PREVIOUS YEAR PAPER

DSSSB Shift Incharge 2023 — 25 June 2023, Shift 2

DSSSB Other Posts · 25 June 2023 · Shift 2

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

Left out of the original paper: 54 (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 June 2023, 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-2023-shift-incharge-25-jun-shift-2/

General

1. Eight film stars, Salman, Kareena, Shahrukh, Madhuri, Kajol, Amitabh, Raveena and Ajay, are sitting in a circle facing the outside direction as follows.
Salman and Amitabh are sitting opposite to each other.
No two male or two female film stars are sitting together.
Madhuri is sitting between Salman and Shahrukh.Ajay is sitting 2nd to the right of Amitabh.
Kajol is not sitting next to Ajay.
Raveena is sitting opposite to Madhuri.
Who is sitting 3rd to the right of Ajay?

(a) Kajol

(b) Raveena

(c) Madhuri

(d) Kareena

Answer: (c)

2. Gagan is 73rd from the left end of the row and 79th from the right end of the same row of students. How many students are there in the row?

(a) 152

(b) 151

(c) 153

(d) 154

Answer: (b)

3. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.
Statements:
A. All dogs are birds.
B. All birds are goats.
Conclusions:
I. All goats are dogs.
II. Some goats are dogs.

(a) Only conclusion II follows.

(b) Only conclusion I follows.

(c) Both conclusions I and II follow.

(d) Neither conclusion I nor II follows.

Answer: (a)

4. Read the following information carefully.
• Kisan is shorter than Sarim but taller than Prajwal.
• Jason is shorter than Urvasi.
• Sarim is shorter than Jason.
Which of the following is false?

(a) Urvasi is the tallest.

(b) Prajwal is the shortest.

(c) Kisan is taller than Jason.

(d) Sarim is shorter than Urvasi.

Answer: (c)

5. Select the letter-cluster from among the giv ions that can replace the question mark (?) in the following series.
ABC, GFE, MJG, SNI, ?

(a) YRL

(b) ZRK

(c) SRK

(d) YRK

Answer: (d)

6. If the first half of the English alphabet series is written in reverse order and no change is made in the second half, which letter is 11th to the left of the letter that is 7th from the end?

(a) R

(b) F

(c) I

(d) E

Answer: (d)

7. In a certain code language, ACCURACY is coded as XZFXZIBX. How will CONFUSED be coded in that language?

(a) LXUMHFWV
(b) XLMUFHVW
(c) WVHFUMLX
(d) VWFHMUXL

Answer: (a)

8. In a certain code language, ABLE is coded as FNEE. How will QUIT be coded in that language?

(a) UXKU
(b) KUXU
(c) UKXU
(d) KUUX

Answer: (c)

9. In early morning, a person started from a point 'A' and walked 6 m towards north. Then, he positioned his back towards the Sun and walked 8 km to reach point 'B'. From this point, he walked 10 m towards the north-west. Finally, he moved towards the direction facing the Sun and covered another 8 km to reach point C. What is the distance between B and C?

(a) 5 m
(b) 6 m
(c) 7 m
(d) 8 m

Answer: (b)

10. Ramu says, "Shailesh's mother is the only [illegible]er-in-law of my mother." How is Ramu related to Shailesh?

(a) Father
(b) Brother
(c) Grandfather
(d) Paternal uncle

Answer: (a)

11. Select the option that is related to the given pair in the same way as the second word is related to the first word in the pair.
CALM : ZXNO

(a) LIKE : ROPV
(b) GAIN : TZMR
(c) NEAR : IZVM
(d) BAIL : ZYOR

Answer: (d)

12. Select the option that is related to the given pair in the same way as the second word is related to the first word in the pair.
ACCENT : DBFDUO

(a) POETRY : PQUFSZ

(b) STRONG : UTSPHO

(c) ABSORB : CBPTCS

(d) STREET : TUFSUF

Answer: (c)

13. Select the option that is related to the given pair in the same way as the second word is related to the first word in the pair.
AWARD : FTCYC

(a) AGENT : CIGPV

(b) ANGER : TGIPC

(c) ADULT : UMVEB

(d) ABUSE : WCDGU

Answer: (b)

14. Four letter-cluster pairs have been given, out of which three are alike in some manner and one is different. Select the one that is different.

(a) BOLD : LYWO

(b) ABLE : YZVO

(c) ARMY : IZNB

(d) BAIL : ZYOR

Answer: (c)

15. Four letter-cluster pairs have been given, out of which three are alike in some manner and one is different. Select the one that is different.

(a) ATTACK : UBBULD

(b) ABSENT : CBFTOU

(c) ABSORB : CBPTCS

(d) ANIMAL : OBNJMB

Answer: (b)

16. Select the number from among the given options that can replace the question mark (?) in the following series.
2, 6, 24, 120, 720, ?

