## FACT and FACT Plus Exam 20 March 2022

| Exam Name | FACT and FACT Plus Exam 20 March 2022 |
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| Test Date | 20/03/2022 |
| Test Time : | 9:00 AM - 11:00 AM |
| Subject | Forensic Biological Sciences FACT Plus |

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## Section : Aptitude in Forensic Sciences

Q. 1 Thin layer chromatography is a type of

Ans $\quad$ 1. Absorption Chromatography
$\times 2$. Ion exchange
3. Adsorption Chromatography

X 4. Partition chromatography

## Q. 2 Statistic is

Ans
$X$ 1. Unknown
$X$ 2. Population characteristic
3. Sample characteristic

X 4. Normally distributed
Q. 3 Proportion turns percentage when multiplied by

Ans
X 1.1/10
X 2. 10
X $3.1 / 100$
4. 100

## Question ID : 310578762

Q. 4 Which of the following techniques is best known for studying Gunshot residue

Ans
X 1. ATR-FTIR
2. SEM-EDX
3. GC-MS
4. NMR
Q. 5 Ridge characteristics in fingerprint are called as

Ans $\quad \times 1$. Ridge Tracing
2. Galton's Details
3. Ridge counting
4. Forensic Details
Q. 6 According to the Beer-lambert Law, on which of the following does absorbance not depend
Ans

1. Colour of the solution
2. Extinction coefficient of the sample
3. Distance that the light has travelled through the sample
4. Solution concentration
Q. 7 The Information Technology Act (also known as ITA) was enacted in

Ans
V 1.2000
X 2. 2002
X 3.2003
4. 2001
Q. 8 CDTI stands for

Ans $\times$ 1. Centre Document Training Institute
$X$ 2. Centre Detective Training Institute
3. Central Detective Training Institute
4. Central Document Training Institute
Q. 9 Who is known as father of Questioned Document Examination

Ans $\quad \mathbf{X}$ 1. Alec s. Osborn
$X$ 2. Arthur S. Osborn
3. Albert S. Osborn

X 4. Allen S. Osborn

## Q. 10 Section 45 in the Indian Evidence Act 1872 defines

Ans $\quad \times 1$. Opinions of Police Personal
2. Opinions of eye witness
3. Opinions of expert
4. Opinions of Judge
Q. 11 The study of Hair is known as

Ans $\quad$ 1. Histology
X 2. Pathology
3. Trichology

X 4. Phytology
Q. 12 Who was the first Indian women Golfer to qualify for Tokyo Olympic 2020

Ans $\quad$ 1. P.V. Sindhu
2. Aditi Ashok

入 3. Sonam Malik
4. Pooja Rani
Q. 13 Which of the following deals with study of insects

Ans
< 1. Cytogenetic
2. Anthropology
3. Entomology
4. Ornithology

## Question ID : 310578748

Q. 14 BIOS in computer science means

Ans $\quad$ 1. Binary Input Output System
2. Broad Input Output System
3. Board Input Output System
4. Basic Input Output System
Q. 15 On which of the following does the critical value for a Chi-square statistic rely

Ans

1. The number of variables
2. The row totals
3. The degrees of freedom
4. The sum of the frequencies

## Question ID : 310578761

Q. 16 Ramesh while going to his drives 4 km in South, then moves to left again drives 3 km . how far he is from his starting point
Ans
$\times 1.4$
$\times 2.3$

- 3.5
<4. 6
Q. 17 Choose the word which is different from the rest

Ans $\times 1$. Palace
X 2. House
3. School

X 4. Cottage

## Q. 18 The person Stas in Stas-Otto methods is

Ans $\quad \times 1$. Benzamine Servais Stas
2. Jean Servais Stas

X 3. Mathew Servais Stas
4. Mike Servais Stas
Q. 19 ILAC operates in accordance with

