PREVIOUS YEAR PAPER

DSSSB Jr. Telephone Operator 2021 — 23 April 2021, Shift 2

DSSSB Other Posts · 23 April 2021 · Shift 2

168 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: 32 (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 23 April 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-jr-telephone-operator-23-apr-shift-2/

Mental Ability

1. Find the missing term in the following letter series :
GJM, LOR, QTW, _____

(a) UZB
(b) VYB
(c) UXA
(d) YVB

Answer: (b)

2. Find the wrong term in the following series :
LNP, IKM, FHJ, CDG, ZBD

(a) IKM
(b) FHJ
(c) CDG
(d) ZBD

Answer: (c)

3. Select the option that is related to the third term on the same basis as the second term is related to the first term.
Snake : Reptile :: Bear : ?

(a) Animal
(b) Mammal
(c) Species
(d) Rodent

Answer: (b)

4. Select the pair that is related on the same basis to the pair given in the question.
HOU : LKY :: ?

(a) DNQ : ILX

(b) CNS : EPA

(c) COP : EQY

(d) DPU : HLY

Answer: (d)

5. If 8465 is coded as 62-14-34-23, then what is the code for 9427?

(a) 81-16-4-49

(b) 79-14-2-47

(c) 88-38-18-68

(d) 80-15-3-48

Answer: (b)

6. In a certain code language, 687 means nature is beauty 713 means beauty with brains 34 means with love What is the code for 'brains'?

(a) 3

(b) 1

(c) 7

(d) 4

Answer: (b)

7. If P $ Q means P is the father of Q; P ! Q means P [illegible]he wife Q and P * Q means P is the brother of Q, which of the following shows that A is m[illegible]er o[illegible]?

(a) A $ B ! C * D

(b) A ! B * C $ D

(c) A $ B * C ! D

(d) A ! B $ C * D

Answer: (d)

8. Rashi runs faster than Garima, but not as fast as Priti. Aashi runs faster than Sakshi but not as fast as Garima. Who runs the slowest among the given friends?

(a) Rashi

(b) Priti

(c) Aashi

(d) Sakshi

Answer: (d)

9. Om, Kishore, Faiz, Zareen, Heema and Jaya are sitting in a circle facing the centre. Jaya is opposite Heema, Om and Faiz are not together, Faiz is to the right of Zareen and Heema is between Om and Faiz. Who is to the right of Kishore?

(a) Zareen

(b) Om

(c) Jaya

(d) Heema

Answer: (c)

10. 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 dancers are singers.
Statement 2 : All singers are actors.
Conclusion I : No actors are dancers.
Conclusion II : All dancers are actors.

(a) Only conclusion I follows

(b) Only conclusion II follows

(c) Both I and II follow

(d) Neither I nor II follows

Answer: (d)

11. In this question, a statement has been given, follow[illegible] by two assumptions numbered I and II. Analyse the two assumptions together and determin[illegible]hich of them is/are implicit in the statement.
Statement : 'A fine of Rs 1500 will be levied on the m[illegible]nber who will miss the weekly meeting.' A notice put up by a housing society manage[illegible]
Assumptions:
I. The members of society miss a lot of meetings.
II. The society is finding new ways to increase the revenue.

(a) Only assumption I is implicit

(b) Only assumption II is implicit

(c) Neither I nor II is implicit

(d) Both I and II are implicit

Answer: (d)

12. Find the wrong number in the following number series:
9, 17, 27, 33, 41, 49

(a) 17

(b) 27

(c) 33

(d) 41

Answer: (b)

13. If (x - 12) > (y - 7) + 4, then which among the following is true?

(a) (x - y) > 9

(b) (x - y) > 10

(c) (x - y) < 9

(d) (x - y) < 10

Answer: (a)

15. Nisha walks 150 m east, then turns south and walks 100 m, then turns west and walks 250 m, then turns north and walks 250 m, then turns to her right and walks 100 m. Where is she now with respect to her starting position?

