PREVIOUS YEAR PAPER

DSSSB Scientific Assistant (Physics) 2021 — 26 September 2021, Shift 1

DSSSB Other Posts · 26 September 2021 · Shift 1

159 of the paper's 200 questions · +1 for a correct answer, −0.25 for a wrong one · 120 minutes

Left out of the original paper: 41 (any question that needs a figure, a symbol or formatting we cannot show, or whose text did not read back cleanly from the booklet).

Questions from the Delhi Subordinate Services Selection Board's paper of 26 September 2021, Shift 1. Each question is followed by its answer, and the answer key is repeated on the last page.

Take it as a timed practice test: exambharo.com/dsssb-other-posts/previous-year-papers/dsssb-other-posts-2021-scientific-assistant-physics-26-sep-shift-1/

General Ability

1. Find the wrong term in the letter-cluster series given below:
JWNK, ERIF, ZNDA, UHYV, PCTQ

(a) ERIF
(b) ZNDA
(c) UHYV
(d) PCTQ

Answer: (b)

2. Find the missing term in the following letter-clust eries given below:
B13PE, G19WM, L25DU, Q31KC, ?

(a) V39RK
(b) V37KK
(c) W37RK
(d) V37RK

Answer: (d)

3. Select the letter triad from the given options which follows the same relation as shown below.
(HYZ, NTD, TOH)

(a) YQO, EYQ, LLU
(b) RES, XZW, DUA
(c) EWQ, NES, TRE
(d) IIE, OSW,OOI

Answer: (b)

4. Select the related word pair from the given alternatives.
Saturn : Planet : : ?

(a) Sun : Asteroid
(b) Polaris : Satellite
(c) Ceres : Star
(d) Moon : Satellite

Answer: (d)

5. If RECORD is written as HUWKHV in a certain code, then how is ABNORMAL written in that code?

(a) YXLKHMYM
(b) YXLKHMYN
(c) YXLKHMYO
(d) YXLKHNYN

Answer: (b)

6. Among six persons, A is shorter than two persons and L is taller than only one person. Z is shorter than K. N is neither the shortest nor the tallest.
U is taller than A. Who is the second tallest one?

(a) N
(b) U
(c) K
(d) Cannot be determined

Answer: (d)

7. In a class of 60, where girls are twice tha[illegible] boy[illegible] Kamal ranked 17th from the top. If there are 9 girls ahead of Kamal, how many boys are aft[illegible] rank ?

(a) 3
(b) 7
(c) 12
(d) 32

Answer: (c)

8. Two statements are followed by two conclusions numbered I and II. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow/s from the given statement.
Statement:
All flowers are leaves.
Some flowers are buds.
Conclusions:
(I) Some buds are leaves.
(II) All leaves are buds.

(a) If only I follow
(b) If only II follows
(c) If either I or II follows
(d) If neither I nor II follows

Answer: (a)

9. Three statements are followed by two conclusions numbered I and II. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow/s from the given statement.
Statement:
All brushes are canvas.
Some colour are brushes.
Some canvas are paint.
Conclusions:
(I) Some canvas are colour.
(II) Some canvas are brush.

(a) If only I follow

(b) If only II follows

(c) If both I and II follow

(d) If neither I nor II follows

Answer: (c)

10. Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow/s from the given statement.
Statement:
No keyboards are remote.
No remote are radio.
No radio is machine.
Conclusions:
(I) Some remotes are keyboard.
(II) No radio are keyboard.
(III)Some machine are remote.

(a) If only I follow

(b) If only II follows

(c) If only III follows

(d) None follows

Answer: (d)

11. Find the missing term in the series.
7, 5, 6, 12, ?, 190, 1128

(a) 80

(b) 40

(c) 66

(d) 136

Answer: (b)

12. In the following question, the statements are followed by conclusions. Study the conclusions based on the given statements and select the appropriate option as your answer.
Statement:
$J < K < L \leq P = R \leq T < C$
conclusions:
I. $L \leq C$
II. $T > J$

(a) Only II follow
(b) Both I and II follow
(c) Only I follow
(d) None follow

Answer: (a)

13. Which two signs should be interchanged to make the given equation correct?
$27 \div 3 - 18 + 3 \times 2 = 18$

(a) + and ÷
(b) + and –
(c) × and +
(d) ÷ and ×

Answer: (a)

General Awareness

21. The dance form of Mohiniattam belongs to which among the following states?

(a) Kerala
(b) Maharashtra
(c) Himachal Pradesh
(d) Gujarat

Answer: (a)

22. Mamallapuram Utsav is a dance festival of which of the following states?

(a) Karnataka
(b) Assam
(c) Tamil Nadu
(d) Manipur

Answer: (c)

23. The Anandalahari, also known as the Khamak, has found mention in which of the following religious texts?

(a) Samaveda
(b) Yajurveda
(c) Mangal kavya
(d) Sundar Kavya

Answer: (c)

24. Union Budget 2021 has proposed National Rail Plan for India to be completed by which year?
    (a) 2025
    (b) 2030
    (c) 2035
    (d) 2040
    Answer: (b)

