

Sr No.	PhD Zoology
1	In the series 357,363,369,..... What will be the 10th term?
Alt1	405
Alt2	411
Alt3	413
Alt4	417

2	Choose word from the given options which bears the same relationship to the third word, as the first two bears: Moon: Satellite :: Earth : ?
Alt1	Sun
Alt2	Planet
Alt3	Solar System
Alt4	Asteroid

3	Door is related to Bang in the same way as Chain is related to?.....
Alt1	Thunder
Alt2	Clinch
Alt3	Tinkle
Alt4	Clank

4	Select the lettered pair that has the same relationship as the original pair of words: Emollient: Soothe
Alt1	Dynamo: Generate
Alt2	Elevation: Level
Alt3	Hurricane: Track
Alt4	Precipitation: Fall

5	Which of the following is the same as Count, List, Weight?
Alt1	Compare
Alt2	Sequence
Alt3	Number
Alt4	Measure

6	Spot the defective segment from the following:
Alt1	The downtrodden
Alt2	needs
Alt3	to be uplifted
Alt4	on a war footing

7	Choose the meaning of the idiom/phrase from among the options given: A close shave
Alt1	a nice glance
Alt2	a narrow escape
Alt3	an intimate
Alt4	a triviality

8	Lightning ----- in the same place twice.
Alt1	doesn't hit
Alt2	never strikes
Alt3	never attacks
Alt4	never falls

9	Choose the option closest in meaning to the given word: FLIPPANT
Alt1	serious
Alt2	unsteady
Alt3	irreverent
Alt4	caustic

10	Choose the antonymous option you consider the best: OBSOLETE
Alt1	obscure
Alt2	hackneyed
Alt3	current
Alt4	grasp

11	Akash scored 73 marks in subject A. He scored 56% marks in subject B and X marks in subject C. Maximum marks in each subject were 150. The overall percentage marks obtained by Akash in all the three subjects were 54%. How many marks did he score in subject C ?
Alt1	84
Alt2	86
Alt3	79
Alt4	73

12	A person starts from his house and travels 6 Km towards the West, he then travelled 4 Km towards his left and then travels 8 Km towards west and 3 Km towards South. Finally he turns right and travels 5 Km. What is the horizontal distance he has travelled from his house ?
Alt1	7 Km
Alt2	15 Km
Alt3	23 Km
Alt4	19 Km

13	If 1st Jan 2012 is a Tuesday then on which day of the week will 1st Jan 2013 fall ?
Alt1	Wednesday
Alt2	Thursday
Alt3	Friday
Alt4	Saturday

14	One morning after sunrise, Reeta and Kavita were talking to each other face to face at University. If Kavita's shadow was exactly to the right of Reeta, which direction was Kavita facing ?
Alt1	North
Alt2	South
Alt3	East

Alt4	West
15	In an exam every candidate took History (or)Geography(or)both. 74.8%took History and 50.2% took Geography. If the Total number of candidates is 1500,how many took History and Geography both?
Alt1	400
Alt2	350
Alt3	750
Alt4	375
16	Which word includes the larger % of Vowels?
Alt1	GOOGLE
Alt2	AMAZON
Alt3	FACE BOOK
Alt4	DOE
17	A= Least prime >24; B=Greatest prime <28; Then
Alt1	A>B
Alt2	A<B
Alt3	A=B
Alt4	None
18	CL X VIII refers
Alt1	861
Alt2	701
Alt3	168
Alt4	107
19	Which of the following is larger than $\frac{3}{5}$?
Alt1	$\frac{1}{2}$
Alt2	$\frac{39}{50}$
Alt3	$\frac{7}{25}$
Alt4	$\frac{59}{100}$
20	Mr. Babu travelled 1200 km by air which formed $\frac{2}{5}$ of his trip. One third of the whole trip, he travelled by car and the rest of the journey was by train. What was the distance travelled by train?
Alt1	600km
Alt2	700 km
Alt3	800 km
Alt4	900 km
21	The phylum in which all the representative animals are marine is
Alt1	Cnidaria

Alt2	Porifera
Alt3	Annelida
Alt4	Echinodermata

22	Which one of the following is an exotic Indian fish
Alt1	<i>Heteropneustes fossilis </i>
Alt2	<i>Cyprinus carpio</i>
Alt3	<i>Catla catla</i>
Alt4	<i>Labeo rohita</i>