(a) 250 m south

(b) 250 m north

(c) 150 m north

(d) 150 m south

Answer: (c)

16. Pratik starts 8 km north, then turns west and rides 6 km, then turns to his right and rides 4 km. Manish rides 4 km west, then turns north and rides 12 km, then turns to his right and rides 9 km. Where is Manish with respect to Pratik now?

(a) 11 km west

(b) 11 km east

(c) 19 km east

(d) 19 km west

Answer: (b)

General Awareness

21. Jawara Dance, also known as the Harvest Dance, is associated with which of the following states?

(a) Tamil Nadu

(b) Madhya Pradesh

(c) West Bengal

(d) Odisha

Answer: (b)

22. The famous song "Kesariya Balam" which is a part of popular Rajasthani folk music is in which of the following styles?

(a) Maand

(b) Powada

(c) Ovi

(d) Lavani

Answer: (a)

23. Which of the following banks was founded by Dyal Singh Majithia and Lala Lajpat Rai?
    (a) Punjab National Bank
    (b) Bank of India
    (c) City Union Bank
    (d) Oudh Commercial Bank

    Answer: (a)

24. As announced in the Budget 2021, Indian Government will privatize how many public banks in the year 2021-22?
    (a) 1
    (b) 2
    (c) 3
    (d) 4

    Answer: (b)

25. Which of the following diseases occurs due to the lack of Vitamin C in the diet?
    (a) Scurvy
    (b) Osteoporosis
    (c) Goitre
    (d) Diabetes

    Answer: (a)

26. Mosses belong to which of the following plant ki oms?
    (a) Pteridophytes
    (b) Angiosperms
    (c) Bryophytes
    (d) Gymnosperms

    Answer: (c)

27. _____ law is a law of physics that states that the force needed to extend or compress a spring by some distance scales linearly with respect to that distance.
    (a) Charles's
    (b) Hooke's
    (c) Ohm's
    (d) Kepler's

    Answer: (b)

28. The Palk Strait connects India with _____.
    (a) Sri Lanka
    (b) China
    (c) Bangladesh
    (d) Pakistan

    Answer: (a)

29. Pandoh Dam is built across the _____ river.
    (a) Sutlej
    (b) Ravi
    (c) Beas
    (d) Chenab
    Answer: (c)

30. Which among the following statements is not true about Alluvial Soil?
    (a) The colour of the alluvial soils varies from the light grey to ash grey.
    (b) They are generally rich in phosphorous but poor in potash.
    (c) Bhangar represents a system of older alluvium, deposited away from the flood plains.
    (d) Khadar is the new alluvium and is deposited by floods annually.
    Answer: (b)

31. Yajna Sri Satakarni was an Indian ruler belonging to which of the following dynasties?
    (a) Satavahana
    (b) Pallavas
    (c) Chola
    (d) Gupta
    Answer: (a)

32. The first session of Indian National Congress was held at Bombay in _____.
    (a) 1890
    (b) 1882
    (c) 1889
    (d) 1885
    Answer: (d)

33. Who defeated Rana Sanga at the Battle of Khanwa?
    (a) Babur
    (b) Humayun
    (c) Akbar
    (d) Jahangir
    Answer: (a)

34. Which of the following books is not written by 'Charles Dickens'?
    (a) David Copperfield
    (b) A Tale of Two Cities
    (c) The Masters
    (d) Oliver Twist
    Answer: (c)

35. The Food and Agriculture Organisation (FAO) of the United Nations was founded in _____.
(a) 1945
(b) 1946
(c) 1942
(d) 1948
Answer: (a)

36. Who won the 'Best Director' award in the 65th Filmfare Awards 2020?
(a) Jagan Shakti
(b) Nitesh Tiwari
(c) Aditya Dhar
(d) Zoya Akhtar
Answer: (d)

