PREVIOUS YEAR PAPER

DSSSB Technical Assistant (Electrical) 2021 — 5 September 2021, Shift 2

DSSSB Other Posts · 5 September 2021 · Shift 2

164 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: 36 (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 5 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-technical-assistant-electrical-5-sep-shift-2/

General Ability

1. Complete the following series.
U, Q, M, I, E, ?

(a) Z
(b) D
(c) B
(d) A

Answer: (d)

2. Complete the following series.
_abc_ab_xa_cxa_c

(a) xcxbb
(b) xxcbb
(c) cxcbb
(d) bcxcb

Answer: (b)

3. Out of the given options, three are similar in a certain manner. However, one option is NOT like the other three. Select the option which is different from the rest.

(a) motorcycle
(b) scooter
(c) autorickshaw
(d) moped

Answer: (c)

4. Out of the given options, three are similar in a certain manner. However, one option is NOT like the other three. Select the option which is different from the rest.

(a) Barley
(b) Millet
(c) Corn
(d) Mustard

Answer: (d)

5. Select the option that is related to the third term on the same basis as the second term is related to the first term.
GTA : IRC :: JDV : ?

(a) KCW
(b) LCX
(c) LBX
(d) KBX

Answer: (c)

6. Select the option that is related to the third term on the same basis as the second term is related to the first term.
Son : Daughter :: Bull : ?

(a) Ass
(b) Buffalo
(c) Ox
(d) Cow

Answer: (d)

7. If 'INDIAN' is coded as '125132' and 'TREAD' is coded as '68935' then the word 'TREND' will be coded as?

(a) 69852
(b) 68925
(c) 89625
(d) 98256

Answer: (b)

8. If 'HEIGHT' is coded as '$*%#@&' and 'FIT' is coded as '!%&' then what is the code for 'FIGHT'?

(a) *&%#@
(b) %&*$#
(c) #$%&!
(d) !%#@&

Answer: (d)

9. Fiza introduced Monu to her husband saying, "His brother's father is the only son of my paternal grandfather". How is Fiza related to Monu?

(a) Father's Sister

(b) Sister

(c) Brother

(d) Mother

Answer: (b)

10. Four boys are sitting to on a bench. Shekhar is to the immediate left of Rishi. Manoj is to the right of Rishi. Vishal is between Rishi and Manoj.
Whose position will be second from the left?

(a) Shekhar

(b) Rishi

(c) Manoj

(d) Vishal

Answer: (b)

11. In the question two statements are given, followed by two conclusions, I and II. You have to consider the statements to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.
Statement 1 : Some hens are cows.
Statement 2 : Some cows are horses.
Conclusion I : Some cows are hens.
Conclusion II : Some hens are horses.

(a) Only conclusion I follows

(b) Only conclusion II follows

(c) Both conclusion I and II follow

(d) Neither conclusion I nor II follows

Answer: (a)

12. In the question one statement is given, followed by two assumptions, I and II. You have to consider the statements to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given assumptions, if any, follows from the given statement.
Statement : Reeta's condition would improve after this operation.
Assumptions I : Reeta can be operated in this condition.
Assumptions II : Reeta cannot be operated in this condition.

(a) Only assumption I is implicit

(b) Only assumption II is implicit

(c) Both I and II are implicit

(d) Neither I nor II is implicit

Answer: (a)

13. Select the option that is related to the third number on the same basis as the second number is related to the first number.
76354 : 98576 :: 34216 : ?

(a) 47132
(b) 78692
(c) 56438
(d) 59463

Answer: (c)

General Awareness

21. The Shalimar Garden in Jammu and Kashmir was built by _____.

(a) Jahangir
(b) Babur
(c) Akbar
(d) Shah Jahan

Answer: (a)

22. The Nehru Trophy Boat Race, also called the Vallam Kali, is an annual boat race that takes place with traditional snake boats in _____.

(a) Tamil Nadu
(b) Andhra Pradesh
(c) Kerala
(d) Karnataka

Answer: (c)

23. As announced in the Budget 2021, the Madurai-Kollam corridor and Chittoor-Thatchur corridor will be constructed in _____.