Ans

1. ISO/IEC 17011
2. ISO/IEC 17013

X 3. ISO/IEC 17012
X 4. ISO/IEC 17014

## Question ID : 310578745

## Q. 20 Medullary index in animal hair is

Ans
$X 1$. None of these
$X 2$. Exactly 0.3
3. More than 0.3
4. Less than 0.3
Q. 21 The "Spiral" search pattern at scene of crime is used

Ans $\quad \times 1$. By spinning around a bunch of times and using an "Oblong" technique
2. By starting at the most inward point and slowly walking in increasing circles.
3. By starting at the most inward point and searching back and forth until the outer edges are reached
4. By starting at the most outward point and circling in
Q. 22 " $A$ " meets " $B$ " on high roads, shows a gun and demands " $B$ "s bag. " $B$ " in consequence, surrenders his bag. Here " $A$ " has committed
Ans

1. Robbery
2. Dacoity
3. Extortion
4. Theft

## Q. 23 SARS-CoV-2 stands for

Ans $\quad$ 1. Severe amount respiratory syndrome coronavirus 2
X 2. Severe ailment respiratory syndrome coronavirus 2
X 3. Severe aquatic respiratory syndrome coronavirus 2
4. Severe acute respiratory syndrome coronavirus 2
Q. 24 Find the missing term: 6, 23, 40, ??, 74

Ans
X 1.17
X2. 47
$\times 3.67$
4. 57
Q. 25 The square of the standard deviation is called

Ans $\quad \times 1$. 2 nd quartile
2. Harmonic mean

X 3. Mode
4. Variance

## Question ID : 310578766

Q. 26 The most repeated value in a data set is called

Ans

1. Mode
2. Median
3. Mean
4. Range
Q. 27 We were not alone in the room. He sat $\qquad$ me. There were others there $\qquad$ us.
Ans $\quad X 1 . \mathrm{Be}$, besides
$X$ 2. Next, between
$X$ 3. Besides, beside
5. With, besides
Q. 28 Which of the followings is not associated with the formal recognition of competence of a conformity assessment body by NABL
Ans
< 1. International recognition
6. Time and money efficient
7. Robust Quality Management System
8. Timely promotion of the employees
Q. 29 The headquarter of International Organization for Standardization is situated in

Ans
X 1. Washington
2. Sydney
3. England
4. Geneva
Q. 30 Identification system based on Anthropometry is known as

Ans

1. Edgeoscopy
2. Diatomology
3. Bertillonage
4. Criminalistics
Q. 31 Pick the odd one out

Ans
>1.L
X2.K

- 3.1
>4.J


## Question ID : 310578730

Q. 32 If $20 \%$ of an electricity bill is deducted, then Rs. 100 is still to be paid. How much was the original bill
Ans
$\times 1.150$
X 2.25
3. 125
4.75

## Q. 33 4R rule of glass fracture relates to

Ans $\times 1$. Rib mark
2. Hackle Mark

Х 3. Concentric fracture
4. Radial fracture

## Question ID : 310578738

## Q. 34 What is the full form of PDF file

Ans $\quad$ 1. Public Document Format
2. Portable Document Format

X 3. Published Document Format
4. Printed document Format
Q. 35 Which of the followings doesn't include fire triangle

Ans

1. Smoke
2. Heat
3. Fuel
4. Oxygen

## Question ID : 310578751

Q. 36 Which of the following CFSLs was established in year 1967

Ans $\times 1$. Guwahati
$X$ 2. Pune
3. Hyderabad
4. Bhopal

Question ID : 310578731
Q. 37 What is the position of earth in our solar system

Ans
$X 1$. Fourth
X 2. First
3. Third
4. Second

## Q. 38 NCRB stands for

Ans $\quad$ 1. National Criminal Records Bureau
$X$ 2. News Crime Records Bureau
3. National Crime Records Bureau
4. New Criminal Records Bureau
Q. 39 What is the "Fear of Darkness" called