37. Part _____ of the Indian Constitution deals with Amendments of the Constitution.
(a) XVI
(b) XIV
(c) XX
(d) XXII
Answer: (c)

38. Which among the following constitutional amendments curtailed the fundamental right to property?
(a) 26th
(b) 22nd
(c) 24th
(d) 25th
Answer: (d)

39. The 4th CISM Military World Winter Games will be held in _____ in March 2022.
(a) France
(b) Italy
(c) South Korea
(d) Germany
Answer: (d)

40. Federation Cup is associated with the game of _____ .
(a) Golf
(b) Basketball
(c) Football
(d) Badminton
Answer: (c)

Arithmetic Ability

41. Which of the following numbers is a multiple of 3?

(a) 23145
(b) 3643
(c) 57890
(d) 63781

Answer: (a)

42. The LCM and HCF of two numbers are 216 and 18 respectively. If one of the numbers is 72, what is the other number?

(a) 52
(b) 56
(c) 54
(d) 60

Answer: (c)

43. What is the least minimum number to be added to 32547 so that the number is exactly divisible by 15?

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

Answer: (a)

44. Two numbers 219 and 149 when divided by x gives remainder of 3 and 5 respectively. What is the greatest possible value of x?

(a) 8
(b) 36
(c) 72
(d) 144

Answer: (c)

45. Two numbers A and B are such that A is 40% of B. If their LCM is 60, what is B?

(a) 20
(b) 30
(c) 12
(d) 18

Answer: (b)

46. The average of 6 numbers is 60. What will be the new average if the number 40 is to be discarded?

(a) 40
(b) 50
(c) 64
(d) 66

Answer: (c)

47. Avinash gives away 30% of his shoes collection to a charity and he still has 140 remaining. What was the original number of shoes that he had?

(a) 170
(b) 490
(c) 200
(d) 240

Answer: (c)

48. In a class of 100 pupils, 60% are boys of which 1/3 like football and the rest like cricket. The number of girls who like basketball is equal to 25% of the total boys. What is the difference between the number of boys who like cricket and girls who like basketball?

(a) 2
(b) 15
(c) 10
(d) 25

Answer: (d)

49. Ramesh suffers a loss of 40% by selling [illegible] at the rate of Rs 15. What was the cost price of each apple?

(a) Rs 4
(b) Rs 5
(c) Rs 6
(d) Rs 40

Answer: (b)

50. An amount of Rs 45000 is to be distributed between A and B in the ratio 2 : 3. What is the share of A?

(a) Rs 12000
(b) Rs 18000
(c) Rs 21000
(d) Rs 15000

Answer: (b)

51. A, B and C started a business by investing money in the ratio 2 : 1/3 : 4. The profit at the end of the year was Rs 180000. If the time span for which they invested were in the ratio 2 : 3 : 1, what will be the combined share of A and B?

(a) Rs 10000

(b) Rs 120000

(c) Rs 12000

(d) Rs 100000

Answer: (d)

52. A car covers a certain distance in 20 minutes at an average speed of 45 kmph. Had the speed been 60 kmph, how long would it have taken to cover the same distance?

(a) 8 min

(b) 10 min

(c) 12 min

(d) 15 min

Answer: (d)

53. A man in a boat takes 1.5 times, as long to row upstream as to row downstream. If the speed of the current is 1 km/h, what is the speed of the boat?

(a) 4 km/h

(b) 5 km/h

(c) 6 km/h

(d) 10km/h

Answer: (b)

54. The work done by 20 women in 5 days is equivalent to the work done by 10 men in 20 days. What is the ratio of their efficiencies?

(a) 2 : 1

(b) 1 : 2

(c) 3 : 2

(d) 2 : 3

Answer: (a)

55. What is the volume of the solid cuboid formed from melting and fusing two spheres of radius 14 cm and 7 cm?

(a) 3000 cu cm

(b) 3080 cu cm

(c) 3500 cu cm

(d) 12936 cu cm

Answer: (d)

56. A hemispherical bowl of outer radius 10 cm is half filled with water. If the thickness of the bowl is 3 cm, what is the volume of water in the bowl?