25. Tertiary Sector is also known as which of the following?
    (a) Manufacturing Sector
    (b) Goods Sector
    (c) Service Sector
    (d) Industrial Sector
    Answer: (c)

26. A food item turns blue-black when 2-3 drops of Iodine solution is added to it. It indicates the presence of which of the following in the food item?
    (a) Protein
    (b) Fats
    (c) Starch
    (d) Fiber
    Answer: (c)

27. Which of the following causes kala-azar?
    (a) Staphylococci
    (b) Leishmania
    (c) Trypanosoma
    (d) Roundworm
    Answer: (b)

28. Which of the following is not a non-renewable type of resource?
    (a) Hydropower
    (b) Coal
    (c) Petroleum
    (d) Natural resources
    Answer: (a)

29. The breaking up and decay of exposed rocks, by temperature changes, frost action, plants, animals and human activity is called as-
    (a) Landslide
    (b) Tempering
    (c) Weathering
    (d) Annealing
    Answer: (c)

30. Which of the following ruler introduced the policy of Dhamma?
    (a) Akbar
    (b) Chandragupta Maurya
    (c) Vikramaditya
    (d) Ashoka
    Answer: (d)

31. Who was the founder of the Slave dynasty?
    (a) Qutbuddin Aibak
    (b) Shamsuddin Iltutmish
    (c) Mohammad Ghori
    (d) Ghiyasuddin Balban
    Answer: (a)

32. Who among the following has won the 2021 Fukuoka Prize?
    (a) P. Sainath
    (b) Ravish Kumar
    (c) Amitabh Kant
    (d) S. Jaishankar
    Answer: (a)

33. Where is the International Olympic Committee's h quarters located?
    (a) Brussels
    (b) Lausanne
    (c) Paris
    (d) London
    Answer: (b)

34. Who has emerged as the topper of the list of EdelGive Hurun Philanthropists of Century?
    (a) Bill Gates
    (b) Warren Buffet
    (c) Azim Premji
    (d) Jamshedji Tata
    Answer: (d)

35. Which of the following Indian states has become the first rabies-free state in India?
    (a) Maharashtra
    (b) Tamil Nadu
    (c) Goa
    (d) Punjab
    Answer: (c)

36. 'Pegasus' software was developed by which of the following companies?
    (a) Amdocs
    (b) Javelin Networks
    (c) NSO Group
    (d) PNMSoft
    Answer: (c)

37. Article 31A was added to the Constitution of India by the virtue of which of the following amendments?
    (a) 5th Amendment
    (b) 4th Amendment
    (c) 2nd Amendment
    (d) 1st Amendment
    Answer: (d)

38. Under which of the following articles of the Constitution of India can the High Court issue writ?
    (a) Article 32
    (b) Article 124
    (c) Article 216
    (d) Article 226
    Answer: (d)

39. Sports Authority of India (SAI) was set up in whic of the following years?
    (a) 1985
    (b) 1989
    (c) 1991
    (d) 1984
    Answer: (d)

40. Which of the following is the objective of Nehru Yuva Kendras?
    (a) Providing urban youth avenues to take part in the process of nation building.
    (b) Providing rural youth avenues to take part in the process of nation building.
    (c) Providing Indian youth with disabilities, avenues to take part in the process of nation building.
    (d) Providing Women youth avenues to take part in the process of nation building.
    Answer: (b)

Arithmetic Ability

43. Which of the following statement is true?
I. (-456) 37 is positive
II. (-235) 102 is negative

(a) Only I

(b) Only II

(c) Both I and II

(d) Neither I nor II

Answer: (d)

44. If the 5-digit number 576xy is exactly divisible by 40, then which of the following is the possible value for (2x + 3y)?

(a) 24

(b) 16

(c) 48

(d) 64

Answer: (b)

45. The average age of the class of 42 students is 17 years. The average age of the class is increased by one year if the age of the teacher is also included. Find the age of the teacher.

(a) 58 years

(b) 59 years

(c) 60 years

(d) 61 years

Answer: (c)

46. An increase of 17.5 percent in entrance fee amusement park follows a decrease of 30 percent in the number of daily visitors. What is the percentage decrease in the total revenue?

(a) 18.25 percent

(b) 17.75 percent

(c) 19.55 percent

(d) 16.45 percent

Answer: (b)

47. A reduction of 20 percent in the price of apples enables Mohan to purchase 3 more apples for Rs 240. What is the original price of an apple?

(a) Rs.12

(b) Rs.20

(c) Rs.16

(d) Rs.24

Answer: (b)

48. A shopkeeper marked his product 60 percent above the cost price and sold it after two consecutive discounts of 10 percent and 20 percent, respectively. Find his profit percent in this transaction.

(a) 13.4 percent

(b) 13.8 percent

(c) 14 percent

(d) 15.2 percent

Answer: (d)

49. What is the profit percentage of a dishonest cloth merchant who use a scale which measures less by 16.67 percent and also sells at a price 10 percent higher than the cost price?

