PREVIOUS YEAR PAPER

DSSSB Scientific Assistant (Documents) 2021 — 25 September 2021, Shift 2

DSSSB Other Posts · 25 September 2021 · Shift 2

160 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: 40 (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 25 September 2021, Shift 2. 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-documents-25-sep-shift-2/

General Ability

1. Find the wrong term in the letter-cluster series given below:
CTXR, JAEY, QGRE, ULPJ, YPTN

(a) JAEY
(b) QGRE
(c) ULPJ
(d) YPTN

Answer: (b)

2. Find the missing term in the following letter-clust eries given below:
DM7F, JS13L, PY19R, VE25X, ?

(a) BR31D
(b) BK31D
(c) BR30D
(d) BK30D

Answer: (b)

3. In the following question, select the related letters from the given alternatives.
CAB : FEG : : RUN : ?

(a) UYS
(b) UYT
(c) UWS
(d) UVS

Answer: (a)

4. In the following question, select the related word from the given alternatives.
White : Colour :: Shirt : ?

(a) Garment
(b) Stich
(c) Button
(d) Collar

Answer: (a)

5. If C = 9 and DOG = 78 then how will you code BAT?

(a) 68
(b) 64
(c) 69
(d) 62

Answer: (c)

6. B is twice as old as A but twice younger than F. C is half the age of A but is twice older than D. Who is the second oldest?

(a) B
(b) F
(c) D
(d) C

Answer: (a)

7. 110 soldiers are standing in a queue from front to [illegible]. A's position from the front is 56 . What is A's position from the end of the given queue?

(a) 55
(b) 54
(c) 56
(d) Cannot be determined

Answer: (a)

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 artists are intelligent.
All intelligent are positive.
Conclusions:
(I) All positive are artists.
(II) All artists are positive.

(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: (b)

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:
No fans are cooler.
All speakers are fan.
Some speakers are clock.
Conclusions:
(I) Some fans are speaker.
(II) Some clocks are fan.

(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:
Some fishes are crocodile.
All crocodiles are snakes.
All snakes are tortoise.
Conclusions:
(I) Some fishes are snakes.
(II) Some snakes are fishes.
(III) All crocodiles are tortoise.

(a) If only I follow

(b) If only II follows

(c) If only I and II follow

(d) All follows

Answer: (d)

11. Find the next term in the series.
341, 213, 121, 59, 21, ?

(a) 9

(b) 1

(c) 18

(d) 14

Answer: (b)

12. Which of the following expression will be definitely false if the expression Q > S ≤ P > R = T is definitely true?

(a) S < P
(b) S = P
(c) P > T
(d) S > Q

Answer: (d)

13. Which two sings should be interchanged in the following equation to make it correct?
24 ÷ 8 – 5 × 5 + 3 = 13

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

Answer: (b)

General Awareness

21. 'Sattriya dance' was developed in the sattras or monasteries of which of the following states?

(a) Assam
(b) Uttarakhand
(c) Bihar
(d) Rajasthan

Answer: (a)

22. Taj Mahotsav is celebrated in which of the following states in India?

(a) Uttar Pradesh
(b) Gujarat
(c) Rajasthan
(d) Madhya Pradesh

Answer: (a)

23. The Ahmednagar fort was built by whom among the following?

(a) Adil Shahi I
(b) Murtaza Nizam Ahmed I
(c) Hussain Shah
(d) Malik Ahmad Nizam Shah I

Answer: (d)

24. Secondary sector of an economy is also known as which of the following?

(a) Manufacturing Sector
(b) Goods Sector
(c) Service Sector
(d) Industrial Sector

Answer: (d)

25. The Finance-Minister in the Budget 2021 has increased the budget outlay for health and well-being by how much percent?

(a) 100 percent
(b) 125 percent
(c) 137 percent
(d) 148 percent

Answer: (c)

26. Which of the following elements is a metal?

(a) Sulphur
(b) Iodine
(c) Mercury
(d) Carbon

Answer: (c)

27. The ability of a medium to refract light is expressed in terms of which of the following?

(a) Refractive Index
(b) Optical Density
(c) Mass Density
(d) Speed of Light in the medium

Answer: (b)

28. Which of the following is known as the solid crus[illegible] the hard top layer of the Earth?

(a) Lithosphere
(b) Biosphere
(c) Atmosphere
(d) Hydrosphere

Answer: (a)

29. The outermost range of the Himalayas is known as:

(a) Karakoram Range
(b) Kailash Range
(c) Zaskar Range
(d) Shiwaliks

Answer: (d)

30. Who among the following raised the slogan, “Freedom is my birth right and I shall have it!”?

(a) Bipin Chandra Pal
(b) Bal Gangadhar Tilak
(c) Lala Lajpat Rai
(d) Bhagat Singh