(a) 1078 cu cm

(b) 1079/3 cu cm

(c) 1078/3 cu cm

(d) 1000/3 cu cm

Answer: (c)

General English

61. 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'.
I have visited the monstrous trees of the Sequoia National Forest, / standing on the edge of the Grand Canyon / and have jumped on the beds at Caesar's Palace in Lake Tahoe.

(a) I have visited the monstrous trees of the Sequoia National Forest,

(b) standing on the edge of the Grand Canyon

(c) and have jumped on the beds at Caesar's Palace in Lake Tahoe.

(d) No error

Answer: (b)

62. 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'.
Looking for apartments was suppose to be a fun and exciting process; unfortunately, none of the ones that we saw / seemed to match the specifications that we had established.

(a) Looking for apartments was suppose to be a fun and

(b) exciting process; unfortunately, none of the ones that we saw

(c) seemed to match the specifications that we had established.

(d) No error

Answer: (a)

63. 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.
The main floor felt like a hotel room, too formal and (sloppy) to be welcoming.

(a) emotional

(b) impersonal

(c) warm

(d) no correction required

Answer: (b)

64. 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.
We joined a (coalition) to end exploitation at the hands of the company owners.

(a) union
(b) culture
(c) streak
(d) no correction required

Answer: (a)

65. Fill in the blank with the appropriate word.
A _____ is one of the series of curves that a river bends into as it crosses the land to reach the sea.

(a) rapid
(b) meander
(c) turmoil
(d) shift

Answer: (b)

66. Fill in the blank with the appropriate word.
She emphasised the probable hardships and the need for complete unity and non-violence in the face of _____ response from virtually every village.

(a) subjugated
(b) dull
(c) provocative
(d) active

Answer: (c)

67. 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.
Upon entering the door at Karan's Hut,
P: The first room, through the door, is the main part of the restaurant.
Q: two things were immediately noticeable:
R: There is another, seldom used, dining room
S: the place is loaded and seems to consist of a maze of rooms.
off to the right.

(a) QSPR
(b) PQRS
(c) SQRP
(d) RPQS

Answer: (a)

68. 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.
When Gandhi
P: Patel was asked by Members of Congress
Q: to lead the satyagraha in Nagpur in 1923
R: was in prison,
S: against a law banning the raising of
the Indian flag.

(a) PQRS
(b) QSRP
(c) RPQS
(d) RQPS

Answer: (c)

69. Select the word that is closest in meaning (SYNONYM) to the bracketed word in the sentence given below.
The survey noted that early deaths from (excess) sugar consumption is because of the build up of uric acid.

(a) supplementary
(b) profusion of
(c) accessory of
(d) remarkable

Answer: (b)

70. Select the word that is the opposite me[illegible]n (A[illegible]ONYM) to the word given below.
ACRIMONIOUS

(a) WARMHEARTED
(b) ACREBIC
(c) RANCOROUS
(d) POISONOUS

Answer: (a)

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

(a) BOUQUET
(b) BOUKEY
(c) BUOQUET
(d) BOUQUETTE

Answer: (a)

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

(a) Skidzophrenia

(b) Schizophenia

(c) Schizophrenia

(d) Skidzophenia

Answer: (c)

73. Select the most appropriate meaning of the given idiom.
"A dime a dozen"

(a) The value of market has fallen.

(b) Money doesn't have any value anymore.

(c) An asset of very high value amongst a lot of things of less value.

(d) Very common and of no particular value.

Answer: (d)

74. Select the most appropriate meaning of the given idiom.
"See eye to eye"

(a) To analyse person correctly

(b) Means to be angry with someone

(c) This means agreeing with someone

(d) To look into someone's eye

Answer: (c)

75. Select the most appropriate 'one word [illegible] the [illegible]pression given below.
"Causing so much emotion, especially pleasu[illegible] it cannot be described."