(a) Andhra Pradesh
(b) Karnataka
(c) Kerala
(d) Tamil Nadu

Answer: (d)

24. Which among the following banks has been named by Forbes in their list of World's Best Banks 2021?

(a) ICICI Bank
(b) HDFC Bank
(c) DBS Bank
(d) CSB Bank

Answer: (c)

25. Electrum is the alloy of gold and _____.
    (a) zinc
    (b) silver
    (c) aluminium
    (d) iron
    Answer: (b)

26. Which among the following is a hormonal disease?
    (a) Goitre
    (b) Malaria
    (c) Cholera
    (d) Rickets
    Answer: (a)

27. The _____ are also known as Sahyadri hills.
    (a) Eastern Ghats
    (b) Western Ghats
    (c) Aravalli
    (d) Vindhya
    Answer: (b)

28. The longest river of which of the following continents is Volga?
    (a) Europe
    (b) South America
    (c) North America
    (d) Asia
    Answer: (a)

29. The Indian Association was founded in 1876 by Surendranath Banerjee and Ananda Mohan Bose in _____.
    (a) Madras
    (b) Poona
    (c) Calcutta
    (d) Bombay
    Answer: (c)

30. When was the first battle of Tarain fought?
    (a) 1195
    (b) 1191
    (c) 1204
    (d) 1185
    Answer: (b)

31. Who among the following Governor General was the first person to codify Laws in 1793?

(a) Lord Curzon
(b) Lord Dalhousie
(c) Lord Hastings
(d) Lord Cornwallis

Answer: (d)

32. The headquarters of International Committee of the Red Cross is located in _____.

(a) Geneva
(b) New York
(c) Paris
(d) Spain

Answer: (a)

33. Which among the following books was NOT written by Munshi Premchand?

(a) Kaya Kalp
(b) Seva Sadan
(c) Vardaan
(d) Meghdoot

Answer: (d)

34. Which among the following states launched Sishu va Achoni for COVID-19 Orphans in June 2021?

(a) Assam
(b) West Bengal
(c) Sikkim
(d) Tripura

Answer: (a)

35. As per Indian Meteorological Department (IMD), _____ 2021 received second highest rainfall in 121 years.

(a) April
(b) March
(c) January
(d) May

Answer: (d)

36. Which among the following cities has been ranked as the most liveable cities in the world according to the Global Liveability Index 2021?

(a) Osaka
(b) Auckland
(c) Adelaide
(d) Tokyo

Answer: (b)

37. The feature of 'Prerogative Writs' in the Indian Constitution is borrowed from the Constitution of _____.

(a) United Kingdom
(b) United States of America
(c) France
(d) South Africa

Answer: (a)

38. India's first general election for the Lok Sabha was conducted in _____.

(a) 1962-63
(b) 1958-59
(c) 1951-52
(d) 1955-56

Answer: (c)

39. BharatPe has announced that it has inked a _____ year-long deal to become an official partner with International Cricket Council (ICC) announced in June 2021.

(a) five
(b) two
(c) four
(d) three

Answer: (d)

40. The Athletics Federation of India (AFI), announc that the Indian Grand Prix 4 will be held on June 21 at the National Institute of Sports i _ _.

(a) Assam
(b) Gujarat
(c) Punjab
(d) Rajasthan

Answer: (c)

Arithmetic Ability

41. Using BODMAS rule, simplify the expression.
(302 + 485) - 360/2 × 2 + 3

(a) 430
(b) 3035
(c) 485
(d) 845

Answer: (a)

42. Evaluate the value (0.8^3) - (0.7^3) + 0.89 + (0.3^2) - (0.2^3).
(The symbol ^ means to the power of)

(a) 1.414
(b) 1.141
(c) 1.161
(d) 1.09

Answer: (b)

43. A bill is of 15500. A discount of 50% and 40% is applied to two different customers. What is the difference between the discounts?

(a) ₹ 6200
(b) ₹ 3100
(c) ₹ 9300
(d) ₹ 1550

Answer: (d)

44. A cricketer scored 120 runs with 2 boundaries and 5 sixes. What percentage of runs did he score by running between the wickets?

(a) 68.33%
(b) 31.67%
(c) 66.67%
(d) 25%

Answer: (a)

45. A student divided a number with 7/9 in[illegible]d o[illegible]. What is the percentage error?

(a) 65.30%
(b) 39.50%
(c) 60%
(d) 50%

Answer: (a)

46. The selling price of x articles is same as the cost price of 25 articles. The profit margin is 25%, how much is the value of x?

(a) 25
(b) 30
(c) 20
(d) 15

Answer: (c)

47. If the selling price gets 4 times, the profit becomes 8 times. What is the original profit percentage?

(a) 65%

(b) 75%

(c) 50%

(d) 40%

Answer: (b)

48. A and B have ₹ 25000 in total. If 1/5 of A's amount is equal to 3/5 of B's amount than how much B have?

(a) ₹ 18750

(b) ₹ 5000

(c) ₹ 6250

(d) ₹ 15000

Answer: (c)

49. A sum of money is distributed among W, X, Y, Z in the proportion of 3 : 4 : 8 : 6. If Y got ₹ 500 less than four times of X, what is the share of half of Z?