Answer: (b)

31. Mahatma Gandhi established the Natal Congress to fight against-
    (a) Englishmen in India
    (b) The Dutch in South Africa
    (c) Racial discrimination
    (d) Industrialists
    Answer: (c)

32. Which of the following movies won the Academy Award for Best Picture in 2021?
    (a) Nomadland
    (b) Parasite
    (c) Joker
    (d) Marriage Story
    Answer: (a)

33. Which of the following personalites won the Nobel prize in Economics in 2020?
    (a) Robert B. Wilson
    (b) Michael Kremer
    (c) Abhijit Banerjee
    (d) Esther Duflo
    Answer: (a)

34. Who among the following won the Formula One B h Grand Prix, 2021?
    (a) Valentino Rossi
    (b) Charles Leclerc
    (c) Daniel Ricciardo
    (d) Lewis Hamilton
    Answer: (d)

35. What is the name of the satellite being developed jointly by NASA and ISRO to detect movements of the planet's surface?
    (a) OSIRIS-Rex
    (b) NISAR
    (c) Artemis-I
    (d) Starlink
    Answer: (b)

36. Who among the following took over as Deputy Chief of Naval Staff from Vice Admiral G Ashok Kumar?
    (a) Satish Namdeo Ghormade
    (b) Karambir Singh
    (c) M.A. Hampiholi
    (d) R. B. Pandit
    Answer: (a)

37. Who among the following was the temporary chairman of the Constituent Assembly's inaugural session?

(a) Shri C. Rajagopalachari
(b) Dr. Sachchidananda Sinha
(c) Shri Sarat Chandra Bose
(d) Dr. B.R. Ambedkar

Answer: (b)

38. The Preamble of the Constitution of India was amended by the virtue of which of the following amendments?

(a) 42nd Amendment
(b) 44th Amendment
(c) 51st Amendment
(d) 73rd Amendment

Answer: (a)

39. Major Dhyan Chand Award for Lifetime Achievement in Sports and Games was instituted in which year?

(a) 1988
(b) 1996
(c) 1990
(d) 2002

Answer: (d)

40. Which of the following countries hoste[illegible]2012 s[illegible]mer Olympics?

(a) United Kingdom
(b) Brazil
(c) France
(d) Russia

Answer: (a)

Arithmetic Ability

42. The least number which when divided by 44 leaves a remainder 38, when divided by 55 leaves the remainder 49 and when divided by 64 leaves the remainder 58 is:

(a) 3514
(b) 3756
(c) 3246
(d) 3576

Answer: (a)

45. There are 19 students in a class with the average marks 62.5. The average of first 10 students is 57.5 and that of last 10 students is 69.5. Find the marks of 10th student.

(a) 62.5

(b) 82.5

(c) 87.5

(d) 91

Answer: (b)

46. If a person spends 50 percent of his saving, his total expenditure would be 50 percent more than his saving. What percent of income does he save?

(a) 75 percent

(b) 80 percent

(c) 60 percent

(d) 70 percent

Answer: (b)

48. There is a loss of 8 percent by selling an item for Rs.69. What is the percentage loss or profit if it is sold for Rs.78?

(a) No profit no loss

(b) 4 percent profit

(c) 4 percent loss

(d) 40 percent profit

Answer: (b)

50. The ratio of the present ages of Ram and his father is 4: 8. The father's age at the time of Ram's birth was 36 years. Find the Ram and his father's present age.

(a) 36 and 72 yrs.

(b) 42 and 80 yrs.

(c) 36 and 75 yrs.

(d) 40 and 69 yrs.

Answer: (a)

51. The ratio of hens to goats in farm A is 5 : 4 and that in farm B it is 5 : 7. What could be the ratio of the total hens to the total goats in farms A and B together?

(a) 1 : 2

(b) 3 : 2

(c) 9 : 11

(d) 7 : 11

Answer: (c)

52. Ramya lent a certain sum of money to Seema at 4% simple interest and the interest earned after 8 years is Rs 3400 less than the amount lent.
How much sum did Ramya lend to Seema?

(a) Rs.3050

(b) Rs.6100

(c) Rs.8200

(d) Rs.5000

Answer: (d)

54. A man goes from home to his office by a cab at a speed of 25 km/hr and returns walking at a speed of 5km/hr. The total time taken in the journey is 6 hrs. Find the distance between his home and office.

(a) 25 km

(b) 26 km

(c) 27 km

(d) 28 km

Answer: (a)

55. 15 person can complete a work in 40 days. They started the work and after 'x' days 5 person left the work. If the whole work was completed in 50 days, find x.