(a) Ineffable

(b) Inebriation

(c) Indwelling

(d) Rhapsodic

Answer: (a)

76. What have large frontal lobes in humans have resulted in:

(a) We can see better during daylight than at night.

(b) We possess language and complex cognitive skills.

(c) The lobes were used to shoo away flies by the early man.

(d) We have a more definite foot structure than other mammals.

Answer: (b)

77. What is the Broca's area ?

(a) Area of the brain associated with seeing

(b) Area of the brain associated with observing

(c) Area of the brain associated with hearing

(d) Area of brain associated with speech

Answer: (d)

78. According to the latest theory and evidence, the size of olfactory bulbs _____

(a) Determines the smelling power.

(b) Does not relate directly to the smelling power.

(c) Depends upon the number of olfactory bulbs present in the human body.

(d) Was reduced by the evolution of colour vision .

Answer: (b)

80. Read the points (A & B) mentioned below and choose the correct answer from the four options.
A: humans relied more on complex thought than on primal senses for survival.
B: Olfactory bulbs were smaller than those of other mammals.

(a) A is right and B is wrong

(b) A is wrong and B is right

(c) Both A and B are worng

(d) Both are correct and A is the explanation for B

Answer: (d)

Discipline1

101. _____ in a PBX system is the mapping of channel on one interface to another channel on another interface.

(a) Extension termination

(b) Trunk termination

(c) Switching

(d) Circuit processing

Answer: (c)

102. A PBX system does NOT allow users to connect _____ into a single telecommunication system.

(a) voice

(b) data

(c) pagers

(d) other non-conceivable application

Answer: (d)

103. A PABX system is normally controlled by a/an _____ located in the main telephone closet.

(a) Modem

(b) Modulator

(c) dedicated computer

(d) remote sensor

Answer: (c)

104. _____ do not rely on central office telephone lines for their connection to the telephone company.

(a) Voice over IP systems

(b) Public address systems

(c) Fire alarm systems

(d) Vending access management systems

Answer: (a)

105. The security designer can use the _____ as a security intercom system by utilising the door stations in lieu of a standard station set.

(a) PBX system

(b) PABX system

(c) communication system

(d) transmission system

Answer: (b)

106. Which of the following is the correct function of a PABX system?

(a) It facilitates the connection of a number of analog or digital station sets to a central switch.

(b) It interfaces with the PBX system.

(c) It interfaces the discreet signal.

(d) It facilitates the connection of a number of a network station sets to a central switch.

Answer: (a)

107. Choose the correct statement.

(a) The received signal is observed by [illegible] PABX system.

(b) The operation of input signal is controlled [illegible] the PABX system.

(c) A loop-start signaling is the preferred signaling system when lines terminate in a switching system such as PBX system.

(d) The PABX immediately detects the grounded tip conductor and will not allow an outgoing call from PABX to use this circuit, thus avoiding glare.

Answer: (d)

108. Which of the following statements is correct with respect to PABX?

(a) The PABX is simply an automated version of the older, manually operated switchboard – the PBX.

(b) It helps in the interaction of one channel to another channel.

(c) A private exchange located at a global location is called PABX.

(d) The PABX connects to the non-actual telephone office via a number of trunks.

Answer: (a)

109. Which of the following services is INCORRECT about a PBX system?

(a) PC PBXs
(b) ATM PBXs
(c) IP-based PBXs
(d) Satellite based PBXs

Answer: (d)

110. EPABX is an on-premises telephone exchange that supports:

(a) digital data service only
(b) analog telephone service only
(c) primary data service only
(d) digital data and analog telephone services

Answer: (d)

111. Sending text only data by _____ is expensive.

(a) social media
(b) telecommunication
(c) e-mail
(d) fax

Answer: (d)

112. Which of the following statements with respect to Fax is correct?

(a) Fax is genuinely the most economic means of communication.
(b) Fax is capable of transmitting physical data
(c) A fax machine is only a coding machine is also called a decoder.
(d) In comparison to emails, the Fax is better means of transferring legal documents.

