PREVIOUS YEAR PAPER

DSSSB Senior Scientific Assistant (Document) 2021 — 18 September 2021, Shift 1

DSSSB Other Posts · 18 September 2021 · Shift 1

151 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: 49 (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 18 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-senior-scientific-assistant-document-18-sep-shift-1/

General Ability

1. A series is given with one term missing. Select the CORRECT alternative from the given ones that will complete the series.
VD, SF, PH, MJ, JL, ?

(a) GN
(b) GO
(c) HN
(d) HO

Answer: (a)

2. A series is given with one term wrong. Select the WRONG term from the given alternatives.
IWE, GTH, ERK, CPN, ANQ

(a) IWE
(b) GTH
(c) ERK
(d) ANQ

Answer: (a)

3. In the following question, four letter pairs are given. The letters on left side of (–) is related to the letters on the right side of (–) with some Logic/Rule/Relation. Three are similar on basis of same Logic/Rule/Relation. Select the ODD one out from the given alternatives.

(a) PR – QS
(b) MX – NY
(c) NF – OH
(d) DL – EM

Answer: (c)

4. In the following question, select the related letters from the given alternatives.
ZT : VY :: JB : ?

(a) EG
(b) EH
(c) FH
(d) FG

Answer: (d)

5. In the following question, select the related word pair from the given alternatives.
East : North-West :: ?

(a) North : South
(b) South : South-East
(c) North-East : South-West
(d) South-East : North

Answer: (d)

6. In a certain code language, 'LEAVE' is written as 'FWBFM'. What is the code for 'WATER' in that code language?

(a) SFVBX
(b) TEVBY
(c) SFUBX
(d) TEUAY

Answer: (c)

7. In a certain code language, 'AEROPLANE' is written as 'ZVILKOZMV'. What is the code for 'EDUCATION' in that code language?

(a) VXEXYGRNM
(b) VWFYZHRLM
(c) VWFXYGRLM
(d) VWFXZGRLM

Answer: (d)

8. Six persons P, Q, R, S, T and U sit around a circular table facing towards the centre (not necessarily in the same order). R sits second to the left of S. U sits second to the right of T. P sits to the immediate left of Q. One person sits between P and U. Who sits third to the right of S?

(a) P
(b) Q
(c) T
(d) U

Answer: (c)

9. Six boxes A, B, C, D, E and F are placed one above the other (not necessarily in the same order). One box is placed between C and D. One box is placed between C and E. Three boxes are placed between A and B. B is placed above A. C is placed above D and F.
Which of the following statement is CORRECT?
I. One box is placed between D and F.
II. B is placed on the top.

(a) Only I

(b) Only II

(c) Both I and II

(d) Neither I nor II

Answer: (d)

10. In the following question below are given some statements followed by some conclusions based on those statements. Taking the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusion logically follows the given statements.
Statements:
I. All G are T.
II. No T is P.
Conclusions:
I. No G is P.
II. Some P are not T.

(a) Only conclusion I follows

(b) Only conclusion II follows

(c) Both conclusion I and II follows

(d) Neither conclusion follows

Answer: (c)

11. In the following question below are given some statements followed by some conclusions based on those statements. Taking the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusion logically follows the given statements.
Statements:
I. Some A are C.
II. No C is D.
Conclusions:
I. Some A is not D.
II. Some D is not A.
III. Some D is A.

(a) Only conclusion I follows

(b) Only conclusion II follows

(c) Only conclusion III follows

(d) Both conclusion I and II follows

Answer: (a)

12. In the following question, select the missing number from the given series.
18, 24, 42, 66, 108, ?

(a) 172
(b) 174
(c) 168
(d) 166

Answer: (b)

13. A series is given with one term wrong. Select that WRONG term from the given alternatives.
1, 8, 9, 64, 25, 216, 49, 516

(a) 49
(b) 64
(c) 516
(d) 9

Answer: (c)

15. If North becomes North-East and South-West becomes West, then what will become South-East?

(a) East
(b) North-West
(c) South
(d) South-West

Answer: (c)

16. Ramesh starts walking towards the south. He tu[illegible] 270° in the anti-clockwise direction. He turns 185° in the anti-clockwise direction. He tur[illegible]120° [illegible]he clockwise direction. He turns 325° in the clockwise direction. Finally, he turns 75° in th[illegible] clockwise direction. In which direction is he facing now?