(a) 10

(b) 15

(c) 25

(d) 20

Answer: (d)

56. 3 boys and 8 girls can do a certain work in the same time as taken by 2 boys and 10 girls. If 5 boys can complete the same work in 12 days, how long would 4 girls take to complete the same work?

(a) 24 days

(b) 30 days

(c) 36 days

(d) 28 days

Answer: (b)

57. The area of the rectangular field is twice the area of the square field and the perimeter of the square field is 60 meters. If the length of the rectangular field is 12.5 percent more than the breadth of the rectangular field, then find the perimeter of the rectangular field.

(a) 60 meter

(b) 85 meter

(c) 90 meter

(d) 120 meter

Answer: (b)

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'.
India has overtaken the U.S. to providing at least one dose of vaccine to its citizens.

(a) India has overtaken
(b) the U.S. to providing at least
(c) one dose of vaccine to its citizens.
(d) No error

Answer: (b)

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'.
Those founded violating the warnings were threatened with stern action.

(a) Those founded violating
(b) the warnings were threatened
(c) with stern action.
(d) No error

Answer: (a)

64. Select the most appropriate option to substitute the bracketed part in the given sentence. If no substitution is required in the bracketed part, select No improvement.
Elena spent a lot of time in the market but ended up b ng only (an denim).

(a) a pair of denims
(b) one denims
(c) No improvement
(d) few denims

Answer: (a)

65. Select the most appropriate option to fill in the blank.
A survey of retired people _____ that most are independent and enjoying life.

(a) alienates
(b) weakens
(c) indicates
(d) violates

Answer: (c)

66. Select the most appropriate option to fill in the blank.
All of the events will be open to the public_____ will include talks from experts.

(a) But
(b) This
(c) And
(d) Hence

Answer: (c)

67. In the following question, a sentence is provided with two blanks. Choose the correct combination of words that fit into the corresponding blanks.
Although the offer has _____ after the due date of the tender, it is still being _____ carefully to see if it meets the criteria of the tender document.

(a) came, examines

(b) come, examined

(c) coming, examined

(d) came, examine

Answer: (b)

68. In the following question, a sentence is provided with two blanks. Choose the correct combination of words that fit into the corresponding blanks.
After using the authorised doses, the agency will _____the data to monitor the use of the vaccine in order _____assess the next quantities to be imported.

(a) analysing, to

(b) analysed, with

(c) analyses, with

(d) analyse, to

Answer: (d)

69. The question consists of four statements labelled P, Q, R, and S, which, when logically arranged, form a coherent passage. Choose the option that represents the most logical order.
A. It may grow stale, may ossify like bone; it may even seem to fade from view.
B. It never does one well to declare a genre dead.
C. But genres tend to regenerate, too.
D. The Western, for example, rides back in town against an explosion of creativity every ten years or so.

(a) ADCB

(b) ABDC

(c) DCBA

(d) BACD

Answer: (d)

70. Select the most appropriate synonym of the given word.
SCRAP

(a) store

(b) reject

(c) hoard

(d) save

Answer: (b)

71. Select the antonym of the given word.
ILLICIT

(a) Lawful
(b) Illegal
(c) Unlawful
(d) Illegitimate

Answer: (a)

72. Select the correctly spelt word.

(a) Cortege
(b) Dammage
(c) Milege
(d) Plummage

Answer: (a)

73. Select the correctly spelt word.

(a) Defered
(b) Decifer
(c) Fammished
(d) Glaucoma

Answer: (d)

74. In the following question, out of the four given options, select the one which best expresses the meaning of the idiom/phrase.
Clouds on the horizon.

(a) Unpleasant weather.
(b) Trouble ahead.
(c) Unpredictable nature of someone.
(d) Additional expenditure.

Answer: (b)

75. Select the word which means the same as the following group of words.
The inescapable agent of someone's downfall.

(a) Posthumous
(b) Philistine
(c) Lacklustre
(d) Nemesis

Answer: (d)

76. Beyond his religious views, Kant has also been criticized for which of the works or beliefs?

(a) For racism presented in his works
(b) For criticising God
(c) For talking about religions in an unfair way
(d) For saying that aesthetics arise from a faculty of disinterested judgment

Answer: (a)

77. What did Kant argue about in his doctrine of transcendental idealism?

(a) About religion
(b) About God
(c) About space and time
(d) About laws and ethics

Answer: (c)

78. In which of the following fields, Kant didn't publish his works?

(a) Ethics
(b) Astronomy
(c) Aesthetics
(d) Astrology

Answer: (d)

Discipline1

101. Which of the following is not based on the study of heterogenous equilibrium?

(a) Ion exchange method
(b) solubility method
(c) titration method
(d) potentiometer method

Answer: (c)

102. The degree of complex formation is called as :

(a) Average ligand number
(b) coordination number
(c) valance number
(d) valency

Answer: (b)