Ans $\times 1$. Arachnop
Х 2. Ophidiophobia
3. Nyctophobia

X 4. Ablutophobia

## Question ID : 310578744

Q. 40 ABFO stands for

Ans $\quad$ 1. American Bureau of Forensic Odontologists
X 2. American Bureau of Forensic Orthopedics
Х 3. American Bureau of Forensic Odontology
4. American Board of Forensic Odontology

## Q. 41 AFIS stands for

Ans $\quad$ 1. Actual Fingerprint Identification System
2. Automated Fingerprint Identification System
3. Automatic Fingerprint Identification System

X 4. Algorithm Fingerprint Identification System

## Question ID : 310578753

Q. 42 Select correct word

Ans $\times 1$. Dessiccator
X 2. Dessicator
X 3. Desicator
4. Desiccator
Q. 43 Forensic photography of bite marks should be done using

Ans
X 1. FSL scale
2. ABFO scale

X 3. FBI scale
X4. CBI scale
Q. 44 Who are the beneficiaries of OROP scheme

Ans $\quad \times 1$. Sportspersons
2. Armed forces Veterans
$X$ 3. Bureaucrats
4. Teachers

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Q. }45\mathrm{ The number of times each value appears is called the value's
Ans }\times1\mathrm{ .Range
    2. Frequency
X 3. Standard Deviation
X 4. Mode
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Q. 46 When in UN day celebrated

Ans
$X 1$. June 21
2. October 24
3. June 24
4. October 21

## Q. 47 Which scope of accreditation of NABL is not applicable in the Forensic Science Laboratories

Ans

1. Medicine
2. Chemistry

X 3. Biology
4. Toxicology
Q. 48 Forensic expert during crime scene visit should not be

Ans $\quad \times$ 1. Confidential
2. Skilled
3. Babbling
4. Ethical

## Q. 49 CFSL Delhi comes under which of the followings

Ans

1. CBI
2. DST
3. DFSS
4. DRDO
Q. 50 When a dead body is found at the scene, the most immediate concern is

Ans

1. Preserving and securing the crime scene
2. Interviewing family members
3. Collection of evidences
4. Identifying the victim

## Section : Forensic Biological Sciences

Q. 51 Which is not a DNA extraction method
Ans $\quad \times$ 1. Solid phase
$\times$ 2. Organic method
$\times$ 3. ABA Card method
$\times$. Chelax based
Q. 52 Name the scientist(s) who derived reconstruction formulae for stature from dry bones

Ans $\quad \times 1$. Rollet (1888)
2. Trotter and Gleser (1952)

X 3. Karl Pearson (1899)
X 4. Telkka (1950)

## Q. 53 Female pelvis is

Ans
$X 1$. Thick
2. Wider and thin
3. V Shaped
4. Heavier
Q. 54 Which is not found in Diatoms

Ans

1. Colpus
2. Chlorophyll
3. Xantophylls
4. Fucoxanthin

## Question ID : 310578820

Q. 55 The word Anthropolite is related to

Ans $\times 1$. Putrefied human body
2. Anatomy of human body
3. Petrified human body
4. Anthroposcopy of human body

## Q. 56 Odontoblasts produce

Ans
X 1. Enamel
2. Dentine
3. Cement
4. Peridental membrane

## Q. 57 What is the shape of nucleus in monocytes?

Ans

1. Kidney shaped
2. Round shape
(3. Apple shaped
3. Triangular shape

## Question ID : 310578811

## Q. 58 Multilocus probes are

Ans $\quad$ 1. Short DNA fragments which binds to target DNA at a single point
X 2. Long DNA fragments which binds to target DNA at a single point
Х 3. Long DNA fragments which binds to target DNA at several points
4. Short DNA fragments which binds to target DNA at several points

## Question ID : 310578788

Q. 59 Which statement describes the Hardy-Weinberg law the best:

Ans $\quad$ 1. In large populations, dominant alleles become more prevalent
2. It is impossible to predict expected allele frequencies mathematically
3. Mechanism of inheritance in a large population does not change allele frequency
4. Allele frequency changes over a period of time in a large population