23	The structure “lantern of Aristotle” is found in
Alt1	<i>Nereis</i>
Alt2	<i>Echinus</i>
Alt3	<i>Taenia</i>
Alt4	<i>Chaetopterus</i>

24	Pollen basket in worker honey bee is present in the
Alt1	Metathoracic legs
Alt2	Mesothoracic legs
Alt3	Prothoracic legs
Alt4	Mandible

25	In sponges, the food is stored in
Alt1	Trophocytes
Alt2	Archeocytes
Alt3	Desmocytes
Alt4	Thesocytes

26	A reason for maternal inheritance of a character is due to genes present in
Alt1	Nucleolus
Alt2	Mitochondria
Alt3	Cytoplasm
Alt4	Lysosomes

27	Which statement about post-translational events is FALSE?
Alt1	Protein targeting involves signal sequences in the nascent polypeptides.
Alt2	Proteins can be modified by acetylation, phosphorylation and glycosylation.

Alt3	Signal peptidase removes one or two amino acids from the amino terminus of some proteins.
Alt4	Some mRNAs encode polypeptides.

28	Which one of the following elements is essentially required for blood coagulation?
Alt1	Calcium.
Alt2	Sodium.
Alt3	Potassium.
Alt4	Iron.

29	Trypsinogen is activated by
Alt1	HCl.
Alt2	Enterokinase.
Alt3	Bile.
Alt4	Chymotrypsin.

30	Emulsification of fatty substances is the function of
Alt1	Lipase enzyme.
Alt2	Bilirubin and biliverdin.
Alt3	HCl.
Alt4	Sodium salts of glycocholic and taurocholic acids.

31	In circulating blood, CO_2 is carried by haemoglobin in the form of
Alt1	Sodium bicarbonate.
Alt2	Potassium bicarbonate.
Alt3	Carboamino compound.
Alt4	Methaemoglobin.

32	What one of the following matches is correct?
Alt1	Lamarck's theory - Struggle for existence.
Alt2	Biogenetic law - Recapitulation theory.
Alt3	Lamarck's theory - Theory of continuity of germplasm.
Alt4	Darwin's theory - Use and disuse of organs.

33	Which of the following is not a green house gas?
Alt1	CO_2
Alt2	Water vapour
Alt3	Methane

Alt4	Ozone
34	A species that has a disproportionately large effect on its environment relative to its abundance and if removed from habitat the habitat is dramatically changed is called
Alt1	Abundant species
Alt2	Keystone species
Alt3	Dominant species.
Alt4	Umbrella species.
35	A population following the growth equation ($dN/dt = rN$) will neither increase nor decrease when
Alt1	$r = 0$
Alt2	$r = 1$
Alt3	$r = 0.5$
Alt4	$r = >0$ but < 1
36	An area is declared "Hot Spot" when
Alt1	It has 1500 or more endemic species and 75 % of its original habitat is lost.
Alt2	It has 1500 or more endangered species and 75 % of its habitat is lost.
Alt3	It has more than 2000 varieties of species.
Alt4	Most of the species inhabiting the area is facing the risk of extinction.
37	The major secretory product of pineal gland is
Alt1	Mesotocin.
Alt2	Melanin.
Alt3	Melatonin.
Alt4	Prolactin.
38	The blood in Cockroach contains
Alt1	Haemoglobin.
Alt2	Haemocyanine.
Alt3	Haemovanadin.
Alt4	No respiratory pigment.
39	Which one of the following features is NOT appropriate for Vitamin C?
Alt1	Water soluble.
Alt2	Anti-Scurvy.
Alt3	Anti-Beriberi.

Alt4	Hexose derivative .
40	The death of the last individual of a species is called
Alt1	Extinction.
Alt2	Clad.
Alt3	Neither extinction, nor clad.
Alt4	Species diversity.
41	Red Data Book provides a list of
Alt1	Advanced animals and plants.
Alt2	Rare, endangered or endemic species.
Alt3	Disease resistant animals.
Alt4	Extinct plants and animals.
42	What is the animal symbol of W. W. F (World Wildlife Fund) ?
Alt1	Red Panda.
Alt2	Giant Panda.
Alt3	Tiger.
Alt4	Kangaroo.
43	Which group of vertebrates comprises the highest number of endangered species?
Alt1	Fishes.
Alt2	Reptiles.
Alt3	Birds.
Alt4	Mammals.
44	Duck-billed platypus is considered as a link between
Alt1	Reptiles and birds.
Alt2	Reptiles and mammals.
Alt3	Echinoderms and chordates.
Alt4	Reptiles and amphibians.
45	In human dosage compensation the only gene which is not transcriptionally silent in the inactivated X chromosome is
Alt1	HPRT.