(a) 4050

(b) 5040

(c) 5400

(d) 5004

Answer: (b)

17. Select the term from among the given options that can replace the question mark (?) in the following series.
47, 173, 303, 437, ?

(a) 769
(b) 755
(c) 557
(d) 575

Answer: (d)

18. Select the term from among the given options that can replace the question mark (?) in the following series.
3, 31, 131, ?, 739

(a) 351
(b) 265
(c) 367
(d) 349

Answer: (a)

21. NTPC Ltd commissioned India's first green hydrogen blending project in which city in January 2022?

(a) Surat
(b) Chennai
(c) Hyderabad
(d) Cochin

Answer: (a)

22. The Aashwasan Campaign for finding the active cases of TB in 174 tribal districts of India, under the ambit of the Tribal TB Initiative, was launched from which state in January 2022?

(a) Gujarat
(b) Madhya Pradesh
(c) Chhattisgarh
(d) Maharashtra

Answer: (d)

23. The Union Minister of State for Health launched Early Childhood Development Conclave, Paalan 1000 National Campaign and Parenting App, from which city in August 2022?

(a) Delhi
(b) Mumbai
(c) Bengaluru
(d) Kolkata

Answer: (b)

24. Who among the following became the first Indian woman to win a medal in the Asian Cup Table Tennis tournament in November 2022?

(a) Naina Jaiswal
(b) Manika Batra
(c) Sutirtha Mukherjee
(d) Mouma Das

Answer: (b)

25. Who among the following won a mixed event gold and an individual bronze medal in the 55-61 kg Kumite category in US Open Karate Championships in Las Vegas, USA in April 2022?

(a) Sandhya Shetty
(b) Bhavisha Singh
(c) Supriya Jatav
(d) Tashvi Menghi

Answer: (c)

26. Which of the following monuments built by Delhi Sultans is located in Ajmer?

(a) Adhai din ka Jhonpra
(b) Quwwat-ul-Islam Mosque
(c) Alai Darwaza
(d) Jammat Khana Masjid

Answer: (a)

27. Kunwar Singh, an old zamindar, joined the rebel boys and battled with the British for many months from which place?

(a) Bengal
(b) Bihar
(c) Lucknow
(d) Bareilly

Answer: (b)

28. Maulvi Ahmadullah Shah fought in which of the following battles during the 1857 revolt?

(a) Battle of Kanpur
(b) Battle of Jhansi
(c) Battle of Chinhat
(d) Battle or Arrah

Answer: (c)

29. Which of the following statements about the Rashtrapati Bhawan at Delhi is INCORRECT?

(a) Lord Irwin, Viceroy and Governor-General of India, was the first occupant of the newly constructed Viceroy's House in April 1929.

(b) The main building was built by Haroun-al-Rashid, while the Forecourt was done by Sujan Singh and his son Sobha Singh.

(c) The H-shaped building shows the elaborate geographical permutations in an elegant style.

(d) Construction was initiated in the reign of Lord Chelmsford, the Governor-General and Viceroy of India.

Answer: (d)

30. Mangal, Basanti, Khuded, Chhopati and Bedu Pako are famous folk songs of which state?

(a) Rajasthan

(b) Gujarat

(c) Uttarakhand

(d) Assam

Answer: (c)

31. Where is the Siyom bridge located that was completed by the Border Roads Organisation and inaugurated by Defence minister Rajnath Singh in January 2023?

(a) Assam

(b) Arunachal Pradesh

(c) Ladakh

(d) Sikkim

Answer: (b)

32. According to a pan-India 'Financial Literacy [illegible]nclusion survey' conducted by the Reserve Bank of India (RBI), digital banking awareness and knowledge among rural and urban population across the country are at par with each other, with the average being _____ for both segments on a score of 21.

(a) 11.7

(b) 12.1

(c) 13.7

(d) 14.1

Answer: (a)

33. Which of the following is the main source of water for Wular Lake?

(a) River Chenab

(b) River Jhelum

(c) River Shyok

(d) River Tawi

Answer: (b)

34. According to Multidimensional Poverty Index (MPI) 2022, which state among the following is NOT one of the states that were initially among the poorest in the country but reduced poverty faster in absolute terms than the national average, narrowing the poverty gap?

(a) Bihar

(b) Jharkhand

(c) Uttar Pradesh

(d) Madhya Pradesh

Answer: (d)

35. Which of the following statements is INCORRECT about the nucleus of a cell?

(a) The nucleus is the control centre of the cell.

(b) The nucleus determines how the cell will function, as well as the basic structure of that cell.

(c) The nucleus is separated from the cytoplasm by a membrane called the nuclear membrane.

(d) Threads of chromatin in the nucleus contain ribonucleic acid (RNA).