(a) North-East
(b) South-East
(c) South-West
(d) North-West

Answer: (b)

General Awareness

21. Moatsu festival is celebrated in which state of India?

(a) Nagaland
(b) Kerala
(c) Manipur
(d) Rajasthan

Answer: (a)

22. Which of the following pair of Monument – State is NOT correct?
I. Victoria Memorial – Uttarakhand
II. Humayu's Tomb – Uttar Pradesh

(a) Only I
(b) Only II
(c) Both I and II
(d) Neither I nor II

Answer: (c)

23. _____ is NOT one of the methods used to calculate National Income.

(a) Expenditure method
(b) Income method
(c) Product method
(d) Revenue method

Answer: (d)

24. Post 1991, which sector largely contributed to the GDP of India?

(a) Agriculture sector
(b) Service sector
(c) Industrial sector
(d) Manufacturing sector

Answer: (b)

25. Which of the following substance is used in soda acid fire extinguishers?

(a) Washing soda
(b) Baking soda
(c) Bleaching powder
(d) Plaster of Paris

Answer: (b)

26. The loudness or softness of a sound is determined by its _____.

(a) frequency
(b) amplitude
(c) wavelength
(d) speed

Answer: (b)

27. Which of the following statement is CORRECT?
I. In Myopia, the image of distant objects is focussed beyond the retina.
II. In hypermetropia, the image of nearby objects is focussed before retina.

(a) Only I
(b) Only II
(c) Both I and II
(d) Neither I nor II

Answer: (d)

28. _____ and _____ have higher average population densities than India.

(a) Bangladesh; Japan

(b) China; Japan

(c) China; Bangladesh

(d) Japan; China

Answer: (a)

29. Which of the following pair of peak – country is NOT correct?
I. Namcha Barwa – Nepal
II. Nanda Devi – India

(a) Only I

(b) Only II

(c) Both I and II

(d) Neither I nor II

Answer: (a)

30. Mahatma Budha attained enlightment at _____.

(a) Bodh Gaya

(b) Sarnath

(c) Patliputra

(d) Pawapuri

Answer: (a)

31. Kanchipuram was the capital of _____.

(a) Pallavas

(b) Chalukyas

(c) Chola

(d) Chandela

Answer: (a)

32. The practice of erecting megaliths began about _____ years ago.

(a) 4000

(b) 2000

(c) 3000

(d) 1000

Answer: (c)

33. Which of the following statement is CORRECT?
I. Delhi first became the capital of a Kingdom under the Tomara Rajputs.
II. In 1236 Sultan Iltutmish's daughter, Raziyya became sultan.

(a) Only I

(b) Only II

(c) Both I and II

(d) Neither I nor II

Answer: (c)

34. Who among the following is called father of Indian Radio Astronomy?

(a) Yashwant Gupta

(b) Anita Sengupta

(c) Ashwin Vasavada

(d) Govind Swarup

Answer: (d)

35. Which of the following statement is CORRECT?
I. Padma Awards are announced every year on the occasion of Republic Day.
II. Bharat Ratna is the highest civilian award of the country.

(a) Only I

(b) Only II

(c) Both I and II

(d) Neither I nor II

Answer: (c)

36. In which year the right to property was removed from the list of fundamental rights of Indian constitution?

(a) 1976

(b) 1978

(c) 1982

(d) 1979

Answer: (b)

37. Which of the following statement is CORRECT?
I. Article 44 of Indian constitution deals with uniform civil code for the citizens.
II. Article 24 of Indian constitution deals with protection of interests of minorities.

(a) Only I

(b) Only II

(c) Both I and II

(d) Neither I nor II

Answer: (a)

38. Neeraj Chopra has become the second Indian to win an individual gold medal in the Olympics. He belongs to which state of India?

(a) Punjab

(b) Haryana

(c) Rajasthan

(d) Uttar Pradesh

Answer: (b)

39. Who was the captain of Indian Women's Hockey Team at Tokyo Olympic 2020 (played in 2021)?

(a) Rani Rampal
(b) Vandana Katariya
(c) Savita Punia
(d) Salima Tete

Answer: (a)

40. International Chess Federation headquarter are situated at _____.

(a) New York
(b) Paris
(c) Moscow
(d) New Delhi

Answer: (b)

Arithmetic Ability

41. If (60) 2 – (40) 2 = A × 100, then what is the value of A?

(a) 10
(b) 20
(c) 50
(d) 100

Answer: (b)

42. What is the sum of first 30 odd numbers?

(a) 900
(b) 930
(c) 465
(d) 480

Answer: (a)

43. Sum of six number is 132. If one number is removed, then the average of remaining five number becomes 20. What is the number which was removed?

