

# FACT and FACT Plus Exam 20 March 2022

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

Option shown in green color with a tick icon is the correct answer.

## Section : Aptitude in Forensic Sciences

**Q.1 The person Stas in Stas-Otto methods is**

- Ans ☐ 1. Benzamine Servais Stas
- ☐ 2. Mike Servais Stas
- ☒ 3. Jean Servais Stas
- ☐ 4. Mathew Servais Stas

Question ID : 310578972

**Q.2 The headquarter of International Organization for Standardization is situated in**

- Ans ☐ 1. Washington
- ☒ 2. Geneva
- ☐ 3. Sydney
- ☐ 4. England

Question ID : 310578983

**Q.3 Which of the following techniques is best known for studying Gunshot residue**

- Ans ☐ 1. ATR-FTIR
- ☒ 2. SEM-EDX
- ☐ 3. NMR
- ☐ 4. GC-MS

Question ID : 310578999

**Q.4 Find the missing term: 6, 23, 40, ??, 74**

- Ans ☐ 1. 47
- ☐ 2. 67
- ☐ 3. 17
- ☒ 4. 57

Question ID : 310578968

**Q.5 According to the Beer-lambert Law, on which of the following does absorbance not depend**

- Ans** ☒ 1. Colour of the solution  
☐ 2. Distance that the light has travelled through the sample  
☐ 3. Extinction coefficient of the sample  
☐ 4. Solution concentration

Question ID : 310578995

**Q.6 Which of the following deals with study of insects**

- Ans** ☐ 1. Ornithology  
☒ 2. Entomology  
☐ 3. Cytogenetic  
☐ 4. Anthropology

Question ID : 310578988

**Q.7 CDTI stands for**

- Ans** ☐ 1. Central Document Training Institute  
☐ 2. Centre Document Training Institute  
☐ 3. Centre Detective Training Institute  
☒ 4. Central Detective Training Institute

Question ID : 310578975

**Q.8 What is the position of earth in our solar system**

- Ans** ☐ 1. Second  
☐ 2. Fourth  
☐ 3. First  
☒ 4. Third

Question ID : 310578977

**Q.9 CFSL Delhi comes under which of the followings**

- Ans** ☐ 1. DFSS  
☐ 2. DST  
☒ 3. CBI  
☐ 4. DRDO

Question ID : 310578974

**Q.10** 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
- ☒ 1. 4
  - ☒ 2. 6
  - ☒ 3. 3
  - ☒ 4. 5

Question ID : 310578967

**Q.11** Thin layer chromatography is a type of

- Ans
- ☒ 1. Partition chromatography
  - ☒ 2. Ion exchange
  - ☒ 3. Adsorption Chromatography
  - ☒ 4. Absorption Chromatography

Question ID : 310578994

**Q.12** Statistic is

- Ans
- ☒ 1. Normally distributed
  - ☒ 2. Population characteristic
  - ☒ 3. Unknown
  - ☒ 4. Sample characteristic

Question ID : 3105781004

**Q.13** What is the full form of PDF file

- Ans
- ☒ 1. Printed document Format
  - ☒ 2. Public Document Format
  - ☒ 3. Published Document Format
  - ☒ 4. Portable Document Format

Question ID : 310578996

**Q.14** Who is known as father of Questioned Document Examination

- Ans
- ☒ 1. Albert S. Osborn
  - ☒ 2. Alec s. Osborn
  - ☒ 3. Allen S. Osborn
  - ☒ 4. Arthur S. Osborn

Question ID : 310578973

**Q.15** 4R rule of glass fracture relates to

- Ans
- ☒ 1. Concentric fracture
  - ☒ 2. Rib mark
  - ☒ 3. Hackle Mark
  - ☒ 4. Radial fracture

Question ID : 310578978

**Q.16 NCRB stands for**

- Ans ☐ 1. National Criminal Records Bureau
- ☐ 2. New Criminal Records Bureau
- ☐ 3. News Crime Records Bureau
- ☒ 4. National Crime Records Bureau