(a) ₹ 187.5

(b) ₹ 62.5

(c) ₹ 375

(d) ₹ 150

Answer: (a)

50. A person borrows a sum of ₹ 1000 rupees. What is the difference between the maturity amounts if he invests half at a compound interest of 10% for 2 years and the other half at 10% simple interest for three years.

(a) ₹ 155

(b) ₹ 15.5

(c) ₹ 1550

(d) ₹ 1.55

Answer: (b)

51. Simple interest rate for two sums of money is the same. The first sum of money is for a duration of 3 years and second is for a duration of 4 years. If the interest amount is same, what are the principle amounts, given that the principal amounts add up to ₹ 1000?

(a) ₹ 250, ₹ 750

(b) ₹ 3000/7, ₹ 4000/7

(c) ₹ 2000/6, ₹ 4000/6

(d) ₹ 1500/6, ₹ 4500/6

Answer: (b)

52. X crosses a 800 m long street in 10 minutes. What is the speed of X in Km per hour?

(a) 8.4

(b) 8

(c) 80

(d) 4.8

Answer: (d)

53. A walks for 10 minutes at a speed 12 km/h. After that he walks for 10 more minutes at a speed of 18 km/h. What is the total distance covered by A in meters?

(a) 500

(b) 5000

(c) 5

(d) 50

Answer: (b)

54. A can lay a road in 15 days and B can do the same task in 5 days. How much time will A & B will take together to complete the task?

(a) 10 days

(b) 3.75 days

(c) 4.5 days

(d) 3 days

Answer: (b)

55. A can lay a road in 8 days and B can do the sam[illegible]ask in 10 days. With help of C they can do it in 3 days. In how much time, C can complete [illegible]ob?

(a) 15 days

(b) 9.23 days

(c) 10 days

(d) 10.41 days

Answer: (b)

56. 22 cubic centimetres of silver is used to create a wire. The radius of the wire is 1 cm. What is the length of the wire?

(a) 7 cm

(b) 22 cm

(c) 14 cm

(d) 10 cm

Answer: (a)

57. Find the length of the longest pole that can be place under a room that is 8 meter long, 7 meter broad and 10 meter high.

(a) 14.59 metres

(b) 10 metres

(c) 12.8 metres

(d) 15.51 metres

Answer: (a)

General English

81. The sentence below has been divided into three parts. Select the part of the sentence that has an error. If the sentence has no error, select the option 'No Error'.
Contamination may effect/ a person, a place, an animal,/ or an object such as clothing.

(a) Contamination may effect

(b) a person, a place, an animal,

(c) or an object such as clothing.

(d) No Error

Answer: (a)

82. The sentence below has been divided into three parts. Select the part of the sentence that has an error. If the sentence has no error, select the option 'No Error'.
In the standards segment of/ the CD, he pays tribute to four keyboardists/ who he greatly admires.

(a) In the standards segment of

(b) the CD, he pays tribute to four keyboardists

(c) who he greatly admires.

(d) No Error

Answer: (c)

83. Select the word segment that substitutes (replaces) the bracketed word segment correctly and completes the sentence meaningfully. Select the option 'no correction required' if the sentence is correct as given.
Until we embrace this belief our culture has little hope (in surviving beyond it's present state of) unrestrained hostility.

(a) in surviving beyond it's present state off

(b) of surviving beyond it's present state of

(c) of surviving beyond its present state of

(d) No correction required

Answer: (c)

84. Select the word segment that substitutes (replaces) the bracketed word segment correctly and completes the sentence meaningfully. Select the option 'no correction required' if the sentence is correct as given.
(This year's winner of Mr. Olympia have also been) the target of the waggling fingers of keyboard warriors.

(a) This years' winner of Mr. Olympia have also been

(b) This year's winner of Mr. Olympia has also been

(c) This year's winner of Mr. Olympia are also being

(d) No correction required

Answer: (b)

85. Fill in the blank with the most appropriate choice.
If you were lucky enough to buy that particular technology stock early on, then soon you will be receiving some _____ rewards.

(a) insufficient

(b) inefficient

(c) munificent

(d) proficient

Answer: (c)

86. Fill in the blank with the most appropriate choice.
The economy is looking _____ as our currency becomes less valuable.

(a) vicarious

(b) precarious

(c) gregarious

(d) contrarious

Answer: (b)

87. Some parts of a sentence have been jumbled up, and labelled P, Q, R and S. Select the option that gives the correct sequence in which these parts can be rearranged to form a meaningful and grammatically correct sentence.
This stuff doesn't merely
P. rhymes but lashes out
Q. predictable, danceable nursery
R. placate the listener with
S. and lacerates the
eardrum relentlessly.