## Question ID : 310578808

## Q. 60 In Hardy Weinberg Equilibrium $P$ represents

Ans

1. Frequency of dominant allele in a population

X 2. Frequency of Null allele in a population
3. Frequency of recessive allele in a population
(4. Frequency of heterozygous genotype in a population

## Question ID : 310578777

Q. 61 Which of the following subunits of RNA polymerase is solely required for initiation of transcription?

Ans

1. $\sigma$ (sigma)
2. a (alpha)
3. $\beta$ (beta)
4. $\omega$ (omega)

## Q. 62 Which is related to skull

Ans $\quad$ 1. Arytenoids
2. Pterygoid
3. Scaphoid
4. Coracoids

## Q. 63 Which of them is a part of mt-DNA?

Ans $\times 1$. T-loop
X 2. S-loop
X 3. Y-loop
4. D-loop

## Question ID : 310578807

Q. 64 Which is not useful in identification of individual from skeletalized remains

Ans $\quad \times 1$. Dentition
2. Tattoos
$X$ 3. Bone abnormalities
X 4. Surgical implants

## Q. 65 Which is not a component of xylem:

Ans $\times 1$. Companion cells
2. Parenchyma
$X$ 3. Tracheids
X 4. Vessels

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\text { Question ID : } 310578787
$$

Q. 66 D13S137 and TPOX are

Ans 1. STR markers
X 2. Type of virus
$X$ 3. Regions of mitochondria
X 4. Restriction enzyme

## Question ID : 310578774

Q. 67 Who discovered radiographic atlas of skeletal development method of hand and wrist

Ans

1. Greulich and Pyle
2. Krogmann and Iscan
3. Tanner and Arheson
4. Thorsan and Hagg
Q. 68 In human beings, growth stops completely at around

Ans
$\times 1.33$ years
X2. 16 years

- 3.23 years

4. 10 years

## Q. 69 Hesitation wound are

Ans $\times 1$. Mostly seen on back
X 2. Deep wound
3. Superficial and parallel

X4. Abrasion

## Question ID : 310578830

## Q. 70 One gene one-enzyme theory proposed by

Ans $\quad \times 1$. Watson and Crick
X 2. Carry B Mullis
3. Beadle and Tatum
4. Gregor John Mendel
Q. 71 Hardest tissue in the human body is

Ans
$X 1$. Plaque
2. Enamel
$X$ 3. Dentine
$X$ 4. Cementum

## Question ID : 310578784

## Q. 72 Which is a fruit fiber

Ans $\times 1$. Sisal
X 2. Mesta
3. Coir
4. Rosella
Q. 33 The DNA fingerprint pattern of a child is

Ans
X 1. $100 \%$ similar to the mother's DNA profile
2. $50 \%$ similar to father's DNA profile and rest similar to mother's DNA profile
3. $100 \%$ similar to the father's DNA profile
4. Exactly similar to that of both of the parents
Q. 74 Determination of age for the widest range is possible from

Ans 1. Skeleton
2. Secondary sex characters
3. Morphological characters
4. Tissue examination
Q. 75 Which of the following codons is the mRNA start codon that initiates translation?

Ans

1. AUG

X 2. UAG
3. UAA
4. UGA

## Q. 76 Which is related to single gene mutation on chromosome 12

Ans $\times 1$. Blindness
X 2. Cataract
3. Phenylketonuria
4. Leprosy
Q. 77 Skin color in human being is an example of

Ans $\quad \times 1$. Monogenic inheritance
2. Complementary genes
$X$ 3. Mendelian inheritance
4. Polygenic inheritance

## Question ID : 310578838

## Q. 78 Which is not the product of Cannabis

Ans $\quad \times$ 1. Ganja
$X$ 2. Hasish
X 3. Charas
4. Cocain
Q. 79 Demirjian method of estimation of age is based on