Question ID : 310578987

**Q.17 Identification system based on Anthropometry is known as**

- Ans ☐ 1. Criminalistics
- ☐ 2. Edgeoscopy
- ☐ 3. Diatomology
- ☒ 4. Bertillonage

Question ID : 310578980

**Q.18 Which of the followings is not associated with the formal recognition of competence of a conformity assessment body by NABL**

- Ans ☐ 1. International recognition
- ☐ 2. Robust Quality Management System
- ☒ 3. Timely promotion of the employees
- ☐ 4. Time and money efficient

Question ID : 310578986

**Q.19 Section 45 in the Indian Evidence Act 1872 defines**

- Ans ☐ 1. Opinions of Judge
- ☐ 2. Opinions of Police Personal
- ☐ 3. Opinions of eye witness
- ☒ 4. Opinions of expert

Question ID : 3105781009

**Q.20 SARS-CoV-2 stands for**

- Ans ☐ 1. Severe ailment respiratory syndrome coronavirus 2
- ☒ 2. Severe acute respiratory syndrome coronavirus 2
- ☐ 3. Severe aquatic respiratory syndrome coronavirus 2
- ☐ 4. Severe amount respiratory syndrome coronavirus 2

Question ID : 310578961

**Q.21 Pick the odd one out**

- Ans ☐ 1. K
- ☒ 2. I
- ☐ 3. J
- ☐ 4. L

Question ID : 310578970

**Q.22** If 20% of an electricity bill is deducted, then Rs. 100 is still to be paid. How much was the original bill

- Ans
- ☐ 1. 75
  - ☐ 2. 150
  - ☒ 3. 125
  - ☐ 4. 25

Question ID : 310578969

**Q.23** "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. Extortion
  - ☐ 2. Dacoity
  - ☒ 3. Robbery
  - ☐ 4. Theft

Question ID : 3105781008

**Q.24** Choose the word which is different from the rest

- Ans
- ☐ 1. Cottage
  - ☐ 2. Palace
  - ☐ 3. House
  - ☒ 4. School

Question ID : 310578966

**Q.25** Which of the followings doesn't include fire triangle

- Ans
- ☐ 1. Fuel
  - ☐ 2. Heat
  - ☒ 3. Smoke
  - ☐ 4. Oxygen

Question ID : 310578991

**Q.26** The study of Hair is known as

- Ans
- ☐ 1. Pathology
  - ☐ 2. Phytology
  - ☐ 3. Histology
  - ☒ 4. Trichology

Question ID : 310578979

**Q.27 What is the “ Fear of Darkness” called**

- Ans
- ☐ 1. Ophidiophobia
  - ☐ 2. Ablutophobia
  - ☒ 3. Nyctophobia
  - ☐ 4. Arachnoph

Question ID : 310578984

**Q.28 Proportion turns percentage when multiplied by**

- Ans
- ☒ 1. 100
  - ☐ 2. 1/100
  - ☐ 3. 1/10
  - ☐ 4. 10

Question ID : 3105781002

**Q.29 The most repeated value in a data set is called**

- Ans
- ☐ 1. Range
  - ☒ 2. Mode
  - ☐ 3. Median
  - ☐ 4. Mean

Question ID : 3105781003

**Q.30 The “Spiral” search pattern at scene of crime is used**

- Ans
- ☐ 1. By starting at the most outward point and circling in
  - ☐ 2. By starting at the most inward point and searching back and forth until the outer edges are reached
  - ☒ 3. By starting at the most inward point and slowly walking in increasing circles.
  - ☐ 4. By spinning around a bunch of times and using an “ Oblong” technique

Question ID : 310578989

**Q.31 ILAC operates in accordance with**

- Ans
- ☒ 1. ISO/IEC 17011
  - ☐ 2. ISO/IEC 17013
  - ☐ 3. ISO/IEC 17014
  - ☐ 4. ISO/IEC 17012

Question ID : 310578985

**Q.32 When in UN day celebrated**

- Ans
- ☐ 1. October 21
  - ☐ 2. June 24
  - ☒ 3. October 24
  - ☐ 4. June 21

Question ID : 310578981

**Q.33 Select correct word**

- Ans ☒ 1. Desiccator
- ☐ 2. Dessicator
- ☐ 3. Dessiccator
- ☐ 4. Desicator

Question ID : 310578965

**Q.34 The square of the standard deviation is called**

- Ans ☐ 1. Mode
- ☐ 2. 2nd quartile
- ☐ 3. Harmonic mean
- ☒ 4. Variance

Question ID : 3105781006

**Q.35 Medullary index in animal hair is**

- Ans ☐ 1. None of these
- ☐ 2. Less than 0.3
- ☒ 3. More than 0.3
- ☐ 4. Exactly 0.3