103. What will be the effect on stability if the size of chelating ring increases?

(a) increases
(b) decreases
(c) remains same
(d) increased by double

Answer: (a)

104. Which of the following is not a feature of Reactive intermediates?

(a) often stabilization by conjugation or resonance
(b) often difficult to distinguish from a transition state
(c) prove existence by means of chemical trapping
(d) High concentration with respect to reaction substrate and final reaction product

Answer: (d)

105. What will be the product formed when 3-pentanol is heated with aqueous HCl?

(a) statistical mixture of the 3-pentyl and 2-pentyl

(b) statistical mixture of the 3-pentyl and 3-pentyol

(c) statistical mixture of the 3-phenyl and 2-phenyl

(d) statistical mixture of the 3-pentyl and 3-phenyl

Answer: (a)

106. What will be the correct order of stability of carbanion?

(a) methyl > primary > secondary > tertiary

(b) methyl < primary < secondary < tertiary

(c) methyl > secondary> primary > tertiary

(d) methyl < secondary < primary < tertiary

Answer: (a)

107. What is the correct value of 1÷ R ? (R is Rydberg Constant)

(a) 911 Å

(b) 744 Å

(c) 131 Å

(d) 654 Å

Answer: (a)

108. Which of the following is correct formula for wav unction?

(a) Ψ(x,t) = Acos(kx-ωt) (17.1) A

(b) Ψ(x,t) = Asin(kx-ωt) (17.1) A

(c) Ψ(x,t) = Acos(kx-ωt) (27.1) A

(d) Ψ(x,t) = Acos(kx-ωt) (18.1) A

Answer: (d)

109. Which is the correct for Moseley's equation?

(a) $\sqrt{v}=a(Z-b)$

(b) $\sqrt{v}=a(Z-a)$

(c) $\sqrt{v}=a(Z+b)$

(d) $v=a(Z-b)$

Answer: (a)

110. Which is the correct electronic configuration of platinum?

(a) [Xe] $4f^{1}4\ 5d9\ 6s^{1}$

(b) [Xe] $4f^{1}44d^{1o}\ 6s^{1}$

(c) [Xe] $4f^{1}45d^{1o}6s^{1}$

(d) [Xe] $4f55d9\ 6s^{2}$

Answer: (a)

111. Which of the following method is used for preparation of Gasoline?

(a) Fisher-Tropsch

(b) Fisher-Scheele

(c) Scheele

(d) groove's process

Answer: (a)

113. Which of the following is atomic number of Lawrencium?

(a) 103

(b) 102

(c) 101

(d) 100

Answer: (a)

114. Which of is the following formula of magnetic moments of lanthanoids?

(a) [4S(S+1)+L(L+1)]^½

(b) [4S(S+1)+L(L+1)]

(c) [4S(S+1)+L(L+1)]^¾

(d) [4S(S+1)+L(L+1)]^¼

Answer: (a)

115. What will be obtained when C2H5-Mg-Br reacts with C6H5COOCH3 in the presence NH4Cl and water?

(a) 3-Phenyl-3-pentanol

(b) 2-Phenyl-3-pentanol

(c) 3-Phenyl-2-pentanol

(d) 4-Phenyl-pentanol

Answer: (a)

116. Complete the reaction : Phthalic anhydride + sec-Butyl alcohol → ?

(a) sec- Butyl hydrogen phthalate

(b) sec- hydrogen butyl phthalate

(c) sec-phthalate , butyl hydrogen

(d) phthalamide

Answer: (a)

117. Complete: Methyl isocyanate + _____ →Sevin

(a) 1- Naphthol

(b) 2- Naphthol

(c) 3-Naphthol

(d) 4- Naphthol

Answer: (a)

118. Which of the following is not true for effect of dilution?

(a) Conductance increases

(b) Specific conductivity decreases

(c) molar conductivity increases

(d) equivalent conductivity decreases

Answer: (d)

119. Which of the following is expression of weight deposited on electrode?

(a) W=ZQ

(b) W=Zt

(c) W=It

(d) W=VQ

Answer: (a)

120. Why it is rare to have a reaction with molecularity 3?

(a) Because the breakdown in rare

(b) Because chances for larger number of molecules to come simultaneously for collision are less

(c) Because chances of smaller number molecules to come simultaneously for collision are more

(d) Because chances of smaller number molecules to come simultaneously for collision are less

Answer: (b)

Discipline2

121. Half life of which order reaction is inde der initial concentration?

(a) second

(b) first

(c) pseudo

(d) zero

Answer: (b)

122. What is the formula weight of NH4Cl?

(a) 52.5g

(b) 53.5g

(c) 54.5g

(d) 56.5g

Answer: (b)

123. What is the solubility product of HgS?

(a) 4 × 10 ¯54ppm

(b) 4 × 10−44ppm

(c) 4 × 10 −45ppm

(d) 4 × 10¯55ppm

Answer: (a)

124. Which water can be easily prepared by adding dropwise conc. HCl to a small volume of KMnO4 solution till the pink colour is just discharged?