(a) 34
(b) 32
(c) 28
(d) 24

Answer: (b)

44. Marked price of a shirt is five times of its cost price. After giving a discount of 70 percent it is sold for Rs. 3300. What is the cost price of this shirt?

(a) Rs. 4400
(b) Rs. 3850
(c) Rs. 2750
(d) Rs. 2200

Answer: (d)

45. Price of book is 160 percent more than the price of pen. If price of pen is Rs. 260, then what is the price of book?

(a) Rs. 524
(b) Rs. 416
(c) Rs. 676
(d) Rs. 822

Answer: (c)

46. Amit spend 40 percent of his income on food. He spends 30 percent of the remaining part on transport and he left with Rs. 17640. What is the income of Amit?

(a) Rs. 42000
(b) Rs. 38800
(c) Rs. 41983
(d) Rs. 44220

Answer: (a)

47. Selling price of a chair is Rs. 36540. If loss is 37 percent, then what is the cost price of this chair?

(a) Rs. 54440
(b) Rs. 50059
(c) Rs. 58000
(d) Rs. 56560

Answer: (c)

48. Ramesh bought a watch and sold it to Vipin at a profit of 15 percent. Vipin sold this watch to Vineet at a loss of 32 percent. If Vineet purchased the watch for Rs. 27370, then for how much price did Ramesh bought this watch?

(a) Rs. 40500
(b) Rs. 37500
(c) Rs. 35000
(d) Rs. 33400

Answer: (c)

49. Ratio of the present ages of Vikram and Sameer is 7 : 9 respectively. If Vikram's age is 8 years less than Sameer's age, then what is the age of Vikram?

(a) 21 years
(b) 24 years
(c) 26 years
(d) 28 years

Answer: (d)

50. A : B = 11 : 17 and B : C = 6 : 11. If the value of B is 1530, then what is the sum of A, B and C?

(a) 5325

(b) 4895

(c) 4715

(d) 4525

Answer: (a)

51. Compound interest (compounding annually) on a sum is Rs. 5880 for 2 years. If rate of interest is 10 percent per annum, then what is the sum?

(a) Rs. 33880

(b) Rs. 28000

(c) Rs. 27400

(d) Rs. 25200

Answer: (b)

52. A sum becomes 5 times of itself in 12 years at the rate of simple interest. In how many years will the sum become 25 times of itself at the same rate of interest?

(a) 48 years

(b) 75 years

(c) 60 years

(d) 72 years

Answer: (d)

53. A train can cross a pole in 6 seconds. If the spe of train is 144 km/hr, then what is the length of the train?

(a) 120 metres

(b) 156 metres

(c) 180 metres

(d) 240 metres

Answer: (d)

54. Rahul and Mohit are 425 metres apart from each other. If Rahul and Mohit are moving towards each other with the speed of 36 km/hr and 54 km/hr respectively, then how much will they take to meet each other?

(a) 21 seconds

(b) 17 seconds

(c) 16 seconds

(d) 14 seconds

Answer: (b)

55. Suresh can complete a work in 40 days. If Sumit is five times as efficient as Suresh, then how much time will Sumit take to complete the same work?

(a) 10 days

(b) 8 days

(c) 12 days

(d) 16 days

Answer: (b)

56. A, B and C together can complete a work in 105/2 days. A and B can complete the same work in 315 days and 210 days respectively. In how many days C alone can complete the same work?

(a) 45 days

(b) 70 days

(c) 84 days

(d) 90 days

Answer: (d)

General English

61. Find the part of the given sentence that has an error in it. If there is no error, choose 'No error'.
I choose the duet/ song because/I was confident./No error

(a) I choose the duet

(b) song because

(c) I was confident.

(d) No error

Answer: (a)

62. Find the part of the given sentence that has an error in it. If there is no error, choose 'No error'.
The government have done/ well to introduce/ the new pension policy./ No error

(a) The government have done

(b) well to introduce

(c) the new pension policy.

(d) No error

Answer: (a)

65. A sentence has been given with a blank to be filled with an appropriate word/words. Choose the correct alternative.
Transition and completion rates _____ improve.

(a) have

(b) has

(c) have to

(d) has to

Answer: (c)

66. A sentence has been given with a blank to be filled with an appropriate word/words. Choose the correct alternative.
People who are orthodox have _____ minds.