(a) 32

(b) 30

(c) 26

(d) 20

Answer: (a)

50. The sum of three numbers is 98. If the ratio between the first and second is 2 : 3 and that between the second and third is 5 : 8, then the second number is ___.

(a) 30

(b) 20

(c) 58

(d) 48

Answer: (a)

51. The ratio of import of steel and iron in 20[illegible] : 4 and in 2020 it was 1 : 1. The ratio of import of steel in 2018 to 2020 was 4 : 3. What was the ratio of import of iron in 2018 to 2020?

(a) 16 : 21

(b) 15 : 19

(c) 17 : 19

(d) 23 : 18

Answer: (a)

52. Two different amounts of money are kept at the same rate of simple interest for time periods in the ratio 4 : 5 so that the interest earned is in the ratio 5 : 4. What is the ratio of principal deposited?

(a) 16 : 9

(b) 25 : 16

(c) 35 : 16

(d) 15 : 16

Answer: (b)

55. A tank can be filled with water by two pipes A and B in 36 minutes working together. If Pipe B was stopped after 32 minutes, then the tank is filled in 42 minutes. The pipe B can alone fill the tank in :

(a) 80 minutes

(b) 90 minutes

(c) 75 minutes

(d) 60 minutes

Answer: (d)

56. William can do a certain work in 8 days and Lucas can do the same work in 12 days. If William works at twice of his efficiency and Lucas works at thrice of his efficiency, then in how many days, together they finish 18 times of the original work?

(a) 36 days

(b) 40 days

(c) 32 days

(d) 24 days

Answer: (a)

General English

61. In the following question, a part of the sentence may contain an error. Identify the part that contains the error and select it as your answer. If the sentence is free from error, select 'No error'.
If I was you, I would complete the project within the given time frame.

(a) If I was you, I would

(b) complete the project

(c) within the given time frame.

(d) No error

Answer: (a)

62. In the following question, a part of the sentence may contain an error. Identify the part that contains the error and select it as your answer. If the sentence is free from error, select 'No error'.
We all must abide to the rules and regulations framed buy the Central Government of India.

(a) We all must abide to the

(b) rules and regulations framed buy

(c) the Central Government of India.

(d) No error

Answer: (b)

63. Select the most appropriate option to substitute the bracketed part in the given sentence. If there is no need to substitute the bracketed part, select 'No improvement'.
One (writer for who I) had taken an interest was Immanuel Belkovsky.

(a) writer whom for I

(b) writer for whom I

(c) writer in whom I

(d) No improvement

Answer: (c)

65. Select the most appropriate option to fill in the blank.
The judge used his _____ in settling the matter.

(a) Know
(b) Tactics
(c) Discretion
(d) Brains

Answer: (c)

66. Select the most appropriate option to fill in the blank.
Smoking is still the biggest preventable cause of cancer, and certain groups have much higher rate of smoking, _____ routine and manual workers.

(a) so as
(b) such as
(c) so that
(d) such that

Answer: (b)

67. In the following question, a sentence is given with two blanks. Choose the correct combination of words that fit into the corresponding blanks.
Once _____ as a nasal decongestant, the drug helps athletes increase their metabolic rate and _____ the weight reduction process manageable.

(a) used, made
(b) used, make
(c) uses, makes
(d) using, making

Answer: (b)

68. In the following question, a sentence is given with two blanks. Choose the correct combination of words that fit into the corresponding blanks.
Mountainously built, _____ a broad face surrounded by a mossy under-beard and rootlike dreadlocks, Emerson has an imposing presence that nonetheless _____ off as oddly fluttery.

(a) with, come
(b) off, coming
(c) off, came
(d) with, comes

Answer: (d)

70. Select the most appropriate synonym for the given word.
ENTHRALL

(a) repel
(b) mesmerize
(c) disgust
(d) free

Answer: (b)

71. Select the antonym for the given word.
FLOURISH

(a) Degenerate
(b) Thrive
(c) Prosper
(d) Proliferate

Answer: (a)

72. Find the incorrectly spelt word.

(a) Appostate
(b) Caveat
(c) Reconnaissance
(d) Brunt

Answer: (a)

73. Select the correctly spelt word.

(a) Garulous
(b) Garrulous
(c) Garruleus
(d) Garrolous

Answer: (b)

74. In the following question, out of the four given options, select the one that best expresses the meaning of the idiom/phrase.
A bitter pill to swallow

(a) a connection that joins two things or organisations
(b) a small, noticeable part of a problem
(c) an unpleasant or painful necessity
(d) the most important or influential part of an activity or process

Answer: (c)

75. Select the word which means the same as the following group of words.
Lacking energy or enthusiasm.

(a) Ebullient
(b) Jaunty
(c) Offhand
(d) Listless

Answer: (d)

77. The movie 'Inception' falls in which of the following categories?

(a) Crime drama
(b) Science fiction thriller
(c) Biopic
(d) Political thriller

Answer: (b)