(a) RPSQ

(b) RQSP

(c) RQPS

(d) RSPQ

Answer: (c)

88. Select the word that is SYNONYM (similar in meaning) to the word given below. placate

(a) reconcile

(b) irritate

(c) provoke

(d) incite

Answer: (a)

89. Select the word that is ANTONYM (opposite in meaning) to the word given below. salubrious

(a) salutary

(b) unhealthy

(c) invigorating

(d) confront

Answer: (b)

90. Four words are given, out of which only one word is spelt correctly. Choose the CORRECTLY spelt word.

(a) chicanery

(b) chicenery

(c) chicanary

(d) chicenary

Answer: (a)

91. Four words are given, out of which only one word is spelt correctly. Choose the CORRECTLY spelt word.

(a) coelesce

(b) coalesce

(c) coalese

(d) colesce

Answer: (b)

92. Select the most appropriate meaning of the given idiom.
Fool's Gold

(a) Iron pyrites, a worthless rock that resembles real gold.

(b) To be enraged and show it.

(c) A swap meet. A place where people gather to buy and sell inexpensive goods.

(d) An unbelievable tale.

Answer: (a)

93. Select the most appropriate meaning of the given idiom.
Against the clock

(a) In the order of; on the authority of

(b) Rushed and short on time

(c) Without making any distinction

(d) Suddenly, without warning

Answer: (b)

94. Select the most appropriate 'one word ' for the expressions given below.
Opinions or beliefs of the majority

(a) Vox populi
(b) Vociferous
(c) Vicissitude
(d) Vicarious

Answer: (a)

95. Select the most appropriate 'one word ' for the expressions given below.
In exactly the same words as were used originally

(a) Vague
(b) Verbatim
(c) Venial
(d) Veer

Answer: (b)

96. Which of the following is NOT a tourist attraction of Lake Condah?

(a) Aboriginal technology
(b) Fish trapping systems
(c) Aboriginal remains
(d) Aboriginal engineering

Answer: (c)

98. _____ fishing method has scarcely changed over the course of time.

(a) salmon
(b) eel
(c) tuna
(d) swordfish

Answer: (b)

100. What does the line "Not all of the stones were quarried locally" mean?

(a) All stones were extracted from the same quarry.
(b) Not all stones were gathered from the region of Lake Condah
(c) Not all stones circles in the region of Lake Condah were to trap fishes.
(d) Not all stones were stored from the region of Lake Condah

Answer: (b)

Discipline1

101. The command given to the computer to perform a particular task is known as _____.

(a) data
(b) instruction
(c) information
(d) indicator

Answer: (b)

102. SMPS Stands for:

(a) Simple Mode Power Switch

(b) Simple Mode Power Supply

(c) Switch Mode Power Supply

(d) Single Mode power Supply

Answer: (c)

103. Which of the following is a Print Command?

(a) Ctrl + Shift + F1

(b) Ctrl + Shift + F2

(c) Ctrl + Shift + F9

(d) Ctrl + Shift + F12

Answer: (d)

104. Which of the following is used as an Extension for Program Files?

(a) .dll

(b) .txt

(c) .xls

(d) .com

Answer: (a)

105. In Lambert's law, the illumination of light is direct proportional to _____.

(a) cos 2 θ

(b) cosθ

(c) cos2θ

(d) cos 3 θ

Answer: (b)

106. Flux emitted by a lamp in all directions is 800 lumens, calculate its mscp.

(a) 300 ÷ π

(b) 500 ÷ 2π

(c) 200 ÷ π

(d) 400 ÷ π

Answer: (c)

107. Co-efficient of adhesion is ratio of:

(a) (tractive effort to slipwheels / adhesive effort)

(b) (adhesive effort / tractive effort)

(c) (total weight / adhesive effort)

(d) (effort during acceleration / effort during braking)

Answer: (a)

108. A suburban train has a maximum speed of 65 kmph and average speed is 49.5 kmph, if the acceleration is 1.3 kmphs. Find retardation if distance between stops is 3 km.

(a) 1.208 kmphs

(b) 2.1 kmphs

(c) 3.1 kmphs

(d) 4 kmphs

Answer: (a)

109. A capacitor has a Capacitance of 6 μF. Calculate the stored energy in it if a DC voltage of 30 V is across it.

(a) 2.9 mJ

(b) 1.7 mJ

(c) 2.7 mJ

(d) 5.7 mJ

Answer: (c)

110. The Voltage and current in an a.c circuit are given as v = 100 sin(10t), i = 6 sin(50t). Find the RMS Power of the Circuit.