Ans
$X 1$. Fusion of epiphysis with shaft
2. Cranial sutures
3. Developmental stages of teeth
4. All of the these
Q. 80 Number of bone in each limb of a man

Ans
$\times 1.20$
$\times 2.22$
$\times 3.16$
4. 30
Q. 81 The variation in the restriction DNA fragment lengths between individuals of a species is called:
Ans
X 1.RAPD
X 2. SSR
X 3. AFLP4. RFLP
Q. 82 A temporary loss of consciousness is called

Ans
X 1. Asphyxia
X 2. Comma
3. Syncope
4. Suffocation
Q. 83 Polydactyly in man is due to

Ans

1. Autosomal dominant allele
2. Autosomal recessive allele
3. Sex linked recessive allele
4. Sex linked dominant allele

## Question ID : 310578789

## Q. 84 Seed plants are of two groups

Ans
$X 1$. Fern and Mosses
$X$ 2. Liverworts and Horse tails
X 3. Algae and Fungi
4. Angiosperms and Gymnosperms
Q. 85 How many teeth does a human adult normally have?

Ans $\quad \times 1.28$

- 2.32

X 3.20
X 4.24

## Q. 86 Voluntary muscles are

Ans 1. Hamstrings
2. Diaphragm

X 3. Locomotory muscles
4. Heart Muscles

## Q. 87 Component not required for PCR

Ans $\quad X$ 1. Taq Polymerase
$\times$ 2. DNA template
3. Alcohol

X 4. PCR primer

## Q. 88 Skeletal maturity in children and young adult is best measured by:

Ans $\quad \times 1$. Radiological assessment of leg and pelvis region bone
2. Radiological assessment of hand and wrist bone development

X 3. Radiological assessment of Lumber vertebrae
4. Radiological assessment of skull

## Q. 89 Joint between the Carpal and Metacarpal of thumb is

Ans $\quad \times 1$. Hinge joints
2. Pivot joints
3. Saddle joints
4. Gliding joints

## Question ID : 310578821

Q. 90 A false positive result is best described as one that is given

Ans $\quad \times 1$. When substance being tested for is absent
2. When the substance being tested for is present in large amounts
3. When substance being tested for is present in minute quantities
4. By a substance other than that being tested for

## Q. 91 Hansen's disease caused by

Ans
X 1. Virus
2. Bacteria
3. Protozoa
4. Fungi
Q. 92 Number of bones in human axial skeleton system are

Ans

1. 80
+2. 100
2. 120
3. 95

## Q. 93 Which is not a side of a tooth

Ans $\times 1$. Distal
2. Ventral

X 3. Mesial
X4. Buccal

## Question ID : 310578799

Q. 94 Amelogenin gene on $X$ chromosomes is

Ans $X 1.6$ base pair longer as compare to that of $Y$ chromosomes
X 2. 8 base pair longer as compare to that of $Y$ chromosomes

- 3.6 base pair shorter as compare to that of $Y$ chromosomes

4. 8 base pair shorter as compare to that of $Y$ chromosomes
Q. 95 Type of joint which allow no movement under normal conditions

Ans 1. Synarthrosis
2. Diarthrosis
3. Amphiarthrosis
4. Knee joints
Q. 96 The gravitational settling of blood after death is

Ans

1. Livor mortis
2. Algor mortis
3. Rigor mortis
$X$ 4. Pallor mortis
Q. 97 Which of the following is a sequence alignment tool

Ans
$\times 1$. PROSITE
2. PIR
3. PRINT
4. BLAST

## Q. 98 Brush burn refers to

Ans
X 1. Electric burn
$X$ 2. Lightening burn
X 3. Pressure abrasion
4. Sliding abrasion