78. In which film Leonardo played the role of a developmentally disabled boy?
(a) What's Eating Gilbert Grape
(b) Catch Me If You Can
(c) This Boy's Life
(d) Wolf of Wall Street
Answer: (a)

79. Which of the following is the first major film of Leonardo DiCaprio?
(a) What's Eating Gilbert Grape
(b) Gangs of New York
(c) This Boy's Life
(d) Titanic
Answer: (c)

Discipline1

101. The angle between the asymptotes of the hyperbola is:
(a) angle of scattering
(b) angle of reflection
(c) angle of refraction
(d) angle of straight line
Answer: (a)

102. A variable quantity which is used to characteri de Broglie waves is known as:
(a) Sine function
(b) Wave function
(c) Work function
(d) Hyperbolic function
Answer: (b)

103. The _____ diffraction is used to study the magnetic properties of solids.
(a) Fraunhofer
(b) Neutron
(c) Fresnel
(d) Electron
Answer: (b)

104. According to classical mechanics, the energy of electrons at 0 K is:
(a) Infinity
(b) Zero
(c) Maximum
(d) Minimum
Answer: (b)

105. The _____ diffraction is used to study the structure of thin film and surface of complex molecules

(a) Electron
(b) Neutron
(c) Fresnel
(d) Fraunhofer

Answer: (a)

106. Magnetic field of a magnetic dipole due to the current flowing through the circular coil on its axis is inversely proportional to the _____ of the linear distance.

(a) Cube
(b) Square
(c) Power 5
(d) Power 4

Answer: (a)

107. The phenomenon in which radiation is produced due to deceleration of charged particle in a medium is called:

(a) Bremsstrahlung
(b) Pion
(c) Meson
(d) Xi

Answer: (a)

108. The quantum theory of the strong interactions between quarks and gluons is called:

(a) Electrodynamics
(b) Classic mechanics
(c) Statistics physics
(d) Quantum Chromodynamics

Answer: (d)

109. The probability of an impossible event is always:

(a) Zero
(b) Constant
(c) Infinity
(d) Maximum

Answer: (a)

110. The free electron gas in a solid obeys:

(a) Fermi -Dirac statistics
(b) Bose -Einstein statistics
(c) Maxwell-Boltzmann statistics
(d) probability

Answer: (a)

111. The probablity of simultaneous occurrence of two independent events is equal to the _____ of probability of their individual occurrence.

(a) sum
(b) difference
(c) ratio
(d) product

Answer: (d)

112. The three dimensional space in which the location of particles in static is completely specified by the three position co-ordinates is known as:

(a) Position space
(b) Phase space
(c) Momentum space
(d) Free space

Answer: (a)

113. The capture by an atomic nucleus of an electron from an inner energy level is known as:

(a) K- capture
(b) R- capture
(c) I - capture
(d) P- capture

Answer: (a)

114. When the atom is placed in an external magnetic field , the electron orbit processes about the field direction as axis . This precession is called:

(a) Axial Precession
(b) Apsidal precession
(c) Nodal precession
(d) Larmor precession

Answer: (d)

115. _____ rule determines the separation of fine structural lines in Russel-Sanuder's coupling (L-S).

(a) Lande interval
(b) Kirchhoff's
(c) Quantisation
(d) Transition

Answer: (a)

116. _____ states that the frequency of a spectral line in the characteristic X-ray spectrum varies directly as the square of the atomic number of the element emitting it.

(a) Moseley's law
(b) Zeroth law
(c) Newton's law
(d) Ohm's law

Answer: (a)

117. The diode which operates in the reverse breakdown region with a sharp breakdown voltage is called:

(a) Zener diode
(b) Schottky diode
(c) Photodiode
(d) Laser diode

Answer: (a)

118. Ratio of(Amplitude) peak voltage of the signal to the peak voltage of the carrier is called:

(a) Modulation index
(b) Carrier power
(c) Trans conductor
(d) Amplification factor

Answer: (a)

119. The period during which there is no ionisation a[illegible]node is called:

(a) Multiplication factor
(b) Dead time
(c) Quenching
(d) Amplification

Answer: (b)

120. The process of preventing the undiserable continuous avalanching is known as:

(a) Optical pumping
(b) Quenching
(c) Bending
(d) Townsend cascade

Answer: (b)

Discipline2

121. The energy that must be added to the crystal to separate its constituents into neutral free atoms at rest and at infinite seperation,with same electronic configuration is called:

(a) Adhesive energy
(b) Molecular energy
(c) Potential energy
(d) Cohesive energy

Answer: (d)

122. The quantum of energy in a elastic wave is known as:

(a) Photon
(b) Phonon
(c) Electron
(d) meson

Answer: (b)

123. The phenomenon in which an interference pattern is created by the reflection of light between two surfaces, a spherical surface and an adjacent touching flat surface is called:

(a) Newton rings
(b) Rayleigh scattering
(c) Chromatic abberation
(d) Achromatisation

Answer: (a)

124. Grating constant is given by the distance:

(a) a⁄b
(b) a×b
(c) a-b
(d) a+b

Answer: (d)

125. AFM stands for:

(a) Atomic force microscopy
(b) Axial force microscopy
(c) Array force microscopy
(d) Army force microscopy

Answer: (a)

126. The molecules in the lattice C60 are held together by weak force called:

(a) Van der Waals force
(b) Coulombs force
(c) Nuclear force
(d) Atomic force

Answer: (a)

127. Projection printing is an approach of:

(a) Scanning tunneling microscope

(b) Atomic force microscopy

(c) Photolithography

(d) Infrared detectors

Answer: (c)

128. _____ is the process in which molecules absorb radiation in the near Ultra voilet and visible range may re-emit it at a longer wavelength.