Question ID : 310578998

**Q.36 Forensic photography of bite marks should be done using**

- Ans ☒ 1. ABFO scale
- ☐ 2. FBI scale
- ☐ 3. CBI scale
- ☐ 4. FSL scale

Question ID : 3105781000

**Q.37 Who was the first Indian women Golfer to qualify for Tokyo Olympic 2020**

- Ans ☐ 1. Sonam Malik
- ☐ 2. Pooja Rani
- ☒ 3. Aditi Ashok
- ☐ 4. P.V. Sindhu

Question ID : 310578962

**Q.38 The number of times each value appears is called the value's**

- Ans ☐ 1. Range
- ☐ 2. Standard Deviation
- ☒ 3. Frequency
- ☐ 4. Mode

Question ID : 3105781005

**Q.39 Forensic expert during crime scene visit should not be**

- Ans ☒ 1. Confidential
- ☒ 2. Babbling
- ☒ 3. Skilled
- ☒ 4. Ethical

Question ID : 3105781010

**Q.40 Which of the following CFSLs was established in year 1967**

- Ans ☒ 1. Pune
- ☒ 2. Bhopal
- ☒ 3. Hyderabad
- ☒ 4. Guwahati

Question ID : 310578971

**Q.41 ABFO stands for**

- Ans ☒ 1. American Bureau of Forensic Orthopedics
- ☒ 2. American Bureau of Forensic Odontologists
- ☒ 3. American Bureau of Forensic Odontology
- ☒ 4. American Board of Forensic Odontology

Question ID : 310578976

**Q.42 BIOS in computer science means**

- Ans ☒ 1. Basic Input Output System
- ☒ 2. Board Input Output System
- ☒ 3. Binary Input Output System
- ☒ 4. Broad Input Output System

Question ID : 310578997

**Q.43 On which of the following does the critical value for a Chi-square statistic rely**

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

Question ID : 3105781001

**Q.44 Who are the beneficiaries of OROP scheme**

- Ans ☒ 1. Sportspersons
- ☒ 2. Teachers
- ☒ 3. Bureaucrats
- ☒ 4. Armed forces Veterans

Question ID : 310578963



**Q.45** We were not alone in the room. He sat \_\_\_\_\_ me. There were others there \_\_\_\_\_ us.

- Ans**
- ☒ 1. Next, between
  - ☒ 2. Be, besides
  - ☒ 3. With, besides
  - ☒ 4. Besides, beside

Question ID : 310578964

**Q.46** The Information Technology Act (also known as ITA) was enacted in

- Ans**
- ☒ 1. 2000
  - ☒ 2. 2001
  - ☒ 3. 2002
  - ☒ 4. 2003

Question ID : 3105781007

**Q.47** When a dead body is found at the scene, the most immediate concern is

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

Question ID : 310578990

**Q.48** AFIS stands for

- Ans**
- ☒ 1. Automatic Fingerprint Identification System
  - ☒ 2. Algorithm Fingerprint Identification System
  - ☒ 3. Actual Fingerprint Identification System
  - ☒ 4. Automated Fingerprint Identification System

Question ID : 310578993

**Q.49** Which scope of accreditation of NABL is not applicable in the Forensic Science Laboratories

- Ans**
- ☒ 1. Chemistry
  - ☒ 2. Toxicology
  - ☒ 3. Medicine
  - ☒ 4. Biology

Question ID : 310578982

**Q.50 Ridge characteristics in fingerprint are called as**

- Ans
- ☐ 1. Ridge Tracing
  - ☐ 2. Forensic Details
  - ☐ 3. Ridge counting
  - ☒ 4. Galton's Details

