11. Write an account on bacteria of human health significance in sea food.
- 12. Write an account on Inland fish marketing in India.

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