(a) buff
(b) mallow
(c) shallow
(d) mellow

Answer: (c)

67. The question below consists of a set of labelled sentences. Out of the four options given, select the most logical order of the sentences to form a coherent paragraph.
P: As late as 1768, the first edition of Encyclopaedia Britannica gave voice to a common misconception by defining volcanoes as "burning mountains, which probably are made up of sulphur and some other matter proper to ferment with it, and take fire." Q: However, science was late in recognizing the important role of volcanism in the evolution of the Earth.
R: Volcanoes figure prominently in the mythology of many peoples who have learned to live with eruptions.
S: Today geologists agree that volcanism is a profound process resulting from the thermal evolution of planetary bodies.

(a) PSQR
(b) RQPS
(c) SQRP
(d) RQSP

Answer: (b)

68. The question below consists of a set of labelled sentences. Out of the four options given, select the most logical order of the sentences to form a coherent paragraph.
P: The average person spends nearly 600 hours dreaming each year during REM sleep.
Q: Approximately 25 percent of the night is spent in REM sleep, and people will remember a dream more than 80 percent of the time if woken during a REM period.
R: It is characterized by an accelerated heart rate, rapid and irregular breathing, and periods in which the eyes dart back and forth.
S: REM sleep is the stage in which dreams occur.

(a) SRQP
(b) RSPQ
(c) SPRQ
(d) RPQS

Answer: (a)

69. Choose the word that means the same as the given word.
Perception

(a) Insolent
(b) Incarnate
(c) Jail
(d) Insight

Answer: (d)

70. Choose the word that is opposite in meaning to the given word.
Unfriendly

(a) War
(b) Warm
(c) Frugal
(d) Dearth

Answer: (b)

71. In the given question, four words are given out of which one word is correctly spelt. Choose the CORRECTLY spelt word.

(a) Definitily
(b) Difenitly
(c) Defenitely
(d) Definitely

Answer: (d)

72. In the given question, four words are given out of which one word is correctly spelt. Choose the CORRECTLY spelt word.

(a) Nashionlism
(b) Nationalism
(c) Netionalism
(d) Natianalism

Answer: (b)

73. In the following question, out of the giv four rnatives, select the alternative which best expresses the meaning of the Idiom/Phrase.
To end in smoke

(a) In difficulty
(b) No choice at all
(c) To waste
(d) To interfere

Answer: (c)

74. In the following question, out of the given four alternatives, select the alternative which best expresses the meaning of the Idiom/Phrase.
Gravy train

(a) A lucky day
(b) To be born in a rich family
(c) Source of easy money
(d) To get fired from one's dream job

Answer: (c)

75. Choose the word that can substitute the given sentence.
A talkative person

(a) Garrulous
(b) Mirthful
(c) Frivolous
(d) Querulous

Answer: (a)

78. Why the area around Chamonix, France, became a special attraction for scientific observations?

(a) Because of the generous locality around.
(b) Because of the steep slopes of the mountains there.
(c) Because that area was never discovered due to fatal weather conditions.
(d) Because of the great glaciers on the Mont Blanc chain.

Answer: (d)

Discipline1

101. The property that will define the stability for the coordination complexes:

(a) Dissociation
(b) CFSE
(c) Interaction
(d) Hydrogen bond

Answer: (b)

102. What is the relation between formation constant and instability constant?

(a) Directly proportional
(b) Inversely proportional
(c) Difference of one
(d) Summation by 1

Answer: (b)

103. The reactive intermediate which contain single unpaired electron in their outermost shell is _____.

(a) carbocation
(b) carbanion
(c) carbon
(d) free radical

Answer: (d)

104. The reactive intermediate with positively charged ion is known as _____.

(a) carbocation
(b) carbanion
(c) carbene
(d) free radical

Answer: (a)

105. What is the total energy of localized benzene as per the huckel molecular orbital theory?

(a) 2α + 2β

(b) 4α + 4β

(c) 6α + 8β

(d) 8α + 8β

Answer: (c)

106. The quantum number having values in the form of +1/2 and -1/2 is _____.

(a) Azimuthal

(b) Magnetic

(c) Principal

(d) Spin

Answer: (d)

107. If value of l = 3 then maximum number of electron can occupy subshell is _____.

(a) 14

(b) 7

(c) 11

(d) 4

Answer: (a)

108. Define the orbital address for n = 3 and l = 1.

(a) 2s

(b) 3p

(c) 3s

(d) 2p

Answer: (b)

111. The symmetry operation that never does not change the position of the element is _____.

(a) Rotation

(b) Inversion

(c) Reflection

(d) Identity

Answer: (d)

112. What is the value of absorption frequency for C=C bond in the IR spectrum?

(a) 1680-1600 cm -1

(b) 1750-1725 cm -1

(c) 1845-1820 cm -1

(d) 1000-600 cm -1

Answer: (a)