Answer: (d)

36. Which of the following statements is correct about algae?

(a) Algae are chlorophyll-bearing, simple, thalloid, autotrophic and largely aquatic (both fresh water and marine) organisms.

(b) Algae include the various mosses and liverworts that are found commonly growing in moist shaded areas in the hills.

(c) Asexual reproduction in algae takes place by th ragmentation of thalli or by the formation of specialised structures called gemmae.

(d) The predominant stage of the life cycle of al is the gametophyte, which consists of two stages.

Answer: (a)

37. The 42nd Constitutional Amendment was made in the light of the recommendations of the Swaran Singh Committee Report that was set up by which government?

(a) Charan Singh Government

(b) Indira Gandhi Government

(c) Morarji Desai Government

(d) Lal Bahadur Shastri Government

Answer: (b)

38. Which of the following statements about Rajya Sabha is INCORRECT?

(a) The Rajya Sabha cannot initiate, reject or amend money bills.

(b) The Council of Ministers is responsible for Lok Sabha and not Rajya Sabha.

(c) Rajya Sabha can criticise the government but cannot remove it.

(d) A no-confidence motion can be moved by any member of the Rajya House.

Answer: (d)

39. Under the anti-defection amendment, who has the final authority to decide if a member of a House has become subject to disqualification under this law?

(a) Presiding officer of the House

(b) Prime Minister of India

(c) The President of India

(d) Chief Election Commissioner of India

Answer: (a)

40. Which of the following statements regarding 'collective responsibility' of the Indian Executive is true.
1-The Council of Ministers is collectively responsible for the Lok and Rajya Sabha.
2-It implies that a vote of no confidence even against a single minister leads to the resignation of the entire Council of Ministers.
3-It also indicates that if a minister does not agree with a policy or decision of the cabinet, he or she must either accept the decision or resign.

(a) Only 1

(b) Only 1 and 2

(c) Only 2

(d) Only 2 and 3

Answer: (d)

45. The average weight of 35 students in a class is 66 kg. Six students of average weight 58.5 kg leave the class and 11 students of average weight 68 kg join the class. What is the average weight (in kg) of the students in the class now?

(a) 66.375

(b) 66.5

(c) 67.675

(d) 68.5

Answer: (c)

46. The ratio of spirit and water in solutions A and B is 2 : 3 and 7 : 8, respectively. Six litres of A are mixed with 9 litres of B. What is the percentage of spirit in the resulting mixture?

(a) 40 %

(b) 44 %

(c) 52 %

(d) 56 %

Answer: (b)

48. Kapil saves 18 % of his income. If his income increases by 6.65 % and savings decrease by 20 %, then by what percent does his expenditure increase?

(a) 12 %

(b) 12.5 %

(c) 10.5 %

(d) 10 %

Answer: (b)

49. By selling an article at 72 % of its selling price, a shopkeeper loses 12 %. If he sells it at 10 % less than its original selling price, then what will be his profit percent?

(a) 10 %

(b) 12 %

(c) 9 %

(d) 8 %

Answer: (a)

50. The cost price of an article is ₹ 600. A shopkeeper sells it for ₹ 637.50, after giving a discount of 15 % on its list price. If he sells it after giving 5 % discount on its list price, then what is the profit percent?

(a) 15.5 %

(b) 16.25 %

(c) 18.75 %

(d) 19.5 %

Answer: (c)

53. X ,Y and Z enter into a partnership by investing their capitals in the ratio 8 : 5 : 4. At the end of a year, the profit was distributed among X, Y and Z in the ratio 6 : 3 : 2. What is the ratio of time for which X,Y and Z invested their capitals?

(a) 13 : 8 : 5

(b) 15 : 12 : 10

(c) 18 : 5 : 9

(d) 20 : 15 : 8

Answer: (b)

54. A certain sum amounts to ₹7,535 in 5 years at 4 % p.a. at simple interest. What will be amount (in ₹) of the same sum in one year at 20% p.a., if the interest is compounded half yearly?

(a) 6,413

(b) 6,534

(c) 6,655

(d) 7,920

Answer: (c)

55. A certain sum amounts to ₹15,435 in one year at 10% p.a., interest compounded half yearly. What will be the compound interest on the same sum in 3 years at the same rate of interest, compounded yearly?

(a) ₹ 4,524

(b) ₹ 4,554

(c) ₹ 4,624

(d) ₹ 4,634

Answer: (d)

57. A 360 m long train A passes a pole in 27 seconds, and passes completely another train B, running in opposite direction at 60 km/h, in 19 seconds. In how many seconds will train B cross completely a bridge of length 540 m?

(a) 36

(b) 40

(c) 42

(d) 45

Answer: (d)

58. Working together X, Y and Z can complete a certain work in 20 days. X and Y together can complete 40 % of it in 10 days and Y and Z together can complete it in 40 days. In how many days can X and Z complete 35 % of the original work?