Answer: (d)

113. As part of one of the security and error recovery features, a/an _____ is inserted between the telephone lines and the fax machines.

(a) coding system
(b) decoding system
(c) encryption device
(d) symmetrical device

Answer: (c)

114. The documents transmitted through fax machines are _____ in a standard fax image format.

(a) internally decoded
(b) internally encoded
(c) externally decoded
(d) externally encoded

Answer: (b)

115. _____ is/are designed to provide communication between one mobile unit and one stationary unit.

(a) Cellular stations
(b) Cellular frames
(c) Cellular telephony
(d) Cellular signals

Answer: (c)

116. The ubiquitous telephone networks throughout the world are the prime examples of a public telecommunication network. These are also known as:

(a) phase shifting transmission network
(b) public shifting telecomm network
(c) public switched telephone network
(d) pulse code modulation technique

Answer: (c)

117. Which of the following is/are NOT a part of the transport system of the transmission media?

(a) Optical fiber
(b) Electrical conductor
(c) Radio paths
(d) Electronic diodes

Answer: (d)

118. Which of the following is NOT one of the sub-networks of a transport system in a communication network?

(a) LAN
(b) WAN
(c) DAN
(d) private network

Answer: (c)

119. The terms 'data communication networks' and 'computer networks' are used _____ .

(a) partially.
(b) interchangeably.
(c) In emphasised manner
(d) Simultaneously

Answer: (b)

120. Which of the following terms is NOT based on the connection-oriented communications?

(a) Connection setup
(b) Data transfer
(c) Connection termination
(d) Network topology

Answer: (d)

Discipline2

121. The networked systems are described on the basis of two key structures, namely _____ and _____.

(a) physical structure, logical structure

(b) crystal structure, chemical structure

(c) logical structure, crystal structure

(d) physical structure, crystal structure

Answer: (a)

122. Continuously varying signals are sampled and quantized into _____.

(a) discrete symbols for transmission

(b) alternative signals

(c) time varying continuous signals

(d) frequency varying continuous signals

Answer: (a)

124. Which of the following is one of the DISADVANTAGES of quantization of PCM?

(a) PCM transmission and reception are also affected by problems in synchronization.

(b) Signal quality can be enhanced easily.

(c) Digital transmission and reception are highly economical.

(d) Signal manipulation is very easy in the digital r[illegible]ne using software.

Answer: (a)

125. When the modulated wave is picked u[illegible] by the [illegible]dio receiver, it is necessary to recover audio signal from it. This process is accomplished [illegible]dio receiver and is called:

(a) Sampling

(b) Quantization

(c) Demodulation

(d) Amplification

Answer: (c)

126. Which of the following statements is correct with respect to multiplexing?

(a) In multiplexing, the transmission of two or more messages happens at the same time over a single interconnecting link.

(b) Multiplexing is the method of transmitting one measurement over a single transmission channel.

(c) Multiplexing is the process by which a continuous audio signal can be converted into a discreet signal.

(d) Multiplexing is the process of controlling the input sinusoidal signal.

Answer: (a)

127. Multiplexing is categorised into:

(a) TDM, FDM

(b) AM, FM

(c) TDM, MDM

(d) FDM, CDM

Answer: (a)

128. Which of the following is one of the types of store program control switching system?

(a) Circuit switching or network switching

(b) Frequency switching or amplitude switching

(c) Space switching or time switching

(d) Series switching or parallel switching

Answer: (c)

129. The links that run between the switching systems are called: _____.

(a) transmission track

(b) modem

(c) gateways

(d) trunks

Answer: (d)