(a) Chlorine water
(b) Bromine water
(c) Manganese water
(d) Potassium water

Answer: (a)

125. Which of the following is another name for Chlorpheniramine?

(a) Avil
(b) Zeet
(c) Benedryl
(d) Seldane

Answer: (a)

126. Constraints containing time explicitly are called as

(a) Holonomic
(b) Non - Holonomic
(c) Scleronomic
(d) Rheonomic

Answer: (d)

127. Compton wavelength for an electron is

(a) 0.0242×10^{-10}m
(b) 1.000×10^{-10}m
(c) 2.99×10^{-10}m
(d) 0.051×10^{-10}m

Answer: (a)

128. The uneven distribution of alternating current over the cross section of the conductor is known as

(a) Hall effect
(b) Photoelectric effect
(c) Skin effect
(d) Magnetic effect

Answer: (c)

129. The process in which an electron and a positron combine to yield gamma ray photon is called as

(a) Pair production
(b) Annihilation
(c) Optical pumping
(d) population inversion

Answer: (b)

130. _____ law states that in a system in thermal equilibrium, on the average, an equal amount of energy will be associated with each degree of freedom.

(a) Wien's Distribution
(b) Rayleigh-Jeans
(c) Kirchhoff's
(d) Equipartition of energy

Answer: (d)

131. In_____statistics , particles can have any spin.

(a) Maxwell -Boltzmann
(b) Bose _Einstein
(c) Fermi-Dirac
(d) Electro

Answer: (a)

132. One curie(Ci) is equal to _____ becquerels(Bq).

(a) 3.0×10^{10} Bq
(b) 2.0×10^{10} Bq
(c) 1.0×10^{10} Bq
(d) 3.7×10^{10} Bq

Answer: (d)

133. The A.C. Bridge used for measurement of large uctnace is called as

(a) Hay Bridge
(b) Meter Bridge
(c) Potentiometer
(d) Hartley Bridge

Answer: (a)

134. _____ law is used to determine the disintegration constant λ.

(a) Coulombs
(b) Faraday
(c) Geirger-Nuttal
(d) Boit-Savart's

Answer: (c)

135. SQUID stands for

(a) Superconducting Quantum Interference Device
(b) Solid Conducting Quantum Intel Device.
(c) Super conducting Quantum Interaction Device.
(d) Super conducting Quantum Interlink Device.

Answer: (a)

136. The instruments based upon the principle of interference are called

(a) Interferometers

(b) Prism

(c) Optical meters

(d) Biprism

Answer: (a)

137. In the plane diffraction grating experiment, the maximum order of the spectrum that can be observed are

(a) Four

(b) Infinite

(c) Three

(d) Two

Answer: (c)

138. The size of the Quantum dot typically ranges from __ to __ in diameter.

(a) 1nm-5nm

(b) 2nm-10nm

(c) 3nm-5nm

(d) 4nm-5nm

Answer: (b)

139. _____ can be used to increase the strength o astic composites.

(a) Carbon nanotubes

(b) Lithium nanotubes

(c) Oxygen nanotubes

(d) Hydrogen nanotubes

Answer: (a)

140. The condition where the number of atoms in the excited state exceeds that in the lower state is called

(a) Population inversion

(b) Optical pumping

(c) Stimulated emission

(d) Photoelectric emission

Answer: (a)

Discipline3

141. For ruby laser, the active centre is

(a) Al2O3

(b) Cr2O3

(c) $Cr^{3}+$

(d) Al

Answer: (c)

142. Magnetic dipole moment equation is given by

(a) M=IA

(b) $M=IA^2$

(c) $M=I^2A$

(d) $M=(IA)^2$

Answer: (a)

143. _____ is a pair of electrons in a superconductor that are attractively bound and have equal and opposite momentum and spin.

(a) Copper pair

(b) Helium pair

(c) Hydrogen pair

(d) Oxygen pair

Answer: (a)

144. _____ shield is used in shielding astronomers from energetic solar flare.

(a) Plasma radiation

(b) Electro static

(c) Magnetic

(d) Electric

Answer: (a)

145. According to the special theory of relativity, ma[illegible]f the particle increases when its velocity

(a) Increases

(b) Decreases

(c) Constant

(d) Zero

Answer: (a)

146. If a sub-group is identical with its conjugate sub group, then it is called as

(a) Factor group

(b) Conjugate sub-group

(c) Normal sub - group

(d) Cyclic group

Answer: (c)

147. _____ theorem states that "Any linear circuit containing several energy sources and resistances can be replaced by a single Constant Current generator in parallel with a Single Resistor.