(a) 20 W

(b) 3 W

(c) 10 W

(d) 300 W

Answer: (d)

111. A coil is resonance at 10 Hz with a capacitor, if the Quality factor and inductance of the coil are 10 and 4 H. Find the Resistance of the coil.

(a) 6 π

(b) 8 π

(c) 4 π

(d) 2 π

Answer: (b)

112. The reverse resistance of the diode can be expressed as:

(a) Rf = (ΔVr / ΔIr)

(b) R = (ΔV / ΔI) r r r

(c) Rf = (ΔIr / ΔVr)

(d) Rf = (ΔIr / ΔVs)

Answer: (b)

113. If the Junction temperature increases, Avalanche Breakdown voltage _____.

(a) increases

(b) decreases

(c) constant

(d) zero

Answer: (a)

114. In Armature resistance speed control method, both variable resistance and armature resistance are connected in _____.

(a) star
(b) parallel
(c) series
(d) delta

Answer: (c)

115. Hopkinson's test of D.C. Machines is conducted at _____.

(a) No Load
(b) Full Load
(c) Half Load
(d) 1/4 Load

Answer: (b)

116. Short-circuit ratio of a synchronous machine is inversely proportional to _____.

(a) Synchronous reactance
(b) Synchronous impedance
(c) Synchronous resistance
(d) Synchronous admittance

Answer: (a)

117. The ability of the motor to remain in Synchronism under rated load condition is Known as _____.

(a) Starting Torque
(b) Running Torque
(c) Pull-in-Torque
(d) Pull-out-Torque

Answer: (d)

118. To enable hardware and software interrupts to be acknowledged which of the following instruction is used?

(a) ENI
(b) DISI
(c) GTS
(d) MLS

Answer: (a)

119. Which of the following connections is used to link test and action graphic elements in parallel?

(a) direct
(b) indirect
(c) horizontal
(d) vertical

Answer: (d)

120. SCADA Stands for:

(a) Simple Control And Data Acquisition

(b) Supervisory Control And Data Acquisition

(c) Supervisory Command And Data Acquisition

(d) Source Control And Data Acquisition

Answer: (b)

Discipline2

121. Which of the following produces delay in PLC?

(a) Timer

(b) Counters

(c) Registers

(d) Memory

Answer: (a)

122. Which of the following Increments every time the input changes from false to true?

(a) RAM

(b) Timer

(c) Counter

(d) ROM

Answer: (c)

123. If the lengths of the sides of a triangle are 6 cr cm and 10 cm respectively. Find area of triangle in sq cm.

(a) 45

(b) 54

(c) 24

(d) 74

Answer: (c)

124. Find the value of sin 75°.

(a) [(√3 + 1) / 2√2]

(b) √8 / √3

(c) √2 +1

(d) √5 +1

Answer: (a)

125. The product of a Matrix and its inverse Matrix is:

(a) A Matrix

(b) 2A Matrix

(c) Null Matrix

(d) Identity Matrix

Answer: (d)

126. A machine gun fires 240 bullets per minute, mass of each bullet is 10 grams. If the power of the gun is 7.2 KW, then find the velocity of the bullet.

(a) 400 ms -1
(b) 300 ms -1
(c) 700 ms -1
(d) 600 ms -1

Answer: (d)

127. Which of the following have same dimensional formulae?

(a) Torque, Energy
(b) Power, Work
(c) Impulse, Force
(d) Velocity, Frequency

Answer: (a)

128. If the mass and velocity of the body is doubled, how does the kinetic energy change?

(a) increases by 2 times
(b) increases by 4 times
(c) increases by 8 times
(d) increases by 16 times

Answer: (c)

129. Specific Gravity of lead is:

(a) 10.22
(b) 20.22
(c) 11.35
(d) 40.35

Answer: (c)

130. A cell is discharged at 4 A for 12 hours and to regain it a charging current of 3 A for 20 hours is required. Calculate ampere hour efficiency.