(a) 9

(b) 10

(c) 12

(d) 15

Answer: (b)

61. Select the most appropriate option to fill in the blank. If no word is required, select 'No word required'.
Shanti selected _____ largest piece of her favourite cake.

(a) a

(b) the

(c) one

(d) No word required

Answer: (b)

62. Select the most appropriate option to fill in the blanks. If no word is required, select 'No word required'.
It was not ____ cold evening, so Kusum did not wear ___ warm jacket.

(a) the; no word required

(b) an; a

(c) a; a

(d) No word required; a

Answer: (c)

63. Select the most appropriate option to fill in the blank.
How _____ of you to solve the puzzle so fast!

(a) smart

(b) smarter

(c) smarting

(d) smartest

Answer: (a)

64. Select the most appropriate option to fill in the blank.
_____ we wore our raincoats, we were drenched in the downpour.

(a) Otherwise
(b) Because
(c) Even
(d) Although

Answer: (d)

65. Select the most appropriate option to fill in the blank.
Introduced in the year 1997, the Tatkal scheme enables passengers to book their train tickets one day in advance _____ the actual date of journey.

(a) to
(b) of
(c) with
(d) at

Answer: (b)

66. Select the most appropriate option to fill in the blank.
_____! I hit my foot on a stone there.

(a) Wow
(b) Whoa
(c) Ouch
(d) Alas

Answer: (c)

67. Select the most appropriate option to fill in the blanks.
The world around us is filled with sound. There are loud sounds and soft sounds. There are pleasant sounds and _____ sounds. At this very moment, you are surrounded by sound. Where does sound come from? How does it get to your ears? Why are there different kinds of sound? The study of these _____ about sound is called acoustics.

(a) horrid; demands
(b) unpleasant; questions
(c) friendly; quizzes
(d) repellent; suspicions

Answer: (b)

68. Select the most appropriate option to fill in the blanks.
A woodcutter was hard at work beside a river. He chopped down a tree and chopped off the branches, one by one. He _____ the small branches in one pile and the large branches in another pile. It was hard work, and he grew tired. By _____, he dropped his axe into the deep river.

(a) stacked; accident
(b) crammed; disaster
(c) squeezed; calamity
(d) mounded; design

Answer: (a)

69. Select the most appropriate option to fill in the blanks.
Born in London on 10 December 1815, Ada Lovelace, the daughter of the famous poet Lord Byron, was an extremely _____ mathematician. Later on in life, she would work closely with Charles Babbage, a popular mechanical engineer responsible for _____ one of the earliest mechanical computers.

(a) imprudent; ravaging
(b) cultured; trashing
(c) innate; establishing
(d) talented; creating

Answer: (d)

74. Select the most appropriate ANTONYM of the given word to fill in the blank.
Indistinct
Her handwriting was so ____ that every word stood out.

(a) soft
(b) large
(c) clear
(d) forward

Answer: (c)

76. The most appropriate title of this passage is:

(a) The temper of the Turtle-dove
(b) The story of the Magpie's Nest
(c) Why birds build their nests
(d) The Sparrow and the Turtle-dove

Answer: (b)

77. Out of the given options, who left the nest-building class first?

(a) Turtle-Dove
(b) Owl
(c) Sparrow
(d) Magpie

Answer: (b)

101. Which of the following is a good safety practice?

(a) Using water pipe for earthing
(b) Using wooden handle screwdriver while working with electric circuits
(c) Stopping the rotating motor with hand
(d) Touching bare conductors

Answer: (b)

102. The safety sign for showing the risk of electric shock is an example of:

(a) Mandatory sign
(b) Prohibition sign
(c) Information sign
(d) Warning sign

Answer: (d)

103. The meaning of _____ is that "It must not be done".

(a) Mandatory sign
(b) Prohibition sign
(c) Information sign
(d) Warning sign

Answer: (b)

104. Which of the following sign is an example of the prohibition sign?

(a) Risk of explosion
(b) Risk of fire
(c) No smoking
(d) First aid point

Answer: (c)

105. Water can be used as the fire extinguisher if the [illegible] involves:

(a) Ordinary combustible like wood and paper
(b) Electrical equipment
(c) Flammable liquids
(d) Flammable gases

Answer: (a)

106. If the fire is due to flammable gases, which of the following fire extinguisher is most suitable?

(a) Water
(b) Foam
(c) Dry powder
(d) Carbon dioxide

Answer: (c)

107. State TRUE/ FALSE for following statements:
1. Foam and water cannot be used as fire extinguisher on electrical equipment.
2. Halon extinguishers may be filled with carbon-tetrachloride and Bromochlorodifluoromethane.

(a) True, True
(b) False, False
(c) True, False
(d) False, True

Answer: (a)

108. A 50 Ω resistor is connected in series with a 100 Ω resistor. What will be the effective resistance of the series connection?