113. What is the range of the fingerprint region in the IR spectrum?

(a) 2000-3600 cm -1

(b) 600-1400 cm -1

(c) 1000-3000 cm -1

(d) 600-1000 cm -1

Answer: (b)

117. Iron storage in body takes place in the form of _____.

(a) ferritin and hemosiderin

(b) siderophores

(c) cubane

(d) oxidase

Answer: (a)

118. The oxidation state of Co in vitamin B12 is _____.

(a) 2

(b) 3

(c) 1

(d) 0

Answer: (b)

119. The structure of vitamin B12 is based on _____

(a) Cube

(b) Closed structure

(c) Corrin ring

(d) Porphyrin ring

Answer: (c)

120. _____ is defined as a form of cycloaddition across the terminal atoms of a fully conjugated system with formation of two new sigma bonds to a single atom of the ("monocentric") reagent.

(a) Redox reaction

(b) Chelotropic reaction

(c) Electrocyclic reaction

(d) Elimination reaction

Answer: (b)

Discipline2

121. The reaction takes place between Diene and Dienophile under thermal condition is known as _____.

(a) Diels-Alder reaction

(b) Ene reaction

(c) Sigmatropic shift

(d) Electrocyclic reaction

Answer: (a)

122. The reactions in photosynthesis that are taking place in the absence of light is known as _____.

(a) Chemical reaction
(b) Dark Reaction
(c) Dim Reaction
(d) Short reaction

Answer: (b)

123. Why Neutron Diffraction method is used in Engineering?

(a) Evaluate micro-residual stress in components
(b) Find the flaws in components
(c) labelling Crystal
(d) Deduce the structure

Answer: (a)

125. The rapid transition of electron that vibrating molecule do not changes its internuclear distance is known as _____.

(a) Franck-Condon Principle
(b) Stark Effect
(c) Raman Effect
(d) Rayleigh effect

Answer: (a)

127. A particle of mass 'm' and energy 'E' is confine[illegible] the ground state of one dimensional infinite potential box of length 'L'. The probability o[illegible]ndin[illegible]e particle in the region 0 to L/2 is _____.

(a) 1
(b) 0.5
(c) 1.5
(d) 0

Answer: (b)

129. The baryon number of electron and proton is _____.

(a) 0,1
(b) 1,0
(c) 0,0
(d) 1,1

Answer: (a)

130. The chemical potential of photon is _____.

(a) 1
(b) 0.5
(c) 0
(d) 1.5

Answer: (c)

133. The lande g factor of the spectral term 3 S is _____.
1

(a) 1
(b) 2
(c) 3
(d) 4

Answer: (b)

134. How many OR gates are required to realize Y = AB + CD + EF?

(a) 2
(b) 3
(c) 4
(d) 1

Answer: (a)

135. Nuclei which have same atomic number but different mass number are called as _____.

(a) Isobars
(b) Isotones
(c) Isotopes
(d) Mirror nuclei

Answer: (c)

137. The width of the central maxima depends on _____.

(a) wavelength of the light only
(b) wavelength of the light and width o[illegible]
(c) width of the slit only
(d) independent of wavelength of light

Answer: (b)

138. In the transverse wave, displacement of the each point is always _____.

(a) at right angle to the direction of propagation of the wave
(b) in the same direction of the propagation of the wave.
(c) in the x-y plane
(d) in the z-y plane

Answer: (a)

139. What is the value of 50 micron in nm?

(a) 500 nm
(b) 5000 nm
(c) 50000 nm
(d) 0.5 nm

Answer: (c)

140. How many number of carbon atoms in the bucky balls?

(a) 20
(b) 60
(c) 45
(d) 70

Answer: (b)

Discipline3

142. In He-Ne Laser, population inversion is achieved by _____.

(a) He only
(b) Ne only
(c) both He and Ne
(d) first by He and then by Ne

Answer: (b)

143. Elementary particle physics is also known as _____.

(a) Low energy physics
(b) High energy physics
(c) Moderate energy physics
(d) Slow energy physics

Answer: (b)

144. The quantum of lattice vibration is called as __ _____.

(a) Photon
(b) Phonon
(c) Polaron
(d) Plasmon

Answer: (b)

145. What is the fourth state of the matter?

(a) Solid
(b) Liquid
(c) Gas
(d) Plasma

Answer: (d)

146. The Habitable zone is also known as the _____.

(a) Goldilocks zone
(b) Ursa major zone
(c) Porridge zone
(d) Apogee zone

Answer: (a)

148. Which of the following is NOT the example of Unipartite network?

(a) Buyer/product

(b) Social networks

(c) Firms

(d) WWW

Answer: (a)

149. When f(-x,c) = -f(x,c) i.e. function f(x,c) is odd and equilibrium point is at x = 0, then the bifurcation is called as _____.