130. Which of the following is NOT a type of switch?

(a) Thermo-optical switch

(b) Electro-optical switch

(c) Magneto-optical switch

(d) Geo-optical switch

Answer: (d)

131. Pick the odd one out.

(a) Switching node

(b) Telephone exchange

(c) Switching centre

(d) Telephone cable

Answer: (d)

132. A network with point-to-point links among all the entities is known as the:

(a) half connected network

(b) fully connected network

(c) alternative network

(d) crystal network

Answer: (b)

133. Which of the following is the correct full form of SOA switches?

(a) Synchronised Oriented Amplifier
(b) Sub-optical Amplifier
(c) Semi-conductor Optical Amplifier
(d) Synthesis Optical Amplification

Answer: (c)

134. Which of the following is the heart of a transmitter?

(a) Current source
(b) Voltage source
(c) Light source
(d) Alternative sine wave source

Answer: (c)

135. At the receiver end, a/an _____ converts the light back into an electrical signal.

(a) optical detector
(b) optical fiber
(c) optical cable
(d) transmitter

Answer: (a)

136. A speaker can convert the _____ signal into acoustic waves.

(a) digital electrical
(b) analog electrical
(c) discreet electrical
(d) pulse electrical

Answer: (b)

137. Which of the following is a key component of an optical receiver?

(a) Transducer
(b) Photodetector
(c) Modem
(d) Medium

Answer: (b)

138. Which of the following is NOT a component of optical fiber?

(a) Core
(b) Cladding
(c) Coating or buffer
(d) Twisting pair

Answer: (d)

139. Mathematically, the energy E of photon is related to the frequency of the emitted light as: _____.

(a) E = h + v

(b) E = h - v

(c) E = h v

(d) E = h/ v

Answer: (c)

140. Numerical aperture measures the _____ power of the optical fiber from a source.

(a) light scattering

(b) light dispersion

(c) light gathering

(d) light reflection

Answer: (c)

Discipline3

141. Which of the following testing components has been INCORRECTLY matched with its function?

(a) Meter, bottom scale -indicates coil condition

(b) Battery control -calibrating control

(c) Condenser selector switch – three-position switch for testing condensers

(d) Test selector switch – five-position switch to select individual tests

Answer: (b)

142. Which of the following is the function of a coil control component?

(a) Is a three-position switch for testing

(b) Is a four-position switch to proper input voltage

(c) Is a five-position switch to individual tests

(d) Calibrating control

Answer: (d)

143. Which one of the following components has a 9 feet long, two conductor, AWG No 18 (Minimum) copper conductor with heavy rubber insulation function?

(a) Test leads

(b) Battery leads

(c) Battery selector switch

(d) Battery selector

Answer: (a)

144. Which of the following methods is used to test the inductor?

(a) Resistance check to test for continuity

(b) Using voltmeter

(c) Direct power supply

(d) Component color coding and resistance measuring with an ohmmeter

Answer: (a)

145. The nature of fault can be classified into two types. One is logical fault and the other one is:

(a) Logical fault

(b) Geometrical fault

(c) Arithmetical fault

(d) Non-logical fault

Answer: (d)

146. A _____ fault causes the logic value at the point in the circuit to become opposite to the specified value.

(a) non-logical

(b) logical

(c) geometrical

(d) graphical

Answer: (b)

147. Select the correct caution during circuit testing.

(a) Before using an ohmmeter, check the current that passes for each range upto 1 Ma.

(b) During testing, we should turn on/off the voltage supply.

(c) During servicing or maintenance voltage supply should range from 150 to 200 volts

(d) We should not use the ohmmeter for any testing purpose.

Answer: (a)

148. When a PCB board is broken then: _____

(a) It is much better to replace the entire board rather than to repair it

(b) the board should be repaired comp.

(c) It is not helpful to throw the entire board rather than to repair it

(d) only the edges should be repaired

Answer: (a)

149. What should be the first step while servicing the transistors?

(a) Visually inspect the connections.