Alt2	XIST.
Alt3	Tim.
Alt4	XIC.

46	Which one of the following sub-cellular organelle is relatively more abundant in a primarily lipid synthesizing cell?
Alt1	Rough surfaced ER.
Alt2	Smooth surfaced ER.
Alt3	Ribosomes.
Alt4	Lysosomes.

47	In the DNA, nonsense codons are
Alt1	UUA,UUG,UUU
Alt2	UAG,UAA,UGA
Alt3	AUA,AUG,UGA
Alt4	AAA,AAG,AAU

48	Mayr's biological concepts of species is mainly based on
Alt1	Morphological traits.
Alt2	Reproductive isolation.
Alt3	Modes of reproduction.
Alt4	Morphology and Reproduction.

49	In the mammalian testis, the hormone inhibin is produced by
Alt1	Leydig cells.
Alt2	Sertoli cells.
Alt3	Mature spermatozoa.
Alt4	Spermatids.

50	Which of the following enzymes is the first to mix with food in the digestive tract?
Alt1	Pepsin.
Alt2	Trypsin.
Alt3	Lipase.
Alt4	Ptyaline.

51	During the transportation of gases, to maintain the ionic balance, chloride ions shift from
Alt1	RBCs to plasma
Alt2	Plasma to RBCs
Alt3	Lungs to blood
Alt4	Blood to lungs

52	Phenotype of an organism is the result of
Alt1	Genotype and environment interactions
Alt2	Mutations and linkages
Alt3	Cytoplasmic effects and nutrition
Alt4	Environmental changes and sexual dimorphism

53	Apoptosis term is related to
Alt1	Abnormal cell growth
Alt2	Programmed cell death
Alt3	Cell morphogenesis
Alt4	Cell differentiation

54	In which year, the National Biodiversity Authority (NBA) was established to implement India's Biological Diversity Act
Alt1	2002
Alt2	2003
Alt3	2004
Alt4	2005

55	A double stranded DNA has 30% cytosine. What is the percentage of adenine in it?
Alt1	0.6
Alt2	0.3
Alt3	0.2
Alt4	0.1

56	Which of the following is the main cause of allopatric speciation?
Alt1	Geographical isolation
Alt2	Reproductive isolation
Alt3	Allochronism
Alt4	None of these

57	The epithelium that helps in gamete formation is
Alt1	Simple squamous epithelium
Alt2	Simple columnar epithelium
Alt3	Simple cuboidal epithelium
Alt4	Ciliated columnar epithelium

58	Which of the following is not an ecosystem service provided by invertebrates?
Alt1	Decomposition of plant and animal tissues
Alt2	Pollination of plants
Alt3	Suppression of herbivorous pests of crops
Alt4	Vectors and intermediate hosts of parasites that attack humans

59	Which of the following are not social behaviors displayed by some invertebrates?
Alt1	Parental care
Alt2	Channel surfing

Alt3	Communal nesting
Alt4	Cooperation in brood care between parents and offspring

60	In which type of wildlife management the wildlife is protected from hunting mainly during breeding season and is enforced by law and if violated is punishable and termed as illegal?:
Alt1	Closed season
Alt2	Open wildlife season
Alt3	Custodial management
Alt4	Limited entry zone

61	The first larvae of Penaeus
Alt1	Zoea
Alt2	Nauplius
Alt3	Mysis
Alt4	Protozoa

62	What is a microscope's ability to distinguish between separate objects that are close together?
Alt1	Magnification
Alt2	Contrast
Alt3	Resolving power
Alt4	Scanning power

63	Sodium ions are "pumped" from a region of lower concentration to a region of higher concentration in the nerve cells of humans. This process is an example of
Alt1	Diffusion
Alt2	Passive transport
Alt3	Osmosis
Alt4	Active transport