(a) Norton's

(b) Thevenin's

(c) Superposition

(d) Maximum power transfer theorem

Answer: (a)

148. A conservative dynamical system will have _____ attractors.

(a) 1
(b) 2
(c) 3
(d) 0

Answer: (d)

149. According to string theory _____ is a physical object that generalizes the notion of a point particle to higher dimensions.

(a) Brane
(b) Axino
(c) Dilaton
(d) Gluino

Answer: (a)

150. In _____ string theory , the strings are unoriented and contains open and closed srings .

(a) Type I
(b) Type II A
(c) Type II B
(d) Matrix

Answer: (a)

151. Which among the following is used for the prese tion of footprint on snow?

(a) Plaster of Paris (POP)
(b) Tracing
(c) Wax
(d) Sulphur

Answer: (d)

152. From the beginning to the end of the crime scene investigation, which of the following are excluded from strict anti-contamination measures?

(a) Keeping away from using any facilities available at the scene
(b) Avoiding moving anything/anybody, unless it is of absolute necessity
(c) At the crime scene, use only one single each entry and exit path
(d) Wearing protective clothing, gloves and shoe covers

Answer: (c)

153. _____ is a search pattern in which the area is divided into pie slices or sections of a wheel, usually six in number

(a) Wheel method
(b) Spiral method
(c) Strip method
(d) Zone method

Answer: (a)

154. Which of the following technique is used for measuring the molecular weight and determining the molecular formula of an organic compound?

(a) Gas chromatography

(b) Thin layer chromatography

(c) High-performance liquid chromatography

(d) Mass spectrometry

Answer: (d)

155. Identify the INCORRECT feature regarding the importance of fingerprints in criminal investigation?

(a) Universal

(b) Inimitable

(c) Uncharacteristic

(d) Permanent

Answer: (c)

156. When a small curved ridge, which is attached to main ridge, forms a spur like appearance, such ridge is known as

(a) Fragment ridge

(b) Ridge ending

(c) Enclosure ridge

(d) Hook ridge

Answer: (d)

157. Identify the correct order of priority fro the g n options for arithmetical operations:
1. Evaluate any powers that are present
2. Complete any operations within each set of brackets 3. Carry-out multiplication and division operation
4. Complete any addition or subtraction

(a) 1-2-3-4

(b) 1-2-4-3

(c) 2-1-3-4

(d) 2-1-4-3

Answer: (c)

158. Which of the following is NOT one of the most useful tool in the analysis and interpretation of experimental data with the forensic discipline?

(a) Phasor representation

(b) Tables

(c) Graphs

(d) Statistical distribution

Answer: (a)

159. _____ is useful to determine whether the given stain is of blood or not on the crime scene.

(a) Spectrophotometry
(b) Visual examination
(c) Enzymatic activity
(d) Cell structure identification

Answer: (b)

160. In which of the following color tests, the pink coloration indicates blood?

(a) Benzidine reaction
(b) Leucomalachite reaction
(c) Phenolphthalein reaction
(d) Crystal test

Answer: (c)

Discipline4

161. Which of the following is one of the method of dental age estimation in children and adolescent?

(a) Morphological techniques
(b) Radiographic method
(c) Gustafson's method
(d) Atlas method

Answer: (d)

162. In clinical psychology, falsification or profound aggeration of illness (physical or mental) to gain external benefits is termed as:

(a) Insanity evaluations
(b) Malingering
(c) Sentence mitigation
(d) Competency evaluations

Answer: (b)

163. Scanning Electron Microscope (SEM) coupled with an Energy Dispersive Spectrometer (EDS) is used in the analysis of

(a) Gun shot residue
(b) Toxins
(c) Arson investigation
(d) Noxious chemicals

Answer: (a)

164. Which of the following instrumental technique of forensic chemistry are also employed in analyzing the papers and inks of questioned documents and to determine the characteristics of microscopic glass fragments?

(a) Nuclear magnetic resonance spectrophotometry

(b) Gas Chromatography- Mass Spectroscopy

(c) UV- VIS- NIR Spectrophotometry

(d) Fourier Transform Infrared Spectrophotometry

Answer: (c)

165. Which of the following is the correct element of crime scene kit for collection of evidence in case of charred documents?