Question ID : 310578992

Section : Forensic Physical Sciences

**Q.51 Which types of cable are used when installing video surveillance components?**

- Ans
- ☐ 1. RG-6 and RG-58
  - ☐ 2. RG-59 and RG-58
  - ☒ 3. RG-59 and RG-6
  - ☐ 4. RG-8 and RG-59

Question ID : 3105781070

**Q.52 Etchant prescribed for steel surface is**

- Ans
- ☒ 1. Gold
  - ☐ 2. Nitric acid
  - ☐ 3. Copper
  - ☐ 4. Iron

Question ID : 3105781058

**Q.53 The function of the “color burst” is to:**

- Ans
- ☒ 1. All of these
  - ☐ 2. To synchronize the color demodulation line by line
  - ☐ 3. Detect the presence of a color video signal
  - ☐ 4. Regenerate the color sub-carrier

Question ID : 3105781069

**Q.54 What is PEP?**

- Ans
- ☒ 1. Positive expanding point
  - ☐ 2. Positive elevating point
  - ☐ 3. Possible expanding point
  - ☐ 4. Possible elevating point

Question ID : 3105781030

**Q.55** Ballooning effect test is a characteristic of

- Ans ☒ 1. Cotton fiber
- ☐ 2. Nylon fiber
- ☐ 3. Manila fiber
- ☐ 4. Coir fiber

Question ID : 3105781049

**Q.56** Statement A: Whilst was more stable than mercury fulminate.  
Statement B: Whilst was non-corrosive in nature.

- Ans ☐ 1. Both are false.
- ☒ 2. Statement A is true and statement B is false.
- ☐ 3. Statement B is true and statement A is false.
- ☐ 4. Both are true.

Question ID : 3105781026

**Q.57** What are the three types of cone cells?

- a. S- cells  
b. M cells  
c. L- cells  
d. N- cells

- Ans ☐ 1. both (c) and (d)
- ☐ 2. both (a) and (b)
- ☒ 3. (a), (b), and (c)
- ☐ 4. (a), (c) and (d)

Question ID : 3105781072

**Q.58** Hampi denomination is present in which Indian currency-

- Ans ☐ 1. 10
- ☒ 2. 50
- ☐ 3. 200
- ☐ 4. 2000

Question ID : 3105781012

**Q.59** In atomic emission spectroscopy the emission due to the electronic transition of

- Ans ☐ 1. Singlet ground state to singlet excited state
- ☐ 2. Singlet ground state to triplet excited state
- ☒ 3. singlet excited state to singlet ground state
- ☐ 4. Triplet excited state to singlet ground state.

Question ID : 3105781044

**Q.60 For a particular vibrational mode to appear in the Raman spectrum, what must change**

- Ans
- ☐ 1. Frequency of radiation
  - ☐ 2. Intensity of radiations
  - ☐ 3. Molecule's shape
  - ☒ 4. Molecule polarizability

Question ID : 3105781041

**Q.61 Which of the following statements is incorrect about the hierarchal clustering?**

- Ans
- ☒ 1. All of these
  - ☐ 2. In general, the splits and merges both are determined in a greedy manner
  - ☐ 3. The hierarchal type of clustering is also known as the HCA
  - ☐ 4. The choice of an appropriate metric can influence the shape of the cluster

Question ID : 3105781052

**Q.62 In the context of the Bayesian approach to the evaluation of evidence, three levels of proposition may be recognized. These are**

- Ans
- ☐ 1. scene, activity and offence.
  - ☒ 2. source, activity and offence
  - ☐ 3. source, accused and offence
  - ☐ 4. source, activity and offender

Question ID : 3105781059

**Q.63 After bomb scene debris has been examined microscopically, the next step is to**

- Ans
- ☐ 1. Examine explosive using AAS
  - ☒ 2. Rinse the recovered debris with acetone to separate the debris from explosive material
  - ☐ 3. Utilize H1-NMR to fingerprint the explosive residue
  - ☐ 4. Identify the detonating material with SEM-EDX