(a) Fluorescence

(b) Phosphorescence

(c) population inversion

(d) optical pumping

Answer: (a)

129. Raman line will not be observed ,if quantum mechanically the polarizability β is:

(a) 0

(b) infinity

(c) 100

(d) 10

Answer: (a)

130. A transition in which there is no emission of E.M diation but the emission of two electrons from the same atom is called:

(a) Auger effect

(b) Accordion effect

(c) Askaryan effect

(d) Casimir effect

Answer: (a)

131. In _____ spectrograph, dispersion is produced by a prism backed by a reflecting metallic film so that the light traverses the prism twice.

(a) Littrow

(b) Wadsworth Prism -Mirror

(c) Concave Grating Vaccum

(d) Constant Deviation

Answer: (a)

132. Baryon's and meson's jointly called:

(a) Hadrons

(b) Leptons

(c) Strange particles

(d) Hyperons

Answer: (a)

133. Up quark has a electric charge of:

(a) ⅔ e

(b) 0 e

(c) ⅓e

(d) 1e

Answer: (a)

134. A small attractive force that acts between two close parallel uncharged conducting plates in a vaccum:

(a) Casimir effect

(b) Nernst effect

(c) Observer effect

(d) Onnes effect

Answer: (a)

135. _____ states that every differentiable symmetry of the action of a physical system with conservative forces has a corresponding conservation law.

(a) Noether's first theorem

(b) Norton's theorem

(c) Gauss theorem

(d) Milliman's theorem

Answer: (a)

136. The ratio of intensity of magnetisation and mag ising field is called:

(a) Magnetic field

(b) Magnetic susceptibility

(c) Magnetic dipole

(d) Magnetic force

Answer: (b)

137. _____ are rapid oscillations of the electron density in a conducting media.

(a) Plasma oscillations

(b) Harmonic oscillations

(c) Non- Harmonic oscillations

(d) Periodic oscillations

Answer: (a)

138. _____ is capable of eliminating oil's and grease down the nano scale.

(a) Commercial cleaning

(b) Plasma cleaning

(c) Domestic cleaning

(d) Decor cleaning

Answer: (b)

139. The ratio of total radiant energy E contained in the volume of the star to the luminosity L of the star is:

(a) Delay time
(b) Electron diffusion time
(c) Photon diffusion time
(d) Average time

Answer: (c)

140. _____ is the stage of the star where no further nuclear burning is possible.

(a) Red giant
(b) Black hole
(c) White dwarf
(d) Yellow dwarf

Answer: (c)

Discipline3

141. The shift toward longer wavelength of electromagnetic radiation emitted by a source in a gravitational field , especially at the surface of massive star is called:

(a) phase shift
(b) Gravitational redshift
(c) Amplitude shift
(d) Gravitational blue shift

Answer: (b)

142. The contraction in the length of an object in its direction of motion is known as:

(a) Lorentz contraction
(b) Lorentz - Fitzgerald contraction
(c) Fitzgerald contraction
(d) Shortening

Answer: (b)

143. Any matrix which commutes with all matrices of irreducible representation must be a _____.

(a) Constant matrix
(b) Zero matrix
(c) Row matrix
(d) Diagonal matrix

Answer: (a)

144. If f(Z) is analytic and bounded in absolute value for all(finite) values of Z in the complex plane ,then f(Z) is a:

(a) Zero
(b) Minimum
(c) Constant
(d) Maximum

Answer: (c)

145. The networks in which all nodes have the same function is called as:

(a) Homogeneous network
(b) Non-Homogeneous network
(c) Complex network
(d) Simple network

Answer: (a)

146. A conductor with a substantially _____ resistance is considered to be a node for the purpose of network analysis.

(a) High
(b) Low
(c) Infinite
(d) Zero

Answer: (d)

147. _____ models can be used to study the s tially extended systems.

(a) Linear dynamic
(b) Nonlinear dynamic
(c) Dynamic
(d) Complex

Answer: (b)

148. A string, whether open or closed, as it moves in spacetime, it sweeps out a two-dimensional surface called:

(a) Branching ratio
(b) worldsheet
(c) chiral multiplet
(d) D1-brane

Answer: (b)

149. One can't construct a string theory without _____ string.

(a) Open
(b) Closed
(c) Wide
(d) Narrow

Answer: (b)

150. _____ has two end points and is topologically equivalent to line interval.