## Q. 99 Cartilage is formed by

Ans $\times 1$. Chondrocytes
X 2. Osteoblasts
3. Chondroblasts

X 4. Osteocytes

## Question ID : 310578792

Q. 100 Which of the following white blood cells is capable of phagocytosis?

Ans

1. Neutrophils
2. Lymphocytes
3. Eosinophils
4. Basophils
Q. 101 What is a plasmid DNA?

Ans
Х 1. Small circular in size
2. All of these
< 3. DNA that replicate in bacteria independently
4. Found in cytoplasm of bacteria

## Question ID : 310578827

Q. 102 Confirmation of menstrual blood stain is done by the following method:

Ans
× 1. Restriction enzyme
X 2. Protein marker
3. Fibrin Degradation Product (FDP)
4. Isoenzyme marker
Q. 103 What does " 0 " means at the dentist?

Ans 1. Gums are perfect
2. None of these

Х 3. Gums are bleeding
4. Gums are recessed
Q. 104 Which amino acid is present in hair medullar protein that is usually not a component of proteins?
Ans
X 1. Glycine
2. Proline
<3. Cystine
4. Citrulline

## Q. 105 Specialized sebaceous gland in the eyelids is called

Ans $\quad \times 1$. Holocrine gland.
$\times 2$. Exocrine gland
3. Meibomian gland

X 4. Pileous gland

## Question ID : 310578780

Q. 106 The length of Amelogenin Locus in X-Chromosome is:

Ans
X 1.110bp
X 2. 112bp
X 3.114bp
4. 106bp

## Q. 107 DNA denaturation can be monitored by

Ans 1.UV absorbance
2. PCR
$X$ 3. Sequencing
X4. PAGE

## Question ID : 310578797

Q. 108 How are the primer dimers are determined in a PCR reaction

Ans $\quad \times 1$. Adding high amount of sample in the reaction
$X$ 2. Adding high amount of primer in the reaction
3. Compare reaction with negative control
4. Increasing number of PCR cycle
Q. 109 Fossa refers to

Ans $\times 1$. A narrow ridge
2. Depression on bony surface

X 3. Broader ridge
$\times 4$. Pointed process

## Question ID : 310578771

Q. 110 Colchicine arrests mitosis at

Ans
$\times 1$. Prophase
$\times$ 2. Telophase
3. Metaphase
4. Anaphase
Q. 111 Mycobacterium leprae is responsible for

Ans

1. Leprosy
2. Influenza
3. Cancer
4. Stroke

## Question ID : 310578835

Q. 112 How many STR loci were included by FBI in 1997 to constitute CODIS

Ans

- 1.13

X2. 16
$\times 3.23$
4. 26
Q. 113 The most famous criminal case of bite mark conviction is of

Ans
X 1. Jeff Thomson
2. Ted Bundy
3. Mohd Ali
4. Wilkinson

## Question ID : 310578840

Q. 114 Animal fibre Mohair is obtained from

Ans
X1. Camel
$\times 2$ 2. Pig
$X$ 3. Sheep
4. Goat
Q. 115 Rh factor found on the surface of RBCs is a

Ans

1. Protein
2. Amino acid
3. RNA
4. Glucose

## Question ID : 310578794

Q. 116 Which is not a potential source of DNA for forensic analysis

Ans
$\checkmark$ 1. Red blood cells
2. Muscle tissue
3. Hair root
4. Epithelial cells in urine
Q. 117 Primary transmission line of the nervous system are

Ans

1. Axons
2. Neurons
$X$ 3. Dendrite
3. Node of Ranvier
Q. 118 Name the cell that receives antigen presented by MHC molecule.

Ans $\times 1$. B-cells
2. T-cells

X 3. Nk cells
4. Macrophages
Q. 119 Genotope and phenotype were created by

Ans $\times 1$. Sutton and Boveri
$X$ 2. Bateson
3. Jhonnson
4. Puneet
Q. 120 Desiccation dead body leads to

Ans
X 1. Myiasis
2. Putrification
3. Mummification
4. Skeletization


[^0]:    Option shown in green color with a tick icon is the correct answer