Question ID : 3105781080

**Q.64 Which one of these statistics is unaffected by outliers?**

- Ans
- ☐ 1. Mean
  - ☐ 2. Range
  - ☒ 3. Interquartile range
  - ☐ 4. Standard deviation

Question ID : 3105781062

**Q.65 Backscattered electron imaging is used to examine the**

- Ans
- ☐ 1. Specimen size
  - ☒ 2. Topography
  - ☐ 3. Surface morphology
  - ☐ 4. Elemental state

Question ID : 3105781056

**Q.66 Which of the following is correct?**

- Ans ☒ 1. Prior odds x likelihood ratio = posterior odds
- ☐ 2. Posterior odds x likelihood ratio = prior odds
- ☐ 3. Prior odds + likelihood ratio = posterior odds
- ☐ 4. Prior odds - likelihood ratio = posterior odds

Question ID : 3105781061

**Q.67 What is the first step in the accident study?**

- Ans ☐ 1. Accident investigation
- ☐ 2. Accident reconstruction
- ☒ 3. Accident data collection
- ☐ 4. Accident data analysis

Question ID : 3105781063

**Q.68 In atomic absorption spectroscopy the most strongly absorbed light is called as**

- Ans ☒ 1. Resonance line
- ☐ 2. Stokes line
- ☐ 3. Base line
- ☐ 4. Anti-stokes line

Question ID : 3105781045

**Q.69 The spacing between characters in case of pica is?**

- Ans ☐ 1. 255 mm per 100 characters
- ☐ 2. 256 mm per 100 characters
- ☐ 3. 257 mm per 100 characters
- ☒ 4. 254 mm per 100 characters

Question ID : 3105781023

**Q.70 Electron microscope was invented by**

- Ans ☐ 1. Wilkinson in 1985
- ☐ 2. Taylor in 1965
- ☒ 3. Ruska in 1931
- ☐ 4. Mayer in 1883

Question ID : 3105781055

**Q.71 Which of the following optical properties are used to compare the fiber:**

- a. Sign of elongation
- b. Pleochroism
- c. Birefringence
- d. Isotropic refractive index

**Ans** ☒ 1. a and b  
☒ 2. a and d  
☒ 3. a, b and c  
☒ 4. a, b, c and d

Question ID : 3105781054

**Q.72 Auger electron spectroscopy can be used for surface chemical analysis in a way similar to which of the following?**

**Ans** ☒ 1. ESCA  
☒ 2. AES  
☒ 3. ICP-AES  
☒ 4. Ion spectroscopy

Question ID : 3105781048

**Q.73 Identify the most important features we look for in a CCTV DVR?**

- a. Number of cameras supported, i.e. number of video inputs.
- b. Recording at how many frames per second (fps).
- c. Circuit board with software burned into its processor chip.
- d. Network connection / remote viewing capability
- e. The control circuit is found on the camera lens

**Ans** ☒ 1. (a), (b), and (d)  
☒ 2. Both (a) and (b)  
☒ 3. (a), (c) and (d)  
☒ 4. (a), (b), (c) and (d)

Question ID : 3105781071

**Q.74 Puppe's Rule' helps in determination of:**

**Ans** ☒ 1. Identity of fire arm  
☒ 2. Nature of injury caused by fire arm  
☒ 3. Range of fire arm  
☒ 4. Sequence in which shots were fired

Question ID : 3105781035

**Q.75 Imagine a case in which police recovered 125 tablets of suspected illicit drugs. To which of the following categories does this data belong?**

**Ans** ☒ 1. Continuous  
☒ 2. Qualitative  
☒ 3. Nominal  
☒ 4. Discrete quantitative

Question ID : 3105781060

**Q.76 Which of the following cannot be conserved during Raman scattering?**

- Ans ☒ 1. Momentum
- ☒ 2. Kinetic energy
- ☒ 3. Electronic energy
- ☒ 4. Total energy

Question ID : 3105781040

**Q.77 ASSERTION – Changing the vocal tracts and changing its resonance frequency.**  
**REASON - when the person produce vowel so the shape of the vocal tract produce different resonance.**