(a) 25 Ω

(b) 50 Ω

(c) 100 Ω

(d) 150 Ω

Answer: (d)

109. A 200 Ω resistor is connected in parallel with another 200 Ω resistor. What will be the effective resistance of the parallel connection?

(a) 25 Ω

(b) 50 Ω

(c) 100 Ω

(d) 150 Ω

Answer: (c)

115. The mass of the substance liberated or deposited at any electrode during electrolysis is:

(a) Inversely proportional to the time for which current is passed

(b) Inversely proportional to the current passed through the electrolyte

(c) Directly proportional to the time for which curre is passed

(d) Independent of the time for which current is p sed

Answer: (c)

116. Which of the following is NOT an applic Mercury cell?

(a) Digital watches

(b) Calculators

(c) Hearing aids

(d) Automobile ignition battery

Answer: (d)

117. Which of the following is NOT a characteristic of primary cell?

(a) Cheaper than secondary cell

(b) Light in weight

(c) Rechargeable

(d) Can not supply large voltage

Answer: (c)

118. The bending of electrodes due to overcharging and discharging, improper electrolyte and temperature is known as _____.

(a) Sulphation
(b) Buckling
(c) Trickle charging
(d) Polarization

Answer: (b)

119. A battery-operated circuit requires 12 V and a capacity of 8 AH. Cells rated at 1.5 V and 2 AH are available to do the job. The required arrangement of cells would be _____ cells in series and _____ parallel rows, respectively.

(a) 8, 4
(b) 4, 8
(c) 6, 6
(d) 8, 8

Answer: (a)

120. Which of the following is not a valid type of circuit breaker?

(a) ELCB
(b) MCB
(c) RCCB
(d) KCCB

Answer: (d)

121. MCCB stands for _____ circuit breaker.

(a) Medium Current
(b) Molded Case
(c) Maximum Current
(d) Minimum Current

Answer: (b)

122. For the protection of the circuits with resistive loads, _____ MCBs are designed.

(a) 'L' Series
(b) 'R' series
(c) 'D' series
(d) 'A' series

Answer: (a)

124. Which of the following is NOT a property of a magnet?

(a) Like poles repel each other
(b) Unlike poles attract each other
(c) Every magnet has two poles
(d) The pole strength of North pole is always higher than south pole

Answer: (d)

125. The mutual inductance between two coils placed close to each other is inversely proportional to the _____.

(a) Number of turns in both coil

(b) Permeability of the free space

(c) Length of the coil

(d) Cross sectional area

Answer: (c)

126. Four inductors having inductances of 10 mH, 5 mH, 5 mH and 2 mH are connected in parallel. Find the total inductance of the parallel combination.

(a) 10 mH

(b) 1 mH

(c) 22 mH

(d) 7 mH

Answer: (b)

127. A 40 mH coil is connected in series with a 90 mH coil. If the mutual inductance between the two coils is 30 mH, find the coefficient of coupling.

(a) 0.5

(b) 0.6

(c) 0.7

(d) 0.8

Answer: (a)

128. How much work is done in moving a charge of 2 C across two points having a potential difference of 10 V?

(a) 5 J

(b) 20 J

(c) 40 J

(d) 200 J

Answer: (b)

129. Calculate the current passing through a resistor of 500 Ω if the power consumed in it is 0.8 W.

(a) 10 mA

(b) 20 mA

(c) 40 mA

(d) 80 mA

Answer: (c)

130. In an AC circuit, the apparent power is 500 VA and active power is 400W. Find the reactive power.

(a) 100 VAR
(b) 200 VAR
(c) 300 VAR
(d) 400 VAR

Answer: (c)

131. In an AC circuit, the active power and reactive power are equal. Find the power factor of the circuit.

(a) 0.5
(b) 0.707
(c) 0.8
(d) 0.6

Answer: (b)

133. The power factor of an ideal transformer should be:

(a) Zero
(b) Unity
(c) 0.5
(d) 0.9

Answer: (a)

134. Which of the following is WRONG for an ideal t sformer?

(a) Windings have no ohmic resistance
(b) No magnetic leakage
(c) 100 % efficiency
(d) Permeability of core is zero

Answer: (d)

135. The primary current in a current transformer is 300 A and there are 2 turns in the primary. To circulate 5 A current in the secondary, the number of secondary turns should be _____.

(a) 60
(b) 120
(c) 200
(d) 400

Answer: (b)

136. To identify the earth leakage fault in cables, _____ is the mostly preferred instrument.

(a) Voltmeter
(b) Ammeter
(c) Megger
(d) Energy meter

Answer: (c)

137. Rod electrodes made up of steel or galvanized iron shall be at least _____ in diameter.

(a) 12 mm

(b) 16 mm

(c) 25 mm

(d) 35 mm

Answer: (b)

138. The earth tester works on the principle of _____.

(a) the fall of potential method

(b) Kirchhoff's current law

(c) the rise of potential method

(d) Kirchhoff's voltage law

Answer: (a)

139. As per IE rules, all earthing systems belonging to the supplier shall be tested for resistance on a dry day during the dry season not less than _____.

