

Q. No	Question	Correct Ans	Option1	Option2	Option3	Option4
1	Human hair has medullary index	Less than 0.3	Less than 0.3	Between 0.3 and 1.0	More than 1.0	Between 1.5 and 2.5
2	Outer layer of hair shaft is called	Cuticle	Cortex	Cuticle	Medulla	Follicle
3	Hardest tissue in human body is	Enamel	Dentin	Enamel	Cementum	Bone
4	Transitional phase in hair growth cycle is	Catagen	Anagen	Catagen	Telogen	Phylogeny
5	Scale pattern on hair helps to	Differentiate human and animal hairs	Differentiate male and female hairs	Differentiate human and animal hairs	Indicates site of hair	Differentiate pubic hair from body hair
6	Study of pollen grains is called as	Palynology	Palynology	Dendrology	Anthology	Agrostology
7	Microscopic examination of cotton fibers reveal	Spirally twisted ribbon like feature	Spirally twisted ribbon like feature	A smooth, cylindrical, hollow, thin walled fibers	Net like thickenings	Distinct length wise striations
8	On the basis of diatoms which is the best suited for diagnosis of ante-mortem drowning	Femur	Vitreous humor	Lung content	Stomach content	Femur
9	Wild life protection Act in India came into force in year	1972	1962	1972	1975	1977

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10	Wildlife Institute of India is situated at	Dehradun	Nanital	Dehradun	Delhi	Hyderabad
11	The best method of identification from pulled hairs is	DNA profiling	Blood grouping	Microscopic examination	DNA profiling	Enzyme analysis
12	In relation to Mitochondrial DNA which is NOT correct	Transmitted paternally to offsprings	Present in cytoplasm	Length of DNA is 16569 nucleotide	Encodes 37 genes	Transmitted paternally to offsprings
13	PCR technique was invented by	Karry Mullis	Karry Mullis	Alec Jeffry	Watson and Crick	Bruce Budowle
14	Deoxyribose lacks an oxygen atom at	C-2 position of ribose	C-1 position of ribose	C-2 position of ribose	C-3 position of ribose	C-4 position of ribose
15	CODIS comprises of	13 STRs	13 STRs	14 STRs	20 STRs	17 STRs
16	Small solid supports onto which are spotted hundreds of thousands of tiny drops of DNA that can be used to screen gene expression is called	DNA microarray	DNA microarray	Cloning library	Chip-seq	Southern blot
17	Which is NOT the violent mode of death	Natural	Natural	Accident	Suicide	Homicide
18	"Washerwomen" appearance in hand and sole in typically seen in cases of	Drowning	Poisoning by washing soda	Aeroplane crash	Drowning	Falling in a dry well

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19	Rule of 9 is used to measure the area involved in cases of	Burn injury	Traffic accidents	Electrical injury	Railway accidents	Burn injury
20	Bone building cells are	Osteoblasts	Osteoblasts	Osteoclasts	Osteocytes	Chondrocytes
21	Carbohydrates are detected using	Molisch's test	Molisch's test	Ninhydrin test	Takayama test	Benzidine test
22	Ligature Mark of hanging is an example of	Pressure abrasion	Scratch abrasion	Pressure abrasion	Bruise	Laceration
23	The layer of actively dividing cells of skin is	Stratum germinativum	Stratum granulosum	Stratum corneum	Stratum lucidium	Stratum germinativum
24	Hardy-Weinberg law refers to the study of	Population equilibrium	Mutation	Genetic drift	Population equilibrium	Allele frequency
25	Pleiotropic gene has	Multiple phenotype	Multiple genotype	Single genotype	Single phenotype	Multiple phenotype
26	Down's syndrome is a typical example of	Trisomy	Nullisomy	Monosomy	Trisomy	Gene Mutation
27	Probability of events must lie in limits of	0 to 1	1 to 2	3 to 5	8 to 10	0 to 1

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28	Most important bone for sex determination is	Pelvis	Pelvis	Humerus	Scapula	Tibia
29	Acetabulum is part of	Pelvis	Mandible	Humerus	Pelvis	Tibia
30	Hemoglobin variants can be easily determined by	Electrophoresis	Electrophoresis	Color test	Colorimetry	GLC
31	Which indicates the presence of saliva	Amylase	Urobilinogen	Amylase	Dermicidin	Amines
32	The approximate percentage of secretors in human population is	80%	20%	80%	40%	95%
33	Which prevents blood clotting	Heparin	Heparin	Fibrinogen	Albumin	Globulin
34	Semen can be detected using	Berberio's test	Guacum test	Reine's test	Berberio's test	Kastle-Mayer test
35	Condyle means	A smooth rounded projection	Sharp distinct ridge	A smooth rounded projection	A horn like process	Small articular surface
36	Cephalic index is used to identify	Race	Age	Sex	Race	Stature