- Ans ☒ 1. Both are true but R is better explanation than A
- ☒ 2. Both are true but R is not better explanation than A
- ☒ 3. Both A and R false
- ☒ 4. A false and R true

Question ID : 3105781065

**Q.78 Who gave the procedure for the classification of Handwriting on the basis of pressure, form, speed, spacing, size and slant?**

- Ans ☒ 1. Livingston
- ☒ 2. Harvey
- ☒ 3. Quirke
- ☒ 4. T.L. Smith

Question ID : 3105781014

**Q.79 Which of the following is not a Video enhancement technique?**

- Ans ☒ 1. Demultiplexing
- ☒ 2. Interlacing
- ☒ 3. Compression
- ☒ 4. Masking

Question ID : 3105781051

**Q.80 Mull technique is used for the sampling of**

- Ans ☒ 1. Gel
- ☒ 2. Gases
- ☒ 3. Liquids
- ☒ 4. Solids

Question ID : 3105781050

**Q.81 The NMR spectroscopy is useful for the detection of**

- Ans
- ☐ 1. Geometrical isomers
  - ☐ 2. Aromaticity
  - ☐ 3. Hydrogen bonding
  - ☒ 4. All of these

Question ID : 3105781043

**Q.82 The nigrosine dyes are present in?**

- Ans
- ☒ 1. Dyestuff inks
  - ☐ 2. Logwood inks
  - ☐ 3. Iron Tannate inks
  - ☐ 4. Ball pen inks

Question ID : 3105781021

**Q.83 NMR spectra are observed in the .....region**

- Ans
- ☐ 1. IR
  - ☒ 2. Radio frequency
  - ☐ 3. Microwave
  - ☐ 4. X-ray

Question ID : 3105781042

**Q.84 Sulphocyanic acid fuming technique for the restoration of document by fuming was developed by?**

- Ans
- ☐ 1. Albert S. Osborn
  - ☐ 2. Henry
  - ☒ 3. M.E.O. Neill
  - ☐ 4. Foster

Question ID : 3105781013

**Q.85 What TAPPI stands for**

- Ans
- ☐ 1. The Association of Police Protection Inc.
  - ☒ 2. Technical Association of the Pulp & Paper Industry
  - ☐ 3. Technical Association of Power Point Imaging
  - ☐ 4. The Association of Pulp & Paper Industry

Question ID : 3105781033



**Q.86 Which has the potential to add further compression to a file, re-wrapping or transcoding?**

- Ans
- ☐ 1. Time conversion tool
  - ☐ 2. Staircasing
  - ☐ 3. GOP=5
  - ☒ 4. Transcoding

Question ID : 3105781073

**Q.87 Which part of human ear converts sound vibrations into electrical signals**

- Ans
- ☐ 1. Tympanic membrane
  - ☐ 2. Hammer
  - ☒ 3. Cochlea
  - ☐ 4. Stirrup

Question ID : 3105781067

**Q.88 Logwood ink is extracted from which tree?**

- Ans
- ☐ 1. *Pyrus calleryana*
  - ☐ 2. *Acer negundo*
  - ☐ 3. *Acer ginnala*
  - ☒ 4. *Haematoxylon campechianum*

Question ID : 3105781015

**Q.89 Which one of the following is not a reason for slightly unstable condition of bullet after leaving the barrel:**

- Ans
- ☐ 1. Nutation
  - ☒ 2. Momentum
  - ☐ 3. Yaw
  - ☐ 4. All of them are the reasons.

Question ID : 3105781027

**Q.90 Potassium ferrocyanide is used for the decipherment of secret writing comprising of?**

- Ans
- ☒ 1. Copper, zinc, iron
  - ☐ 2. Copper, aluminum, zinc
  - ☐ 3. Iron, silver, copper
  - ☐ 4. Zinc, silver, iron

Question ID : 3105781018

**Q.91 Statement A: The critical angle for a given bullet type/target medium is velocity dependent.**  
**Statement B: Bullets will invariably lose their gyroscopic stability and tumble after ricocheting.**

- Ans** ☒ 1. Statement B is true and statement A is false.  
☐ 2. Both are false.  
☐ 3. Statement A is true and statement B is false.  
☐ 4. Both are true.