(a) 60%
(b) 40%
(c) 50%
(d) 80%

Answer: (d)

131. Nichrome is an alloy of:

(a) Copper, Chromium, Aluminium
(b) Gold, Silver,Platinum
(c) Nickel, Chromium, Manganese
(d) Iron, Brass, Silver

Answer: (c)

132. In P-type semiconductor, Fermi level shifts towards _____.

(a) Valance band

(b) Conduction band

(c) P-region

(d) N-region

Answer: (a)

134. Maximum Compression ration of SI Engine is limited to _____.

(a) 10 : 1

(b) 12 : 7

(c) 5 : 1

(d) 4 : 5

Answer: (a)

135. Pressure range of fire tube boiler is _____.

(a) 23 bar to 35 bar

(b) 15 bar to 25 bar

(c) 10 bar to 18 bar

(d) 11 bar to 35 bar

Answer: (b)

138. Find inverse laplace transform of [5/(s + 3)].

(a) 5e (3t)

(b) 5e (5t)

(c) 5e (6t)

(d) 5e (-3t)

Answer: (d)

139. Which region of the transistor is moderately doped?

(a) Emitter

(b) Collector

(c) Base

(d) Base and Collector

Answer: (b)

140. Reverse recovery time of general purpose Diode is:

(a) 15 µS

(b) 45 µS

(c) 25 µS

(d) 50 µS

Answer: (c)

Discipline3

141. A sinusoidal voltage of Amplitude 10 V and frequency 50 Hz is applied to Half wave Rectifier. The Load resistor is 500 Ω. Compute RMS value of Load current.

(a) 50 mA
(b) 75 mA
(c) 10 mA
(d) 20 mA

Answer: (c)

142. A sinusoidal voltage of $100/\sqrt{2}$, 40 Hz is applied to Full wave Rectifier. Compute the PIV of the diode.

(a) 100 V
(b) 200 V
(c) 20 V
(d) 50 V

Answer: (b)

143. The resistance of a two element series circuit with an instantaneous current of I = 3sin(50t + 450) that has taken real power of 81 W at a power factor of 0.8 lag is _____.

(a) 18 ohm
(b) 25 ohm
(c) 64 ohm
(d) 2 ohm

Answer: (b)

144. Compute the inductance of a coil in which a current increases linearly from 0.2 A in 0.1 sec, producing voltage of 10 V.

(a) 5 μH
(b) 5 mH
(c) 50 H
(d) 5 H

Answer: (d)

145. The linear distance moved by a Point in one revolution is called as _____.

(a) radius
(b) circle
(c) square
(d) pitch

Answer: (d)

146. The visual rays of any object perpendicular to plane forms a view on Plane of Projection is called as _____.

(a) Orthographic Projection
(b) Oblique Projection
(c) Pictoral Projection
(d) Isometric Projection

Answer: (a)

147. The line on which rolling circle rolls is called as _____.

(a) tangent
(b) normal
(c) director
(d) helix

Answer: (c)

148. A 2000/50 V, 1-φ Transformer takes 0.4 A on the HV side on no-load at a power factor of 0.3 lag. Calculate the Ironloss.

(a) 320 W
(b) 240 W
(c) 600 W
(d) 1000 W

Answer: (b)

149. Which type rotor used in high speed applicatio

(a) Salient type rotor
(b) Slip ring rotor
(c) Squirrel cage rotor
(d) Non-Salient type rotor

Answer: (d)

150. A 200 V, 10 KVA, single phase alternator produces armature current of 20 A on short circuit. Determine synchronous impedance.

(a) 5 Ω
(b) 10 Ω
(c) 8 Ω
(d) 20 Ω

Answer: (b)

151. Which of the following wattmeter is used only in AC circuits?

(a) Dynamo meter
(b) Induction wattmeter
(c) Electrostatic meters
(d) Rectifier meter

Answer: (b)

152. The scale of the dynamometer wattmeter is _____.

(a) hyperbola

(b) non - uniform

(c) parabola

(d) uniform

Answer: (d)

153. A 10 V Moving Iron voltmeter has a resistance of 3 Ω and an inductance of (2/π)H what will be the its impedance of the Instrument if frequency is 5Hz.

(a) √409

(b) √209

(c) √709

(d) √509

Answer: (a)

154. Which connector includes both data connector and power connector?

(a) SATA

(b) PEG

(c) PCI

(d) FDD

Answer: (a)

155. Fibre Optic cable is a combination of _____

(a) Gold and Copper

(b) Silver and Nichrome

(c) Brass and Copper

(d) Plastic and Glass

Answer: (d)

156. HTTP Stands for:

(a) Hypertext Transfer Protocol

(b) Hyper Text Transfer Programme

(c) Hidden Text Transfer Programme

(d) Hidden Text Testing Programme

Answer: (a)

157. In common collector configuration, Y Can be written as _____.

(a) 1 + β

(b) α

(c) βα

(d) 1 + α

Answer: (a)

158. In Varactor doide, depletion capacitance is inversely proportional to _____.

(a) Forward Voltage

(b) Junction Voltage

(c) Breakdown voltage

(d) Width of the space charge region

Answer: (d)

159. What is the phase difference between the feedback signal and input signal of degenerative feedback?

(a) 90°

(b) 180°

(c) 0°

(d) 45°

Answer: (b)