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37	From which part of cinchona plant, a drug is obtained	Bark	Flower	Leaf	Bark	Root
38	Pigment granules, cortical fusi, ovoid bodies are present in which part of hair	Cortex	Scales	Cuticle	Cortex	Medulla
39	Which of the following is NOT a natural fiber	Rayon	Jute	Silk	Rayon	Ramie
40	Which of these fibers are obtained from leaf of its plant	Abaca	Cotton	Coir	Hemp	Abaca
41	Difference in the number of base pairs of the Amelogenin gene between X and Y chromosome is	6	14	20	6	4
42	Watson and Crick received Nobel prize for their work in the year	1962	1953	1955	1962	1980
43	Most commonly used STR loci in Forensic DNA profiling are	Tetrameric	Dimeric	Trimeric	Tetrameric	Pentameric
44	According to the current concept death is defined as:	Irreversible stoppage of brain stem functions	Irreversible cessation of all vital functions of body	Irreversible stoppage of brain stem functions	Irreversible stoppage of Lung functions	Irreversible cessation of function of Heart
45	Which of the following injury is NOT possible by blunt forces	Incised	Incised	Abrasion	Bruise	Laceration

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46	Kicking by a shoe sole produces	Patterned abrasion	Scratch abrasion	Graze abrasion	Patterned abrasion	Incised wound
47	Who is NOT associated with the ultra structure of cell membrane	Robert Hooke	E. Overton	E. Gorter and F. Grendel	Robertson	Robert Hooke
48	BLOSSUM matrices are used for	Pairwise alignment	Multiple sequence alignment	Pairwise alignment	Phylogenetic analysis	All of the options
49	The computational methodology that tries to find the best matching ligand is	Molecular docking	Molecular matching	Molecular docking	Molecular affinity checking	Molecular fitting
50	GRAIL is acronym of	Gene relationship across implicated loci	Gene relationship across implicated loci	Genetic rule around inbred loci	Genomic revolution across indigenous loci	Genetic revolution across Indian Land
51	Central Dogma of Molecular Biology was first stated by	Crick	Watson and Crick	Beedal and Tatum	Klug	Crick
52	Gustafson's contribution to forensic science is	Estimation of age from teeth	Estimation of age from teeth	Estimation of time since death due to fire	Estimation of time since death in drowning	Estimation of age from X-ray of hand
53	Basi-sphenoid suture in skull is used for determining	Estimation of age	Species of origin	Estimation of age	Estimation of height	Sex determination
54	Acromion process is present in	Scapula	Fibula	Pelvis	Scapula	Humerus

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55	Eruption of permanent maxillary canine tooth in humans happens between	11-12 years	5-6 years	11-12 years	8-9 years	14-15 years
56	One of the method to estimate age from bone is	Osteon counting	Osteon counting	Colouring of bones due to age	Examination of colour of bone marrow	Measuring with osteometric board
57	Xiphoid process is	Portion of sternum	Portion of sternum	Portion of scapula	Potion of coccyx	Portion of condyle
58	Symphysial face of pubis is helpful to find out	Age from pelvis	Sex from pelvis	Age from pelvis	Deterioration of bony material with age	Stature from pelvis
59	Supra-orbital ridges are related to	Determination of sex	Injury during life time	Estimation of age	Determination of sex	Deterioration of bone
60	Primary dentition starts with	Mandibular central incisor	Mandibular central incisor	Maxillary central incisor	Lower lateral incisor	Upper lateral incisor
61	Blood groups antigens A and B are related to	RBC	Plasma	Platelets	WBC	RBC
62	Rh antigen was described by	Landsteiner and Wiener	Landsteiner and Levine	Landsteiner and Wiener	Weiner and Levine	Davidsohn and Wiener
63	Acetone chlor-hemin test was recommended by	Wagenaar	Takayama	Wagenaar	Teichman	Barberios

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64	HLA locus is located on	Short arm of chromosome 6	Long arm of chromosome 6	Short arm of chromosome 6	Long arm of chromosome 4	Short arm of chromosome 4
65	Tamm-Horsfall glycoprotein is found in	Urine	Urine	Saliva	Vaginal secretion	Sweat
66	Ossification of bones help in estimation of	Age	Sex	Age	Race	Stature
67	Which is useful in estimation of age of an individual at the time of death	Epiphyseal union	Facial reconstruction	Adipocere	Skull-photo superimposition	Epiphyseal union
68	Which does NOT relate to diatoms	Colpus	Frustules	Epitheca	Cingulum	Colpus
69	Which was the first PCR based DNA marker	HLA-DQA1	THO1	D16S539	D10S28	HLA-DQA1
70	Bombay blood groups are devoid of	A, B and H antigen	A antigen only	B antigen only	A and B antigen only	A, B and H antigen