Question ID : 3105781028

**Q.92 The particle size of toner used in printer for 600 DPI lies in the range of.....**

- Ans** ☐ 1. 1-3  $\mu\text{m}$   
☐ 2. 4-6  $\mu\text{m}$   
☐ 3. 2-4  $\mu\text{m}$   
☒ 4. 8-10  $\mu\text{m}$

Question ID : 3105781017

**Q.93 The database designed for collection, restoration and comparing of tool images is**

- Ans** ☐ 1. NIST  
☐ 2. AFTE  
☐ 3. NBTRD  
☒ 4. TRAX

Question ID : 3105781057

**Q.94 The flameless ignition temperature of Pyrodex is?**

- Ans** ☒ 1. 400° C  
☐ 2. 500° C  
☐ 3. 200° C  
☐ 4. 300° C

Question ID : 3105781031

**Q.95 Photon detectors for IR are made of semiconducting material such as**

- Ans** ☐ 1. Lithium niobate  
☐ 2. Triglycine sulphate  
☒ 3. Indium antimonide  
☐ 4. Barium titanate

Question ID : 3105781038

**Q.96 Which is considered to be the poorest type of movement in handwriting-?**

- Ans ☒ 1. Wrist movement  
☒ 2. Full arm movement  
☒ 3. Thumb movement  
☒ 4. Finger movement

Question ID : 3105781011

**Q.97 Who first used the term Nanotechnology**

- Ans ☒ 1. Eric Drexler  
☒ 2. Sumio Lizima  
☒ 3. Professor Norio Taniguchi  
☒ 4. Richard Feynman

Question ID : 3105781075

**Q.98 \_\_\_\_\_ is a mineral fibre.**

- Ans ☒ 1. Angora  
☒ 2. Mohair  
☒ 3. Asbestos  
☒ 4. Nylon

Question ID : 3105781046

**Q.99 The typical trigger pull of Military rifle is**

- Ans ☒ 1. 15 – 18 lbs  
☒ 2. 4 – 7 lbs  
☒ 3. 12 – 15 lbs  
☒ 4. 9 – 12 lbs

Question ID : 3105781034

**Q.100 What ratio decides the efficiency of Nano substances?**

- Ans ☒ 1. Weight/Volume ratio  
☒ 2. Surface area/Volume ratio  
☒ 3. Volume/Weight ratio  
☒ 4. Pressure/Volume ratio

Question ID : 3105781076

**Q.101 The reaction between Fe(II) and ferrozine is catalyzed by :**

- Ans ☒ 1. Short-wave UV light  
☒ 2. Long-wave UV light  
☒ 3. Short-wave X-rays  
☒ 4. Long-wave X-rays

Question ID : 3105781029

**Q.102 What is TTI?**

- Ans
- ☐ 1. Tangential terminal identifier
  - ☐ 2. Transferring terminal identifier
  - ☒ 3. Transmitting terminal identifier
  - ☐ 4. Tangential transferring identifier

Question ID : 3105781022

**Q.103 Ammunition is defined under which section of IPC-**

- Ans
- ☐ 1. Section 2-1[a] IPC
  - ☒ 2. Section 2-1[b] IPC
  - ☐ 3. Section 7[b] IPC
  - ☐ 4. Section 7[a] IPC

Question ID : 3105781024

**Q.104 Compton effect is**

- Ans
- ☒ 1. In which the energy of a photon is reduced and that of an electron is increased
  - ☐ 2. In which the energy of an electron is reduced and that of photon is increased
  - ☐ 3. In which the energy of a photon and electron is decreased.
  - ☐ 4. In which the energy of a photon and electron is neither increased nor decreased

Question ID : 3105781036

**Q.105 Polarisability decreases as**

- Ans
- ☒ 1. Both b and c
  - ☐ 2. Length of bond decreases
  - ☐ 3. Electron density decreases
  - ☐ 4. Electron density increases

Question ID : 3105781039

**Q.106 The composition of Lesmok is?**

- Ans
- ☐ 1. 75 percent black powder and 25 percent gun cotton
  - ☐ 2. 80 percent black powder and 20 percent gun cotton
  - ☐ 3. 70 percent black powder and 30 percent gun cotton
  - ☒ 4. 85 percent black powder and 15 percent gun cotton

Question ID : 3105781032

**Q.107 Nuclear magnetic resonance which arises from**

**Ans** ☒ 1. None of these

☒ 2. Transition between the nuclear spin energy level of a molecule arising from the interaction of the unsymmetrical charge distribution in nuclei with the magnetic field.