64	Notochord is found in the tail region of
Alt1	Chordata
Alt2	Urochordata
Alt3	Cephalochordata
Alt4	Vertebrata

65	The chemical factors that determine traits are called
Alt1	Alleles
Alt2	Traits
Alt3	Genes
Alt4	Characters

66	What principle states that during gamete formation genes for different traits separate without influencing each other's inheritance?
Alt1	Principle of dominance
Alt2	Principle of independent assortment
Alt3	Principle of probabilities
Alt4	Principle of segregation

67	Which of the following cells undergo meiosis?
Alt1	Sperm cells
Alt2	Skin cells
Alt3	Liver cells
Alt4	All of these

68	An example of aestivating fish
Alt1	Lepidosiren paradoxa
Alt2	Etroplus suratensis
Alt3	Sardinella longiceps
Alt4	Mugil cephalus

69	A chronospecies is
Alt1	A population that will eventually become a new species, given enough time
Alt2	A species that, though reproductively isolated, looks exactly like another species
Alt3	A label used for a stage of a single species evolving over time
Alt4	A measure of how many new species appear in a given period of time

70	The origin of a new species first requires
Alt1	Reduced gene flow
Alt2	Increased gene flow
Alt3	Reduced mutation rates
Alt4	Increased mutation rates.

71	Which of the following is used to determine what traits are primitive and what traits are derived in an analysis of closely related species?.
Alt1	A molecular clock
Alt2	An outgroup
Alt3	A phenetic approach
Alt4	An adaptive radiation model

72	Twins made from two individual zygotes (dizygotic twins):
Alt1	are related genetically as the monozygotic twins
Alt2	share 0% genetic similarities
Alt3	are similar in 100% of genetic sequences
Alt4	are related genetically as non-twin siblings.

73	Which of the following is not a major factor in the success of the Arthropoda (insects, crustaceans, spiders, etc.)?
Alt1	Paired jointed appendages
Alt2	A chitinous exoskeleton
Alt3	Body segmentation and the fusion of body segments into functional regions of the body (head, thorax, abdomen)
Alt4	Radial symmetry

74	Surgical removal of Gall bladder in man would lead to
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Alt1	Impairment of digestion of fat
Alt2	Jaundice
Alt3	Increased acidity in intestine
Alt4	None of these

75	Autecology deals with:
Alt1	Study of individual organism
Alt2	Study of group of organisms--
Alt3	Study of autotrophs
Alt4	Study of heterotrophs

76	Which one of the following animals is an Ectothermic Homeotherm?
Alt1	Lantern fish
Alt2	Whale
Alt3	Fruit Bat
Alt4	Owl

77	DNA repair is <i>not</i> associated with
Alt1	DNA ligase
Alt2	DNA exonuclease
Alt3	DNA endonuclease
Alt4	DNA helicase

78	Why mitochondrial DNA (mtDNA) is often used for studying relatedness in animal populations by population geneticists?
Alt1	mtDNA mutates at a slow rate than nuclear DNA
Alt2	mtDNA is uniparental as it passed on from mother to child without any recombination between pairs of chromosomes
Alt3	mtDNA codes for mitochondrial proteins
Alt4	Single nucleotide polymorphisms are very few in the hypervariable regions of mitochondria

79	Hardy-Weinberg equilibrium assumes significance for the following, <i>except</i>
Alt1	a large population
Alt2	random mating
Alt3	no natural selection
Alt4	genetic drift

80	Cell fractionation require all, <i>except</i>
Alt1	Centrifuge
Alt2	HPLC
Alt3	Dialysis
Alt4	Cryostat

81	Most commonly used animal for the production of secondary antibody for immulogical techniques is _____
Alt1	Mice
Alt2	Goat
Alt3	Rabbit
Alt4	Horse

82	Which one of the following is <i>not</i> related to the tiger reserve or project tiger of India?
Alt1	Sunderbans
Alt2	Kaziranga
Alt3	Manas
Alt4	Bandipur

83	Classical example of a hormone that is being regulated by open loop feedback is _____
Alt1	Prolactin
Alt2	FSH
Alt3	LH
Alt4	Calcitonin

84	Self-ligation of restriction enzyme digested plasmid DNA can be avoided by using
Alt1	AMV reverse transcriptase
Alt2	T4 DNA ligase
Alt3	calf intestine phosphatase
Alt4	T7 Polymerase

85	Which one of the following chemical compounds/drugs depolymerizes actin filaments?
Alt1	Cytochalasin B
Alt2	Colchicine
Alt3	Phalloidin
Alt4	Cyclodextrin