(a) Closed string
(b) Open string
(c) Loop string
(d) Oriented string

Answer: (b)

151. Which among the following is one of the medico legal importance of abrasion wound?

(a) Abrasion effect are generally seen in assaults
(b) Direction of application of force is determined
(c) Homicidal abrasion are frequent
(d) Abrasion on face of suspect can indicate struggle

Answer: (d)

152. The psychosexual disorder in which erotic release is achieved through having pain inflicted on oneself is known as

(a) Masochism
(b) Transvertism
(c) Fetishism
(d) Sadism

Answer: (a)

153. Who is responsible as the as the first responder the early documentation of crime scene and all its evidence?

(a) Local lawmaker
(b) Police personnel
(c) District forensic coordinator
(d) Regional forensic officer

Answer: (b)

154. Which of the following is the potential health or safety hazard associated with given example: “Offender still present at the scene”

(a) Sharp object risk
(b) Environmental factors
(c) Insecure environments
(d) Unsafe structures

Answer: (c)

155. What is considered as a mature analytical technique in forensic science. Its high sensitivity, selectivity, resolution and speed, good accuracy has made it an indispensable tool of forensic science?

(a) Gas chromatography

(b) High-performance liquid chromatography

(c) Thin layer chromatography

(d) Massspectrometry

Answer: (a)

156. Which of the following are the most informative genetic markers used for DNA profiling which consists of adjacent repeats of a set of nucleotides?

(a) Short tandem repeats

(b) Single nucleotide polymorphisms

(c) Double tandem length repeats

(d) Restriction Fragment Length Polymorphisms

Answer: (a)

157. _____ is the technique which involve time-dependent potential to an electrochemical cell and measure the resulting current as a function of that potential.

(a) Conductometry

(b) Voltammetry

(c) Potentiometry

(d) Inductometry

Answer: (b)

158. Which among the following spectroscopy technique is used to observe rotational, vibrational and other low mode frequencies?

(a) Fluorescence spectroscopy

(b) X-ray spectroscopy

(c) Raman spectroscopy

(d) Atomic spectroscopy

Answer: (c)

159. The pattern in which there are present two separate and distinct overlapping loops with separate shoulders and two deltas.
The core forming ridges of the loops open towards the same side of the deltas.
Which of the following composite finger print pattern is associated with the above two statements?

(a) Twin loop pattern

(b) Accidental pattern

(c) Central pocket loop

(d) Lateral pocket loop

Answer: (d)

160. Which among the following characteristics to analyze the imprints, result from the natural erosion of the shoe caused by use?

(a) Class characteristics

(b) Wear characteristics

(c) Individual characteristics

(d) Non-artificial characteristic

Answer: (b)

Discipline4

161. In which of the following method of barefoot examination, outline of an identified footprint is drawn and positioned over an unknown footprint and compared?

(a) Optical center method

(b) Overlay method

(c) Gunn method

(d) Composite method

Answer: (b)

162. Which of the following lifting technique for shoeprint and tire tracks, is best for collecting dry or dusty residue impressions on almost any surface, even the skin of a cadaver?

(a) Gelatin lifts

(b) Adhesive lifts

(c) Electrostatic dust-print lifts

(d) Rubber lifts

Answer: (c)

163. Which of the following footprint is a condition in which complete instep region of the plantar surface of the foot is impressed on the surface?

(a) Phalange character

(b) Crease character

(c) Deformity character

(d) Flatfoot character

Answer: (d)

165. Identify the correct measure of central tendency from the following descriptive statistics used in forensic research?

(a) Range

(b) Standard deviation

(c) Median

(d) Range estimated standard deviation

Answer: (c)

166. Which of the following is NOT the commonly used statistical probability density functions (distributions) in forensic science?

(a) Normal
(b) Binomial
(c) Poisson
(d) Exponential

Answer: (d)

167. Which among the following multivariate statistical analysis is commonly used to classify the evidences from a crime scene?

(a) Cluster analysis
(b) Discriminant analysis
(c) Logistic regression analysis
(d) Genesis analysis

Answer: (a)

168. Bloodstains fallen from the height upto 50 cm is indicated with

(a) Rectangular rugged edges
(b) Corrugated edges
(c) Round sharp edges
(d) Small spike like projections along the edges

Answer: (c)

169. _____ is used for separation of various e me systems and is being adopted to study the body proteins.

(a) Chromatography
(b) Electrophoresis
(c) Spectroscopy
(d) Microscopy

Answer: (b)

170. In which of the following chemical test performed for detection of semen, a small amount of semen is taken and treated with a saturated aqueous solution of picric acid?

(a) Barberio's test
(b) Florence test
(c) Acid phosphatase test
(d) Choline test

Answer: (a)

171. What is the quantity of DNA present in one drop blood?

(a) 04 miligram
(b) 1500 nano gram
(c) 15 microgram
(d) 300 pico gram

Answer: (b)

172. "A person looks unusually happy, active, or irritable, but frequently makes poor choices due to impractical ideas or poor regard of consequences" The above characteristic satisfies which of the following disorder?