(a) once every year

(b) once every two years

(c) Twice every year

(d) Once every five years

Answer: (b)

140. Two identical fluorescent tubes – each of 20 W ...e connected in series. The rating of the choke required is _____.

(a) 10 W

(b) 20 W

(c) 40 W

(d) 80 W

Answer: (c)

141. In DC operation of the fluorescent tube, the life of the tube decreases by about _____ as that with AC operation.

(a) 80 %

(b) 60 %

(c) 50 %

(d) 40 %

Answer: (a)

142. Following are the pairs of different types of lamps and their application. Which pair is wrong?

(a) Carbon lamp – as cinema projector lamp

(b) Sodium vapour lamp – as night lamp

(c) Neon discharge lamp – as indicator lamp

(d) Mercury vapour lamp – for industrial lighting

Answer: (b)

143. Among the following, which one is a not an insulator?

(a) Mica
(b) Glass
(c) Rubber
(d) Germanium

Answer: (d)

146. The ripple frequency of the bridge rectifier is 120 Hz. What will be the frequency of the supply?

(a) 30 Hz
(b) 60 Hz
(c) 90 Hz
(d) 120 Hz

Answer: (b)

147. Universal motor cannot be used for _____.

(a) Food mixer
(b) Hand drill
(c) Hair drier
(d) Power factor corrector

Answer: (d)

148. Which of the following method can NOT be used speed control of universal motor?

(a) Field flux control
(b) Frequency control
(c) Variable resistance control
(d) Centrifugal system control

Answer: (b)

149. A 4-pole, 50 Hz single phase induction runs with a forward slip of 0.1. Find the backward slip.

(a) 2.1
(b) 1.9
(c) 0.9
(d) 0.1

Answer: (b)

150. Which of the following motor can be best choice for signaling and timing devices?

(a) DC series motor
(b) DC compound motor
(c) Synchronous motor
(d) Reluctance motor

Answer: (d)

151. The frequency of the voltage generated by an alternator having 4-poles and rotating at 1200 rpm is _____.

(a) 40 Hz
(b) 50 Hz
(c) 60 Hz
(d) 100 Hz

Answer: (a)

153. Synchroscope method is used for _____ an alternator.

(a) Starting
(b) Breaking
(c) Synchronizing
(d) Reversing the rotation of

Answer: (c)

154. At zero power factor leading load, the armature reaction in alternator is:

(a) Purely demagnetizing
(b) Purely magnetizing
(c) Cross magnetizing
(d) Partly demagnetizing and partly cross magnetizing

Answer: (b)

155. State TRUE/FALSE for following statements:
1. All synchronous generators are invariably delta connected machines.
2. Field system of an alternator is usually excited from DC supply.

(a) True, True
(b) False, False
(c) False, True
(d) True, False

Answer: (c)

156. State TRUE/FALSE for following statements:
1. Salient pole type rotors are used in turbo alternators.
2. Cylindrical rotor type alternators are driven by solar cell.

(a) True, True
(b) False, False
(c) False, True
(d) True, False

Answer: (b)

157. Which of the following machine can be used for increasing the power factor?

(a) Synchronous motor

(b) DC shunt motor

(c) Single phase induction motor

(d) Stepper Motor

Answer: (a)

158. Which of the following parameter is plotted on x-axis in V-curves of synchronous motor?

(a) Armature current

(b) Field current

(c) Power factor

(d) Load

Answer: (b)

159. Which of the following statement is correct for synchronous motor?

(a) It can be operated on leading as well as lagging power factor.

(b) It does not require DC excitation.

(c) It is a self-starting machine

(d) The power factor is independent of load.

Answer: (a)

160. A synchronous motor running at 1800 rpm is ope ed with the supply frequency of 60 Hz. Find the number of poles.

(a) 8

(b) 6

(c) 4

(d) 2

Answer: (c)

161. Which of the following condition corresponds to minimum armature current in synchronous motor?

(a) Leading power factor, half load

(b) Leading power factor, full load

(c) Lagging power factor, full load

(d) Unity power factor, no load

Answer: (d)

162. Which parameters are plotted n Y-axis in case of inverted V-curves and V-curves, respectively?

(a) Power factor, armature current

(b) Armature current, field current

(c) Field current, power factor

(d) Armature current, power factor

Answer: (a)

164. For a 4-pole DC machine having duplex lap winding, total number of parallel paths between the brushes are _____.

(a) 2
(b) 4
(c) 8
(d) 16

Answer: (c)