(a) Polyvinyl acetate solution (7-9 percent in acetone)

(b) High resolution camera (minimum 160 megapixels)

(c) High intensity light source

(d) Thick glass sheets

Answer: (c)

166. What is minimum number of photographs that should be taken for general view of the crime scene?

(a) 2

(b) 3

(c) 4

(d) 6

Answer: (c)

167. Which of the following cyber crime is cla[illegible]as crime against property?

(a) Credit card fraud

(b) Spamming

(c) Forgery

(d) Unauthorized access of computers

Answer: (a)

168. The software that secretly collects information and then sends it out to the concerned parties is called as

(a) Virus

(b) Adware

(c) Browser hijacker

(d) Spyware

Answer: (d)

169. Which method is based on inelastic scattering of one-color light, generally through a laser source which basically means that the occurrence of photons in one-color light deviates during interaction with a sample?

(a) Atomic Absorption Spectroscopy

(b) Raman spectroscopy

(c) Fourier transform infrared spectroscopy

(d) UV-Vis spectroscopy

Answer: (b)

170. Computer vandalism is classified as which type of following cyber crime?

(a) Criminality against individuals

(b) Criminality against organization

(c) Criminality against property

(d) Criminality against society

Answer: (c)

171. _____ means stealing of trade secrets through illegal means such as wiretapping or illegal incursions.

(a) Corporate espionage

(b) Money laundering

(c) Embezzlement

(d) Cyber terrorism

Answer: (a)

172. _____ is an advanced form of phishing which redirects the connection between an IP address (i.e., consumer seeking legitimate site) and its (i.e., legitimate site).

(a) Spoofing

(b) Redirectors

(c) Advance-fee fraud

(d) Pharming

Answer: (d)

173. The largest and strongest bone of the face that serves for the reception of the lower teeth is known as:

(a) Hyoid

(b) Mandible

(c) Sacrum

(d) Vertebrae

Answer: (b)

174. _____ are trimming or cutting teeth and their chief role is to pierce and break down the food in the course of chewing.

(a) Permanent Mandibular Central Incisor

(b) Permanent Mandibular Lateral Incisor

(c) Permanent Mandibular Canine

(d) Permanent Mandibular First Premolar

Answer: (a)

175. Which is the elongated and strongest bone of the human body that is practically cylindrical in the superior part?

(a) Tibia

(b) Femur

(c) Fibula

(d) Carpals

Answer: (b)

176. _____ allows programmers to think about programs at a higher level without bothering about the low-level implementation details.

(a) Optimization

(b) Abstraction

(c) Safety

(d) Documentation

Answer: (b)

177. Let S be the set {1, 2, 3} and T the set {4, 5} then S-T=?

(a) {1}

(b) {2}

(c) {4, 5}

(d) {1, 2}

Answer: (d)

178. The basic parts of an instruction cycle include fetch, _____, read the effective address from memory and execute.

(a) decode

(b) encode

(c) delete

(d) write

Answer: (a)

179. Because we are predicting the outcome of branches (and maybe other things), we do not necessarily know for sure that when we execute an instruction we will actually end up using the result. What this process is known as?

(a) execution
(b) speculation
(c) scheduling
(d) branching

Answer: (b)

180. Which type of communication reflects transparency on the part of the communicator?

(a) Assertive
(b) Passive
(c) Aggressive
(d) Passive - Aggressive

Answer: (a)

Discipline5

181. What we should not do during Group Discussion?

(a) Use illustrations or data if necessary.
(b) Hit your fist on the table.
(c) Keep eye contact with others.
(d) Take the point positively.

Answer: (b)

182. In which type of data structure all items are inserted at one end (called the rear or the back or the tail) and deleted at the other end (called the front or the head)?

(a) Stack
(b) Queue
(c) Array
(d) Structure

Answer: (b)

183. In which of the tree, the heights of the right subtree and left subtree of the root differ by at most 1

(a) Red tree
(b) Binary tree
(c) AVL tree
(d) Search tree

Answer: (c)

184. Which statement is true for conceptual data independence?

(a) Ability of a data base application to continue to run, after tuning is performed at the physical level.

(b) Inability of a data base application to continue to run, regardless of what tuning is performed at the physical level.

(c) Inability of a data base application to continue to run, after tuning is performed at the physical level.

(d) Ability of a data base application to continue to run, regardless of what tuning is performed at the physical level.