(a) Transcritical bifurcation

(b) Pitchfork bifurcation

(c) Fold bifurcation

(d) Ordinary bifurcation

Answer: (b)

150. The duality which is equivalence of two theory such as string theory or quantum field theory is _____.

(a) D-duality

(b) N-duality

(c) T-duality

(d) M-duality

Answer: (c)

151. Object Oriented Programming (OOP) is a progr ning paradigm that relies on the concept of:

(a) classes and objects

(b) procedural programming

(c) structural programming

(d) semantic web

Answer: (a)

152. This programming paradigm is used to structure a software program into simple, reusable pieces of code blueprints, which are used to create individual instances of objects.

(a) Intelligent programming

(b) Object Oriented Programming (OOP)

(c) Procedural programming

(d) Structural programming

Answer: (b)

153. _____ objects can often be characterized by integers whereas _____ objects require real numbers

(a) Continuous; Discrete

(b) Discrete; Continuous

(c) Continuous; Virtual

(d) Virtual; Continuous

Answer: (b)

154. Mathematical programming models have been demonstrated to be useful analytical tools in optimizing:

(a) Decision-making problems
(b) Linear problems
(c) Nonlinear problems
(d) Discrete problems

Answer: (a)

155. Which of the following was first proposed in 1947 and has been widely used in solving constrained optimization problems?

(a) Nonlinear programming
(b) Linear programming
(c) Pair programming
(d) XP programming

Answer: (b)

156. A proper computer system architecture should _____ performance and _____ costs as well as power consumption.

(a) reduce; maximize
(b) maximize; maximize
(c) maximize; reduce
(d) minimize; reduce

Answer: (c)

157. Which of the following is a genre of no[illegible]riting that encompasses technical materials such as manuals, instructions, specifications, [illegible]ftware documentation?

(a) Incremental writing
(b) Report writing
(c) Vocational writing
(d) Technical Writing

Answer: (d)

158. Technical communication is _____ and it entails a purposeful transaction between sender and receiver that provides specific information for practical and specific purposes.

(a) transactional
(b) evolutional
(c) spiral
(d) incremental

Answer: (a)

159. The _____ or _____of an algorithm relates to the resources required by it, such as how quickly it will run, or how much computer memory it will use.

(a) Precision; Recall

(b) Number of variables; Performance

(c) Efficiency; Number of modules

(d) Efficiency; Performance

Answer: (d)

160. Which of the following term is used to denote a particular way of organizing data for particular types of operation?

(a) Memory segment

(b) Memory page

(c) Data structure

(d) Control loop

Answer: (c)

Discipline4

161. SQL is a programming language used by nearly all _____ to query, manipulate, and define data, and to provide access control.

(a) Cloud databases

(b) Columnar databases

(c) Relational databases

(d) Key-value databases

Answer: (c)

162. Data within the most common types of databases in operation today is typically modeled in _____ in a series of tables to make processing and data querying efficient.

(a) Modules

(b) Segments

(c) Rows and columns

(d) Maps

Answer: (c)

163. The outcome of software engineering is a(n) _____ software product.

(a) efficient and reliable

(b) complex and trustworthy

(c) highly complex

(d) highly programmed

Answer: (a)

164. Which of the following is an engineering branch associated with development of software product using well-defined scientific principles, methods and procedures?

(a) Software Project Management
(b) Software engineering
(c) Communication networks
(d) Digital Communication

Answer: (b)

165. Which of the following task refers to the transmission of digital data between two or more computers?

(a) Computer Network
(b) Data communication
(c) IoT
(d) Internet of Everything

Answer: (b)

166. The physical connection between networked computing devices is established using either _____ media or _____ media.

(a) cable; wireless
(b) switches; routers
(c) repeaters; bridges
(d) repeaters; cables

Answer: (a)

167. Which of the following is NOT a characteristic of an algorithm?

(a) Must take an input
(b) Must give some output
(c) Definiteness - each instruction is clear and unambiguous
(d) Infiniteness – algorithm never terminates after a finite number of steps

Answer: (d)

168. Operations such as reducing the probability of unauthorized/inappropriate access to data, or the unlawful use, disclosure, disruption, deletion, corruption, modification, inspection, recording, or devaluation of information refer to:

(a) Internet programming
(b) Cyber programming
(c) Information science
(d) Information security

Answer: (d)

169. Automata theory is closely related to:

(a) Informal language theory

(b) Formal language theory

(c) Natural Language Theory

(d) Network language Theory

Answer: (b)

170. Automata are often classified by the class of formal languages they can recognize, as in the _____, which describes a nesting relationship between major classes of automata.