165. After a motor is rewound, the windings must be further insulated with _____.

(a) Rubber
(b) Varnish
(c) Paper
(d) Oil

Answer: (b)

166. The input signal to the inverter circuit is _____.

(a) Constant DC voltage
(b) Pulsating DC voltage
(c) High frequency AC voltage
(d) Low frequency AC voltage

Answer: (a)

167. How many SCRs are required in single-phase ha wave controlled rectifier?

(a) 0
(b) 1
(c) 2
(d) 4

Answer: (b)

168. A 3-phase half-wave rectifier is supplied with a 440 V, 60 Hz supply. Find the output ripple frequency.

(a) 30 Hz
(b) 60 Hz
(c) 120 Hz
(d) 180 Hz

Answer: (d)

169. Which of the following method can NOT be used for the speed control of squirrel cage induction motor?

(a) Stator voltage control
(b) Stator frequency control
(c) Stator current control
(d) Rotor resistance control

Answer: (d)

170. Nichrome wire is an alloy of:

(a) Nickel and Aluminium

(b) Nickel and Copper

(c) Nickel and Chromium

(d) Nickel and iron

Answer: (c)

171. In microwave oven cooking of food is done with the help of microwave energy of _____ frequency.

(a) 2450 GHz

(b) 2450 MHz

(c) 2450 kHz

(d) 2450 Hz

Answer: (b)

172. Which of the following is not a part of electric bell?

(a) Electromagnet

(b) Gong

(c) Armature

(d) Sole plate

Answer: (d)

173. In a food mixer, the minimum acceptable insulat resistance value is _____.

(a) 10 Ω

(b) 1 kΩ

(c) 1 MΩ

(d) 100 Ω

Answer: (c)

174. Which of the following is not a characteristic of cleat wiring?

(a) High capital cost

(b) Easy fault detection

(c) Easy to repair

(d) Used for temporary purpose

Answer: (a)

177. State TRUE/FALSE for following statements related to energy meter installation:
1. It should preferably be not installed below 1 m from the ground.
2. No meter shall register at no load.

(a) True, False

(b) False, True

(c) True, True

(d) False, False

Answer: (c)

178. In which power plant uranium is used as fuel?

(a) Nuclear power plant

(b) Hydroelectric power plant

(c) Diesel power plant

(d) Solar power plant

Answer: (a)

179. Which part of the hydroelectric power plant overcomes the abnormal pressure in the conduit when load on the turbine falls and acts as a reservoir during increase of load on the turbine?

(a) Penstock

(b) Dam

(c) Surge tank

(d) Spillway

Answer: (c)

180. Which of the following is NOT a part of coal handling and coal preparation system in thermal power plant?

(a) Ball mill

(b) Crusher

(c) Separator

(d) Chimney

Answer: (d)

181. Which of the following type of draught is produced by the chimney in thermal power plant?

(a) Induced draught

(b) Forced draught

(c) Natural draught

(d) Balanced draught

Answer: (c)

182. Reflectors of a nuclear reactor are made up of:

(a) Boron

(b) Cast iron

(c) Steel

(d) Beryllium

Answer: (d)

183. A power plant has load factor = 0.75 and capacity factor = 0.60. If the maximum demand is 200 MW, find the plant capacity.

(a) 200 MW

(b) 250 MW

(c) 275 MW

(d) 350 MW

Answer: (b)

184. Usually, power transmission over long distances is carried out by using _____.

(a) Overhead lines

(b) Underground lines

(c) Wireless transmission system

(d) Fiber optic lines

Answer: (a)

185. As compared to copper conductors, which of the following is not a valid drawback of aluminium conductors?

(a) Smaller tensile strength

(b) Smaller conductivity

(c) Higher cost

(d) Higher coefficient of linear expansion

Answer: (c)

186. In cadmium conductors, the addition of 1% or 2% cadmium in copper increases the tensile strength by about _____.

(a) 5 %

(b) 15 %

(c) 25 %

(d) 50 %

Answer: (d)

187. Which of the following part is not present in dis ution system?

(a) Step up transformer

(b) Feeder

(c) Distributor

(d) Service mains

Answer: (a)

188. Which of the following statement is TRUE for Ferranti-effect?

(a) Receiving end voltage is zero

(b) Sending end voltage is zero

(c) Receiving end voltage is greater than sending end voltage

(d) Sending end voltage is greater than receiving end voltage

Answer: (c)

189. A 3-phase induction motor has supply frequency of 60 Hz. When the rotor is stationary, the frequency of rotor current is _____.

(a) 0 Hz

(b) 30 Hz

(c) 60 Hz

(d) 120 Hz

Answer: (c)

190. In induction motor, which of the following part can be made up of cast iron?

(a) Stator frame

(b) Stator winding

(c) Rotor winding

(d) Brushes

Answer: (a)

191. Which of the following statement is wrong for 3 phase induction motor?

(a) It is a self-starting machine.