160. The range of frequency of very high frequency oscillator [VHF]:

(a) 30 MHz to 300 MHz

(b) < 20 KHz

(c) >3 GHz

(d) 300 MHz to 3 GHz

Answer: (a)

Discipline4

161. For Progressive winding, the back pitch Yb and front pitch Yf are related as:

(a) Y = Y + 1 b f

(b) Y = Y - 1 b f

(c) Y = Y + 2 b f

(d) Yb = - Yf + 1

Answer: (c)

162. As Per ISO earth plate dimensions are _____.

(a) 40 cm × 30 cm × 3 mm

(b) 20 cm × 20 cm × 4 mm

(c) 60 cm × 60 cm × 3.18 mm

(d) 10 cm × 20 cm × 2 mm

Answer: (c)

163. Pole Pitch of a.c Machine is expressed as ratio of _____.

(a) Number of poles to number of slots

(b) Number of commutator segments to Number of slots

(c) Number of slots to Number of Commutator segments

(d) Number of Slots to the Number of Poles

Answer: (d)

164. Slot Degree is Expressed as _____.

(a) [(pairs of Poles × 360°) / number of Poles]

(b) [pairs of Poles / number of Poles]

(c) [(pairs of poles × 360°) / number of Phases]

(d) [pairs of Phases / number of Poles]

Answer: (a)

165. A two-wire D.C distributor cable 10 m long is loaded with 0.2 A/meter. Compute the total current supplied by distributor.

(a) 10A

(b) 5A

(c) 2A

(d) 6A

Answer: (c)

166. The voltage rating of the secondary distribution system is _____.

(a) 400/230 V

(b) 230/400 V

(c) 33/66 KV

(d) 230/230 V

Answer: (a)

167. How many junctions are there in a silicon control rectifier?

(a) 1

(b) 2

(c) 4

(d) 3

Answer: (d)

168. In single phase full wave AC Voltage controller SCR's are connected in _____.

(a) series

(b) parallel

(c) anti-parallel

(d) both series and parallel

Answer: (c)

169. Single phase half bridge inverters requires _____.

(a) two wire AC supply

(b) two wire DC supply

(c) three wire AC supply

(d) three wire DC supply

Answer: (d)

170. A three phase full converter is to supply a purely resistive load of 50 V DC for 0° firing angle. The output voltage for 450° firing angle would be _____.

(a) 0 V
(b) 30 V
(c) 25 V
(d) 45 V

Answer: (a)

171. A chopper operating at 5 KHz, from a 100 V DC source. Calculate the chopping period.

(a) 5 msec
(b) 0.2 msec
(c) 10 msec
(d) 100 msec

Answer: (b)

172. Which of the following power plant has NOT standby losses?

(a) Steam Power Plant
(b) Diesel Power Plant
(c) Nuclear Power Plant
(d) Hydro electric Power Plant

Answer: (d)

174. A consumer has a maximum demand of 200 KW the tariff is Rs. 100 per KW of Maximum Demand. Calculate Annual Maximum Charges.

(a) Rs. 20,000
(b) Rs. 10,000
(c) Rs. 5,000
(d) Rs. 35,000

Answer: (a)

175. In one pulse rectifier, the ripple frequency can be expressed as _____.

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

Answer: (a)

176. Transformer utilization factor of bridge rectifier is:

(a) 0.273
(b) 0.8106
(c) 0.672
(d) 0.923

Answer: (b)

177. Which of the following device is used in uncontrolled two pulse rectifier?

(a) BJT
(b) IGBT
(c) SCR
(d) Diode

Answer: (d)

178. Drain characteristics of FET gives relation between _____.

(a) IG, VDS
(b) ID, VGS
(c) I ,V D DS
(d) IS, VGS

Answer: (c)

179. In PNP transistor _____.

(a) Emitter and Collector are P-type
(b) Emitter and Base are P-type
(c) Emitter and Base are N-type
(d) Base and Collector are P-type

Answer: (a)

180. Which of the following relay can detect faults in t transformer?

(a) Buchholz Relay
(b) mho Relay
(c) reactance Relay
(d) impedance Relay

Answer: (a)

Discipline5

181. Pick up of the coil can be expressed as:

(a) rated secondary current of C.T × Voltage setting
(b) rated secondary current of P.T × Voltage setting
(c) rated secondary current of P.T × Current setting
(d) rated secondary current of C.T × current setting

Answer: (d)

182. Which of the following fault is NOT unsymmetrical fault?

(a) L - L Fault
(b) L - G Fault
(c) 3-φ Fault
(d) L - L- G Fault

Answer: (c)

183. Operating time of the circuit breaker:

(a) 0.1 to 0.2 sec

(b) < 0.002 sec

(c) 50 sec

(d) 1000 sec

Answer: (a)

184. An irrigation pump set of 7.5 KW is to be installed with 3-φ, 415 V supply. Find full load current of motor if η = 85% and p.f = 0.8 lag.