(a) Amnesia disorder

(b) Confabulation

(c) Bipolar disorder

(d) Dementia

Answer: (c)

173. _____ is the lack of critical cognitive function and level of consciousness wherein a sufferer is almost entirely unresponsive and only responds to base stimuli such as pain.

(a) Stupor

(b) Psychopathy

(c) Psychosis

(d) Neurosis

Answer: (a)

174. The principles of chemistry play quite a crucial role in each division of Forensic Science Laboratory. Which one of the following is INCORRECT?

(a) Examination of metal alloys and metal fragments for identification and comparison.

(b) Examination of petroleum products like diesel, petrol, and kerosene.

(c) Examination of inflammable material in suspec cases of arson, dowry deaths, etc.

(d) Examination of low standard construction ma al but not any adulteration

Answer: (d)

175. _____ is actually two instruments that a cally clubbed together.

(a) Microscopy-resonance spectrophotometry

(b) Gas Chromatography- Mass Spectroscopy

(c) UV- VIS- NIR Spectrophotometry

(d) Fourier Transform Infrared Spectrophotometry

Answer: (b)

176. The effect which occurs when the collective effects of two chemicals are much greater than the sum of the effects of each agent given alone, is termed as

(a) Agro-chemical Poisoning

(b) Iatrogenic Poisoning

(c) Synergistic Poisoning

(d) Drug Poisoning

Answer: (c)

177. Which among the following dose for a specific substance is essentially the quantity that can be expected to cause death in half (i.e. 50 percent) of a group of a particular test population, when entering the body by a particular route?

(a) Lethal dose

(b) Toxic dose

(c) Threshold dose

(d) Effective dose

Answer: (a)

178. Which of the following is the type of magazine loading shotgun?

(a) Side by side type

(b) Repeater type

(c) Over & under type

(d) Paradox type

Answer: (b)

179. Which of the following is the correct drawback of Mercury fulminate primer?

(a) Mercury fulminate does not gives mercury on ignition

(b) Barrels get deteriorated gradually because of the dispersion of mercury on their surface

(c) Powder glass particles if used, will abrade the barrel resulting in the increase of bore diameter

(d) Potassium chlorate when ignited produces pot ium chloride, which releases moisture resulting on late rusting of barrels

Answer: (c)

180. _____ of a firearm is a part which s and hold the internal parts in position.

(a) Barrel

(b) Chamber

(c) Bore

(d) Stock

Answer: (d)

Discipline5

181. Which of the following is the correct basic integrated kit element for document related case?

(a) UV lamp, short wavelength only

(b) Marking crayon pencils (Red and blue)

(c) Low intensity light source

(d) A3 plane white sheets

Answer: (b)

183. Deliberately altered writing intended to conceal the identity of the writer by attempting to change his or her writing habits is known as:

(a) Contemporaneous Writing
(b) Natural Writing
(c) Distorted Writing
(d) Disguised Writing

Answer: (d)

184. Which of the following close-up photography is NOT necessary at the crime scene?

(a) Plastic print
(b) Wound
(c) Victim
(d) All relevant items present at the scene of crime

Answer: (a)

185. Identify the kind of evidence which is classified as volatile digital evidence?

(a) Multimedia card
(b) Virtual drives
(c) CD/DVD
(d) Mobile

Answer: (b)

186. Which of the following cyber crime is classified crime against societies?

(a) Cyber defamation
(b) Denial of service
(c) Forging
(d) Intellectual property crimes

Answer: (c)

187. Which of the following type of malware gathers information such as, websites visited, browser and system information, and your computer IP address?

(a) Virus
(b) Adware
(c) Browser hijacker
(d) Spyware

Answer: (d)

188. Which of the following is NOT the application of scanning electron microscope?

(a) Gunshot residue analysis
(b) Examination of conducting materials
(c) Examination of paint particles and fibres
(d) Counterfeit bank notes

Answer: (b)

189. Identify the fastest rising trace component technique from the following?

(a) Inductively coupled plasma-mass Spectroscopy

(b) Gas chromatography-mass spectrometer

(c) High-performance liquid chromatography

(d) High Performance Thin layer chromatography

Answer: (a)

190. Which of the following technique for detailed paint analysis, is the most conclusive type of examination that a forensic investigator can perform on paint samples?

(a) Micro chemical test

(b) Vibrational spectroscopy

(c) Physical match

(d) Polarized light microscopy technique

Answer: (c)

191. Which is a scattering technique in chemical analysis that uses a laser source, due to this there is minimal requirement for sample preparation and presentation and so the technique has a higher spatial resolution?

(a) Raman spectroscopy

(b) Infrared spectroscopy

(c) X-ray diffraction

(d) X-ray fluorescence

Answer: (a)

192. Under which type of cyber crime does the Broadcast of child pornography is classified?

(a) Criminality against individuals

(b) Criminality against property

(c) Criminality against organization

(d) Criminality against society

Answer: (a)

193. Identify the hackers that are also called as crackers?

(a) White hat hackers

(b) Black hat hackers

(c) Grey hat hackers

(d) Red hat hackers

Answer: (b)

194. _____ is an attack that uses a fake identity, such as a network identity, to achieve illegal access to individual information by authentic access identification.