(b) It has high efficiency.

(c) It always runs at a speed less than its synchronous speed.

(d) The direction of rotation cannot be reversed.

Answer: (d)

192. Which of the following is not correct for squirrel cage induction motor?

(a) Simple construction

(b) Low power factor

(c) High efficiency

(d) Low cost

Answer: (b)

193. A 4-pole, 3-phase induction motor is supplied th gh a 50 Hz supply. If it runs at the speed of 1410 rpm, Find the slip.

(a) 3 %

(b) 4 %

(c) 5 %

(d) 6 %

Answer: (d)

194. State TRUE/FALSE for following statements:
1. Pole changing method of speed control is suitable for cage motors only.
2. Rotor resistance control method is possible with wound rotor only.

(a) True, True

(b) True, False

(c) False, True

(d) False, False

Answer: (a)

195. Which of the following circuit can NOT be used for obtaining variable frequency supply for induction motor?

(a) Cycloconverter

(b) Voltage source inverter

(c) Current source inverter

(d) Chopper

Answer: (d)

196. Quad is the term used to indicate the group of _____ insulated conductors.

(a) 2
(b) 4
(c) 6
(d) 8

Answer: (b)

197. In case of ICDP main switch, the meaning of ICDP is _____.

(a) Iron Clad Double Pole
(b) Insulated Core Double Pole
(c) Insulated Cable Double Pole
(d) Instant Cutoff Double Pole

Answer: (a)

199. The maximum length of the flexible conduit in motor installation should be less than _____.

(a) 10 m
(b) 5 m
(c) 2.5 m
(d) 1.25 m

Answer: (d)

200. In which of the following power plant the source power is unlimited?

(a) Diesel power plant
(b) Steam power plant
(c) Nuclear power plant
(d) Solar power plant

Answer: (d)

Answer key

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

General

1	**(c)**	2	**(b)**	3	**(a)**	4	**(c)**	5	**(d)**	6	**(d)**	7	**(a)**	8	**(c)**
9	**(b)**	10	**(a)**	11	**(d)**	12	**(c)**	13	**(b)**	14	**(c)**	15	**(b)**	16	**(b)**
17	**(d)**	18	**(a)**	21	**(a)**	22	**(d)**	23	**(b)**	24	**(b)**	25	**(c)**	26	**(a)**
27	**(b)**	28	**(c)**	29	**(d)**	30	**(c)**	31	**(b)**	32	**(a)**	33	**(b)**	34	**(d)**
35	**(d)**	36	**(a)**	37	**(b)**	38	**(d)**	39	**(a)**	40	**(d)**	45	**(c)**	46	**(b)**
48	**(b)**	49	**(a)**	50	**(c)**	53	**(b)**	54	**(c)**	55	**(d)**	57	**(d)**	58	**(b)**
61	**(b)**	62	**(c)**	63	**(a)**	64	**(d)**	65	**(b)**	66	**(c)**	67	**(b)**	68	**(a)**
69	**(d)**	74	**(c)**	76	**(b)**	77	**(b)**	101	**(b)**	102	**(d)**	103	**(b)**	104	**(c)**
105	**(a)**	106	**(c)**	107	**(a)**	108	**(d)**	109	**(c)**	115	**(c)**	116	**(d)**	117	**(c)**
118	**(b)**	119	**(a)**	120	**(d)**	121	**(b)**	122	**(a)**	124	**(d)**	125	**(c)**	126	**(b)**
127	**(a)**	128	**(b)**	129	**(c)**	130	**(c)**	131	**(b)**	133	**(a)**	134	**(d)**	135	**(b)**
136	**(c)**	137	**(b)**	138	**(a)**	139	**(b)**	140	**(c)**	141	**(a)**	142	**(b)**	143	**(d)**
146	**(b)**	147	**(d)**	148	**(b)**	149	**(b)**	150	**(d)**	151	**(a)**	153	**(c)**	154	**(b)**
155	**(c)**	156	**(b)**	157	**(a)**	158	**(b)**	159	**(a)**	160	**(c)**	161	**(d)**	162	**(a)**
164	**(c)**	165	**(b)**	166	**(a)**	167	**(b)**	168	**(d)**	169	**(d)**	170	**(c)**	171	**(b)**
172	**(d)**	173	**(c)**	174	**(a)**	177	**(c)**	17	**(a)**	179	**(c)**	180	**(d)**	181	**(c)**
182	**(d)**	183	**(b)**	184	**(a)**	185	**(c)**	1	**(d)**	187	**(a)**	188	**(c)**	189	**(c)**
190	**(a)**	191	**(d)**	192	**(b)**	193	**(d)**	1	**(a)**	195	**(d)**	196	**(b)**	197	**(a)**
199	**(d)**	200	**(d)**												