(a) Chomsky hierarchy

(b) Turing's hierarchy

(c) Allen's hierarchy

(d) Church's hierarchy

Answer: (a)

171. Which of the following is the program that, after being initially loaded into the computer by a boot program, manages all of the other application programs in a computer?

(a) Operating system (OS)

(b) Compiler

(c) Parser

(d) Linker-loader

Answer: (a)

172. Which of the following system program transla[illegible] the code written in one language to some other language without changing the mean[illegible]of t[illegible]program?

(a) Loader-linker

(b) Parser

(c) Compiler

(d) Operating system (OS)

Answer: (c)

173. A compiler should make the target code efficient and optimized in terms of:

(a) Simplicity, Modularity

(b) Efficiency, Modularity

(c) Precision, Recall

(d) Time and space

Answer: (d)

174. Which of the following system consists of multiple software components that are on multiple computers, but run as a single system?

(a) Distributed Networks

(b) Distributed Computer System

(c) Distributed File Systems

(d) Distributed Drivers Systems

Answer: (b)

175. The kernel stack has a fixed size. When too much data is pushed upon the stack, an _____ will be generated.

(a) Overflow
(b) Underflow
(c) Inflow
(d) In-Out flow

Answer: (a)

176. Cooling of the body after death is called _____.

(a) Coroner
(b) Algor mortis
(c) Crowner
(d) Livor mortis

Answer: (b)

177. Which of the following is NOT a duty performed by a forensic pathologist?

(a) Determine the apparent cause of death
(b) Determine the identity of the deceased
(c) Determine the removal process of the deceased
(d) Determine the postmortem interval

Answer: (c)

178. In a scenario, where an angry employee puts po[illegible]n in the tea of his employer to kill him but instead the employer's sister drinks it and dies.
Which of the following manner of deaths is [illegible]icte[illegible]y the above given case?

(a) Homicide
(b) Natural
(c) Accidental
(d) Suicide

Answer: (a)

180. Which of the following chemical tests is/are used for confirming the presence of blood?
1. Fluorescein
2. Teichmann
3. Takayama

(a) Both 2 and 3
(b) Both 1 and 2
(c) Both 1 and 3
(d) Neither 1, 2 nor 3

Answer: (a)

Discipline5

181. What must be the blood type if Anti-A antibodies are added to a blood sample and no agglutination occurs, but it does occur when anti-B antibodies are added?

(a) A

(b) AB

(c) B

(d) O

Answer: (c)

182. Which of the following dyes are used for the microscopic visualization of sperm cells?
1. The Brentamine Fast Blue B reagent
2. Nuclear Fast Red dye
3. Picro indigo carmine dye

(a) Only 2

(b) Both 2 and 3

(c) Both 1 and 2

(d) Both 1 and 3

Answer: (b)

183. What is the CORRECT definition of Substrate Control?

(a) A piece of material on which biologic evidence has been deposited

(b) Method of DNA typing using short length polymorphs

(c) Addition of DNA primers in PCR to begin the re ation process

(d) Samples of DNA from someone who might ha handled biologic evidence during collection and analysis

Answer: (a)

184. Siblings in a family share the same mitochondrial DNA with which of the following family member(s)? a. Mother
b. Maternal Grandmother
c. Father
d. Paternal Grandmother

(a) Both a and c

(b) Both a and b

(c) Both c and d

(d) Both b and c

Answer: (b)

185. Which of the following processes is/are part of DNA amplification?
1. Annealing
2. Extension
3. Elimination

(a) Both 1 and 3

(b) Both 2 and 3

(c) Both 1 and 2

(d) All three

Answer: (c)

186. Example of DNA sources is/are: a. Toothbrushes
b. Pillows
c. Red blood cells

(a) Both a and b

(b) Both a and c

(c) Both b and c

(d) All three

Answer: (a)

187. Which of the method is used for the estimation of PMI if the death has taken place within twelve hours of being discovered?