Answer: (d)

185. Software size may be estimated in terms of _____ in the software.

(a) Database

(b) Data structures

(c) Kilo Line of Code

(d) Documentation

Answer: (c)

186. Function point counts on five parameters, named as External Input, External Output, _____, External Interface Files, and External Inquiry

(a) Logical Internal Files

(b) Logical Internal objects

(c) Logical Records

(d) Internal Records

Answer: (a)

187. Characteristics of unreliable channel will determine complexity of reliable _____.

(a) address transfer protocol

(b) data transfer protocol

(c) packet transfer protocol

(d) File transfer protocol

Answer: (b)

188. A scalar quantizer partitions the set R of real numbers into M subsets R1,... , RM, what are these subsets called as

(a) Quantized files

(b) Quantized records

(c) Quantization regions

(d) Quantized numbers

Answer: (c)

189. The average running time of quick sort is in _____.

(a) O(n log n)

(b) O(log n)

(c) O(n)

(d) O(n/2)

Answer: (a)

190. A (rooted) _____ is either empty or a node (the root) with a binary tree as left subtree and binary tree as right subtree

(a) binary tree

(b) Red-black tree

(c) B tree

(d) B+ tree

Answer: (a)

191. Why confidentiality is important from the Information Security point?

(a) Because it is intended to ensure that no unauthorized access to information is not permitted and that accidental disclosure of sensitive information is possible.

(b) Because it is intended to ensure that unauthorized access to information is permitted and that accidental disclosure of sensitive information is not possible.

(c) Because it is intended to ensure that no unauthorized access to information is permitted and that accidental disclosure of sensitive information is not possible.

(d) Because it is not intended to ensure that no unauthorized access to information is permitted and that accidental disclosure of sensitive information is not possible.

Answer: (c)

192. Computer Security Depends on Two Types of Requirements, identify those two requirements.

(a) Private and Non-Secure

(b) Functional and Assurance

(c) Non functional and Non assurance

(d) Public and Non-secure

Answer: (b)

193. A nondeterministic finite automaton (NFA) is a 5-tuple M = (Q, Σ, δ, q, F), where

(a) Q is a finite set, whose elements are called states

(b) Q is an infinite set, whose elements are called states

(c) Q is a finite set, whose elements are called symbols

(d) Q is an infinite set, whose elements are called symbols

Answer: (a)

194. A _____ is defined as a data processing system in which the time interval required to process and respond to inputs is so small that it controls the environment

(a) Real time system
(b) Distributed system
(c) Grid system
(d) Uniprocessing system

Answer: (a)

195. The process of compilation is divided in to how many phases?

(a) 02
(b) 03
(c) 06
(d) 08

Answer: (c)

196. The parser in a compiler needs to try out different _____ rules.

(a) production
(b) association
(c) translation
(d) preposition

Answer: (a)

197. In which type of machine, each processing unit operates on the data independently via independent instruction streams?

(a) SISD
(b) SIMD
(c) MIMD
(d) MISD

Answer: (d)

198. How many processors are there in Earth Simulator?

(a) 512
(b) 5120
(c) 12
(d) 520

Answer: (b)

199. The _____ contains instructions, whereas the _____ consists of the execution of those instructions.

(a) Task, Program
(b) Program, Thread
(c) Thread, Program
(d) Task, Thread

Answer: (b)

200. When it is essentially an unsigned integer variable, that is, a variable that can take on only nonnegative integer values, then what does it mean?

(a) Semaphore

(b) Monitor

(c) Program

(d) Process

Answer: (a)

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

General Awareness

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

Arithmetic Ability

42	**(a)**	45	**(b)**	46	**(b)**	48	**(b)**	50	**(a)**
51	**(c)**	52	**(d)**	54	**(a)**	55	**(d)**	56	**(b)**
57	**(b)**								

General English

61	**(b)**	62	**(a)**	64	**(a)**	65	**(c)**	66	**(c)**
67	**(b)**	68	**(d)**	69	**(d)**	70	**(b)**	71	**(a)**
72	**(a)**	73	**(d)**	74	**(b)**	75	**(d)**	76	**(a)**
77	**(c)**	78	**(d)**						

Discipline1

101	**(c)**	102	**(b)**	103	**(a)**	104	[illegible]	05	**(a)**
106	**(a)**	107	**(a)**	108	**(d)**	109	**(a)**	110	**(a)**
111	**(a)**	113	**(a)**	114	**(a)**	115	**(a)**	116	**(a)**
117	**(a)**	118	**(d)**	119	**(a)**	120	**(b)**		

Discipline2

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

Discipline3

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

Discipline4

161	**(d)**	162	**(b)**	163	**(a)**	164	**(c)**	165	**(c)**
166	**(c)**	167	**(a)**	168	**(d)**	169	**(b)**	170	**(c)**
171	**(a)**	172	**(d)**	173	**(b)**	174	**(a)**	175	**(b)**
176	**(b)**	177	**(d)**	178	**(a)**	179	**(b)**	180	**(a)**

Discipline5

181	**(b)**	182	**(b)**	183	**(c)**	184	**(d)**	185	**(c)**
186	**(a)**	187	**(b)**	188	**(c)**	189	**(a)**	190	**(a)**
191	**(c)**	192	**(b)**	193	**(a)**	194	**(a)**	195	**(c)**
196	**(a)**	197	**(d)**	198	**(b)**	199	**(b)**	200	**(a)**