☒ 3. Transition induces between the electro spin energy levels of a molecule in an applied magnetic field.

☒ 4. Transition between the nuclear spin energy level of a molecule in the applied magnetic field.

Question ID : 3105781037

**Q.108 What is the most prominent characteristic of wrist writing?**

**Ans** ☒ 1. Non-alignment

☒ 2. Connecting strokes

☒ 3. Tapering terminals

☒ 4. Blunt terminals

Question ID : 3105781019

**Q.109 What is the average of the vocal tract in a man?**

**Ans** ☒ 1. 17mm

☒ 2. 30mm

☒ 3. 10mm

☒ 4. 25mm

Question ID : 3105781064

**Q.110 The melting point of Vicara fiber is**

**Ans** ☒ 1. 288-300 °C

☒ 2. 265-275 °C

☒ 3. 245- 260°C

☒ 4. 192-210 °C

Question ID : 3105781053

**Q.111 Typewritten material can be erased using?**

**Ans** ☒ 1. Petroleum ether

☒ 2. Propanol

☒ 3. Ethanol

☒ 4. Ethyl Acetate

Question ID : 3105781016

**Q.112 Which of the following scientists who invented the digital image sensor and were awarded the Nobel Prize in 2009?**

- Ans** ☒ 1. Williard S. Boyle and George E. Smith  
☐ 2. Atella and Dawon kahng  
☐ 3. Nasir Ahmed  
☐ 4. David Teter

Question ID : 3105781074

**Q.113 The weaver choke reduces the recoil upto-**

- Ans** ☐ 1. 6-10 percent  
☐ 2. 2-3 percent  
☐ 3. 2-7 percent  
☒ 4. 8-13 percent

Question ID : 3105781025

**Q.114 The effect 'squash' is related with which of the following printing methods?**

- Ans** ☐ 1. Lithography  
☒ 2. Letterpress  
☐ 3. Photogravure  
☐ 4. Gravure

Question ID : 3105781020

**Q.115 The smallest picture element is called a:**

- Ans** ☐ 1. Dot  
☐ 2. None of these  
☐ 3. Pic  
☒ 4. Pixel

Question ID : 3105781068

**Q.116 Standard Consistency of the cement sample can be measured using**

- Ans** ☐ 1. Gauge Trowel  
☐ 2. XRD  
☒ 3. Vicat Apparatus  
☐ 4. SEM

Question ID : 3105781077

**Q.117 HMM is a statistical method of characterizing the \_\_\_\_\_.**

- Ans** ☒ 1. Spectral properties of frames  
☐ 2. Classical pattern classifier  
☐ 3. None of these  
☐ 4. Random probability distribution

Question ID : 3105781066

**Q.118 Viscose Filters used in XRD may eliminate**

- Ans ☒ 1.  $K_{\beta}$
- ☐ 2.  $K_{\alpha 1}$
- ☐ 3.  $K_{\alpha 2}$
- ☐ 4. All of these

Question ID : 3105781047

**Q.119 Which of the following is a non-parametric test-**

- Ans ☐ 1. T-test
- ☒ 2. Kolmogorov-Smirnov test
- ☐ 3. Pearson Coefficient of Correlation
- ☐ 4. One-way ANOVA

Question ID : 3105781078

**Q.120 Tire marks made by a rotating or yawning vehicle are**

- Ans ☐ 1. Yaw Marks
- ☐ 2. Skid Marks
- ☐ 3. Scrub Marks
- ☒ 4. Scuff Marks

Question ID : 3105781079