86	Which cell organelles have the capacity to undergo pleomorphism or polymorphism?
Alt1	Glyoxisome and Peroxisome
Alt2	Lysosome and Mitochondria
Alt3	Ribosome and Chloroplast
Alt4	Endoplasmic reticulum and Golgi complex

87	Unique property of lysosomal proteins is
Alt1	always enclosed in clathrin-coated vesicles
Alt2	phosphorylated mannose residues
Alt3	O-linked glycosylation of asparagine residues
Alt4	functional at alkaline pH

88	Spermatozoa lacking acrosome is found only in _____
Alt1	Snake
Alt2	Fish

Alt3	Frog
Alt4	Quail

89	Function of a eukaryotic protein can be abolished if point mutation is executed in the region of
Alt1	TATA box of 5'UTR promoter
Alt2	first nucleotide of a codon in the first exon
Alt3	third nucleotide of a codon in the first exon
Alt4	targeting poly adenylation signal in 3'UTR

90	Which one of the following statements is <u>incorrect</u> with reference to gamete maturation?
Alt1	Both Meiosis I and II will be completed before fertilization in male gametes.
Alt2	Meiosis I alone will be completed before fertilization in female gamete and the Meiosis II will occur after fertilization
Alt3	<i>In vitro</i> fertilization can be performed without the completion of capacitation of male gametes.
Alt4	Resumption of meiosis for female gamete maturation is not related to puberty.

91	Which one of following group of amino acids is the site for glycosylation?
Alt1	Glycine or alanine
Alt2	Glutamine or arginine
Alt3	Tryptophan or phenylalanine
Alt4	Asparagine, serine or threonine

92	The phenotypic expression of one gene is affected by another gene is known as _____
Alt1	Epigenetics
Alt2	Epistasis
Alt3	Homeostasis
Alt4	Heterosis

93	Continuation of glycolysis during fermentation is dependent mainly on
Alt1	production of 2 molecules of ATP
Alt2	recycling NAD ⁺
Alt3	recycling NADH
Alt4	utilization of 2 molecules of ADP

94	As per Morgan's law of recombination, when a grey normal wild type Drosophila (female) is crossed with black vestigial (male), 944 flies are black vestigial, 965 are wild type, 206 are grey vestigial and 185 are black normal. Find the recombinant frequency.
Alt1	0.30
Alt2	0.17
Alt3	0.34
Alt4	0.15

95	Which one of the following endocrine glands has originated from two different germ layers?
Alt1	Adrenal
Alt2	Pituitary

Alt3	Thyroid
Alt4	Pineal

96	Most of the deserts in the world occur at 30 degree north and 30 degree south latitude. This can be best explained by _____
Alt1	the pattern of global climate change in the last century
Alt2	the pattern of continental drift during last millions of years
Alt3	the pattern of atmospheric circulation above and below the equator
Alt4	the pattern of mountain ranges that occur at those latitudes

97	Somatomammotropin is responsible for _____
Alt1	Breast growth during pregnancy
Alt2	Postnatal lactation
Alt3	Milk ejection just after parturition
Alt4	Postnatal depression and stress

98	A couple having blood group A with Rh negative (Father) and B with Rh positive (Mother) have a girl child with blood group O, Rh positive. What will be the genetic allele combination of the parents in terms of the blood group? What would be the percentage of having a child with blood group O, Rh positive?
Alt1	$I^A I^A, Rh^-$ and $I^B I^B, Rh^+$ & 25%
Alt2	$I^A I^A, Rh^-$ and $I^B I^B, Rh^+$ & 25%
Alt3	$I^A I^A, Rh^-$ and $I^B I^B, Rh^+$ & 50%
Alt4	$I^A I^A, Rh^-$ and $I^B I^B, Rh^-$ & 25%

99	Each repeat unit of the nuclear ribosomal gene cluster of eukaryotes contains
Alt1	a terminator for RNA Polymerase I
Alt2	a promoter for RNA polymerase I
Alt3	an ATG start codon and also a Polyadenylation signal
Alt4	at least one tRNA gene

100	Brown fat degradation is associated with
Alt1	shivering thermogenesis and glycolysis
Alt2	non-shivering thermogenesis and gluconeogenesis
Alt3	non-shivering thermogenesis and beta-oxidation
Alt4	shivering thermogenesis and glycogenolysis