(a) 20

(b) 15.34

(c) 33.3

(d) 41.2

Answer: (b)

185. The material used for wiring continuous bar is _____.

(a) Copper

(b) Brass

(c) Aluminium

(d) Bronze

Answer: (c)

186. Luminous efficiency of a fluorescent tube is ___ _____.

(a) 20-25 lumen / watt

(b) 30-35 lumen / watt

(c) 10-20 lumen / watt

(d) 50-60 lumen / watt

Answer: (d)

187. Earthing of equipment is necessary for protection against _____.

(a) over voltage

(b) over loading

(c) high temperature of conductor

(d) danger of electric shock

Answer: (d)

188. Calculate the number of poles for 1 km, 11 KV over head line per I.E rule.

(a) 15

(b) 16

(c) 17

(d) 18

Answer: (a)

189. In 8051 micro controller, the data pointer register size _____ bit wide.

(a) 16
(b) 24
(c) 20
(d) 8

Answer: (a)

190. In 8051 microcontroller, has _____ parallel I/O ports and _____ serial ports.

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

Answer: (c)

191. Operating frequency of 8051 micro controller is _____.

(a) 12 MHz
(b) 24 MHz
(c) 36 MHz
(d) 48 MHz

Answer: (a)

192. How many registers constitute internal RAM of 8 ?

(a) 34
(b) 32
(c) 42
(d) 44

Answer: (b)

193. Slip power recovery is employed in _____ for speed control.

(a) wound rotor induction motors
(b) reluctance motors
(c) universal motors
(d) dc motors

Answer: (a)

194. Load equalization in the drives can be achieved by using _____.

(a) pumps
(b) flywheel
(c) dc motors
(d) generators

Answer: (b)

195. Which of the following condition must be satisfied in regenerative braking to supply the generated electrical energy to the source?

(a) E > V and Negative I a

(b) E > V and Positive I a

(c) E < V and Negative I a

(d) E < V and Positive I a

Answer: (a)

196. The series motor is operated under dynamic braking at 4 times the rated torque and 600 rpm. Calculate the value of braking current is _____.

(a) 3 times the rated torque

(b) 4 times the rated torque

(c) 2 times the rated torque

(d) 9 times the rated torque

Answer: (c)

197. Torque of a DC Motor is directly Proportional to _____.

(a) Field resistance

(b) Product of flux and armature resistance

(c) Armature current

(d) Product of flux and armature current

Answer: (d)

198. If the MSCP is equal to 200. Find flux of light s ce.

(a) 600 π

(b) 100 π

(c) 800 π

(d) 200 π

Answer: (c)

199. Which type of heating is employed for wood drying and gluing?

(a) Resistance heating

(b) Dielectric heating

(c) Induction heating

(d) Solar heating

Answer: (b)

200. Schedule speed of train is Expressed as:

(a) distance ÷ (time for run + time for stop)

(b) distance ÷ time for stop

(c) distance ÷ time for run

(d) acceleration of train ÷ time for stop

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

General Awareness

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

Arithmetic Ability

41	**(a)**	42	**(b)**	43	**(d)**	44	**(a)**	45	**(a)**	46	**(c)**
47	**(b)**	48	**(c)**	49	**(a)**	50	**(b)**	51	**(b)**	52	**(d)**
53	**(b)**	54	**(b)**	55	**(b)**	56	**(a)**	57	**(a)**		

General English

81	**(a)**	82	**(c)**	83	**(c)**	84	**(b)**	85	**(c)**	86	**(b)**
87	**(c)**	88	**(a)**	89	**(b)**	90	**(a)**	91	**(b)**	92	**(a)**
93	**(b)**	94	**(a)**	95	**(b)**	96	**(c)**	98	**(b)**	100	**(b)**

Discipline1

101	**(b)**	102	**(c)**	103	**(d)**	104	**(a)**	105	**(b)**	106	**(c)**
107	**(a)**	108	**(a)**	109	**(c)**	110	**(d)**	111	**(b)**	112	**(b)**
113	**(a)**	114	**(c)**	115	**(b)**	116	**(a)**	117	**(d)**	118	**(a)**
119	**(d)**	120	**(b)**								

Discipline2

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

Discipline3

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

Discipline4

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

Discipline5

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