(a) Rigor mortis

(b) Bloating

(c) Algor mortis

(d) Insect activity

Answer: (c)

188. An AB blood type person can give blood to an individual of which of the following blood types?

(a) A, AB

(b) A, B, AB, O

(c) AB

(d) B, AB

Answer: (c)

189. Which of the following is/are NOT an example of Altered Bloodstain pattern? a. wipes (blood was present, but a person/object moved through it and changed its appearance) b. vertical blood drops (blood dripping at 90 degrees to the surface) c. flow (large pool of blood moving down a wall or incline)

(a) Only a

(b) Both b and c

(c) Both a and c

(d) Only c

Answer: (b)

190. Which of the following terms is used to identify the rounded ends of a long bone?

(a) Metaphysis

(b) Diaphysis

(c) Biphasic

(d) Epiphysis

Answer: (d)

191. Which of the following is used for determining the age in an adult (25 to 30 years approx.)? i. Pubic bones
ii. Deciduous teeth

(a) Only i
(b) Only ii
(c) Both i and ii
(d) Neither i nor ii

Answer: (a)

192. Which of the following is/are role of a Forensic anthropologist?
1. Identification of skeletal remains
2. Help in facial and body recognition in a crowd 3. Perform autopsies to determine the presence/ absence of a disease

(a) Only 2
(b) Both 1 and 2
(c) Both 2 and 3
(d) All 1, 2 and 3

Answer: (b)

193. Which of the following is NOT a part of Diaphysis? a. Articular Cartilage
b. Medullary Cavity
c. Periosteum

(a) Only a
(b) Only b
(c) Only c
(d) All a, b and c are included

Answer: (a)

194. The wisdom tooth mostly erupts between _____ age period of a human being.

(a) 5 to 9 years
(b) 20 to 30 years
(c) 45 to 65 years
(d) 17 to 21 years

Answer: (d)

195. When a person has no teeth, the identifying information is gathered from the analysis of which of the following?
1. structure of skull
2. analysis of dentures
3. structure of jaws

(a) Only 1
(b) Only 3
(c) Both 1 and 2
(d) All 1, 2 and 3

Answer: (d)

196. Reverse Tolerance is associated with which of the following drugs?

(a) LSD

(b) Cocaine

(c) Morphine

(d) Alcohol

Answer: (a)

197. Which of the following is NOT a withdrawal symptom from the lack of a drug?

(a) Headaches

(b) Hallucinations

(c) Fever

(d) Nausea

Answer: (c)

198. The characteristics of Ethanol is/are:
1. Acts as a mild tranquilizer 2. It is a central nervous system anti-depressant 3. It also acts a neurotoxin

(a) Both 1 and 2

(b) Both 1 and 3

(c) Only 3

(d) All 1, 2 and 3

Answer: (b)

199. For a male, how is the amount of alcohol requi to achieve a given BAC calculated?

(a) Volume = Weight X BAC / 3.78

(b) Volume = Weight X BAC / 4.67

(c) Volume = Weight X BAC / 2.33

(d) Volume = Weight X BAC / 1.99

Answer: (a)

200. Which of the following is NOT a test included in the Field Sobriety Testing?

(a) Stand on one foot

(b) Walk and turn

(c) Vertical gaze nystagmus

(d) Horizontal gaze nystagmus

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	**(a)**	2	**(a)**	3	**(c)**	4	**(d)**	5	**(d)**	6	**(c)**	7	**(d)**	8	**(c)**
9	**(d)**	10	**(c)**	11	**(a)**	12	**(b)**	13	**(c)**	15	**(c)**	16	**(b)**		

General Awareness

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

Arithmetic Ability

41	**(b)**	42	**(a)**	43	**(b)**	44	**(d)**	45	**(c)**	46	**(a)**	47	**(c)**	48	**(c)**
49	**(d)**	50	**(a)**	51	**(b)**	52	**(d)**	53	**(d)**	54	**(b)**	55	**(b)**	56	**(d)**

General English

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

Discipline1

101	**(b)**	102	**(b)**	103	**(d)**	104	**(a)**	[illegible]	**(c)**	106	**(d)**	107	**(a)**	108	**(b)**
111	**(d)**	112	**(a)**	113	**(b)**	117	[illegible]8		**(b)**	119	**(c)**	120	**(b)**		

Discipline2

121	**(a)**	122	**(b)**	123	**(a)**	125	**(a)**	127	**(b)**	129	**(a)**	130	**(c)**	133	**(b)**
134	**(a)**	135	**(c)**	137	**(b)**	138	**(a)**	139	**(c)**	140	**(b)**				

Discipline3

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

Discipline4

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

Discipline5

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