(a) Eavesdropping

(b) Dumpster diving

(c) Masquerade

(d) Data diddling

Answer: (c)

195. Which of the following type of phishing sometimes uses fake caller-ID data to give the appearance that calls are originated from a trusted organization?

(a) Spoofing
(b) Redirectors
(c) Pharming
(d) Vishing

Answer: (d)

196. The Humerus, radius, ulna etc. bones are categorized under

(a) Long bones of upper extremity
(b) Long bones of lower extremity
(c) Short bones of upper extremity
(d) Short bones of lower extremity

Answer: (a)

197. Sometimes even the URL, title bar, and status bar imitate the original Website, this is referred to as a _____

(a) A phished URL
(b) A spoofed URL
(c) A Pharmed URL
(d) A redirected URL

Answer: (b)

198. Which is the slimmest of all elongated bones a s also minor among the two leg bones and also in ratio to its dimension?

(a) Tibia
(b) Femur
(c) Fibula
(d) Carpals

Answer: (c)

199. What is the pigment due to the presence of which color of hair is red?

(a) Eumelanin
(b) Cuomelanin
(c) Pheomelanin
(d) Deomelanin

Answer: (c)

200. Which method has devised a method for accurate age estimation by means of incremental lines that can be seen on histological section of the teeth?

(a) Amino acid racemization
(b) Gustafson's method
(c) Boyd's method
(d) Demirjian's method

Answer: (c)

Answer key

Answer key from the Delhi Subordinate Services Selection Board's official answer key for this sitting. "—" means the key gave none.

General Ability

1	**(b)**	2	**(d)**	3	**(b)**	4	**(d)**	5	**(b)**	6	**(d)**
7	**(c)**	8	**(a)**	9	**(c)**	10	**(d)**	11	**(b)**	12	**(a)**
13	**(a)**										

General Awareness

21	**(a)**	22	**(c)**	23	**(c)**	24	**(b)**	25	**(c)**	26	**(c)**
27	**(b)**	28	**(a)**	29	**(c)**	30	**(d)**	31	**(a)**	32	**(a)**
33	**(b)**	34	**(d)**	35	**(c)**	36	**(c)**	37	**(d)**	38	**(d)**
39	**(d)**	40	**(b)**								

Arithmetic Ability

43	**(d)**	44	**(b)**	45	**(c)**	46	**(b)**	47	**(b)**	48	**(d)**
49	**(a)**	50	**(a)**	51	**(a)**	52	**(b)**	55	**(d)**	56	**(a)**

General English

61	**(a)**	62	**(b)**	63	**(c)**	65	**(c)**	66	**(b)**	67	**(b)**
68	**(d)**	70	**(b)**	71	**(a)**	72	**(a)**	73	**(b)**	74	**(c)**
75	**(d)**	77	**(b)**	78	**(a)**	79	**(c)**				

Discipline1

101	**(a)**	102	**(b)**	103	**(b)**	104	**(b)**	[illegible]	**(a)**	106	**(a)**
107	**(a)**	108	**(d)**	109	**(a)**	110	**(a)**	111	**(d)**	112	[illegible]3
(a)	114	**(d)**	115	**(a)**	116	**(a)**	117	**(a)**	118	**(a)**	
119	**(b)**	120	**(b)**								

Discipline2

121	**(d)**	122	**(b)**	123	**(a)**	124	**(d)**	125	**(a)**	126	**(a)**
127	**(c)**	128	**(a)**	129	**(a)**	130	**(a)**	131	**(a)**	132	**(a)**
133	**(a)**	134	**(a)**	135	**(a)**	136	**(b)**	137	**(a)**	138	**(b)**
139	**(c)**	140	**(c)**								

Discipline3

141	**(b)**	142	**(b)**	143	**(a)**	144	**(c)**	145	**(a)**	146	**(d)**
147	**(b)**	148	**(b)**	149	**(b)**	150	**(b)**	151	**(d)**	152	**(a)**
153	**(b)**	154	**(c)**	155	**(a)**	156	**(a)**	157	**(b)**	158	**(c)**
159	**(d)**	160	**(b)**								

Discipline4

161	**(b)**	162	**(c)**	163	**(d)**	165	**(c)**	166	**(d)**	167	**(a)**
168	**(c)**	169	**(b)**	170	**(a)**	171	**(b)**	172	**(c)**	173	**(a)**
174	**(d)**	175	**(b)**	176	**(c)**	177	**(a)**	178	**(b)**	179	**(c)**
180	**(d)**										

Discipline5

181	**(b)**	183	**(d)**	184	**(a)**	185	**(b)**	186	**(c)**	187	**(d)**	188	**(b)**	189	**(a)**
190	**(c)**	191	**(a)**	192	**(a)**	193	**(b)**	194	**(c)**	195	**(d)**	196	**(a)**	197	**(b)**
198	**(c)**	199	**(c)**	200	**(c)**										