(b) Check the power supply to see that its output voltage are present and of the correct values.

(c) Check with the leakage current

(d) Find the loose wire or faulty connection.

Answer: (b)

150. Which of the following is the correct value of voltage range for power supply in transistor troubleshooting?

(a) 50 V – 100 V

(b) 4 V – 12 V

(c) 0 V – 5 V

(d) 10 V – 50 V

Answer: (b)

151. Select the correct caution that must be exercised during the board servicing, before attempting to remove the defective IC.

(a) The board should be placed in the holding jig.

(b) The board should be washed with distilled water.

(c) The power supply of the board should be ON.

(d) All resisters should be removed from the board.

Answer: (a)

152. Which of the following is NOT one of the techniques used during servicing of a transistor?

(a) Power supply check

(b) Visual inspection

(c) Transistor check

(d) Frequency modulation check

Answer: (d)

153. Which of the following is NOT one of precautions that is observed habitually for boards of modular assembly?

(a) Be extremely careful at all times while handling a board.

(b) Do not flex the board indiscriminately.

(c) Be partially attentive when removing the board or replacing a part.

(d) Do not force anything associated with the board

Answer: (c)

154. When we are soldering to discrete component[illegible]peatedly, the PCB will:

(a) not be damaged

(b) be damaged

(c) get more strength simultaneously.

(d) weak gradually.

Answer: (b)

155. Which of the following forms one of the fundamental building blocks of an electric power system?

(a) Rectifier

(b) Amplifier

(c) Diode

(d) Transformer

Answer: (d)

156. Which of the following is NOT a type of single phase transformer, based on its construction?

(a) Core type

(b) Cladding type

(c) Shell type

(d) Berry type

Answer: (b)

157. Which of the following statements about core of transformers is INCORRECT?

(a) Core steel can be hot- or cold-rolled in the transformer.

(b) It can be grain-oriented or non-grain-oriented.

(c) Its thickness range varies from 0.23 mm to 0.36 mm.

(d) It has no losses.

Answer: (d)

158. The coil in which electrical energy is fed with the help of source is called:

(a) primary winding

(b) secondary winding

(c) coupling

(d) induction coil

Answer: (a)

159. A transformer works on the principle of:

(a) reactive induction

(b) mutual induction

(c) inductive induction

(d) capacitive induction

Answer: (b)

160. If the transistor circuits are operated by the class small signal, the transistor can be modelled as _____ two-port network.

(a) quadrilateral

(b) circular

(c) sinusoidal

(d) linear

Answer: (d)

Discipline4

161. The ac characteristics of a transistor are described in the data sheet in terms of characteristic curves of _____ parameters, which are commonly known as hybrid parameters.

(a) 2

(b) 3

(c) 4

(d) 5

Answer: (c)

162. h-parameters of a transistor _____ when the temperature and the operating point of the transistor change.

(a) do not change

(b) also change

(c) may or may not change

(d) remain the same

Answer: (b)

164. The _____ is widely used for demodulating the amplitude modulated (AM) signal in the radio receivers.

(a) peak detector

(b) peak-to-peak detector

(c) clamped detector

(d) envelope detector

Answer: (d)

165. The random fluctuations produced by thermal agitation of the electrons are called:

(a) Partition noise

(b) White noise

(c) Johnson noise

(d) Shot noise

Answer: (c)

166. 'By pulsing the radar on and off, it is possible to use the same antenna for both, transmission and reception'.
This statement is correct for which of the following radars?

(a) Bistatic radar

(b) Monostatic radar

(c) Dipole radar

(d) Monopole radar

Answer: (b)

167. Sextant is used to:

(a) measure the angular distance between two visible objects

(b) measure the time to reach visible objects

(c) measure the speed required to reach prior visible object

(d) Distance measurement

Answer: (a)

168. What is the full form of GPS?

(a) Global Passing System

(b) Global Projecting System

(c) Global Processing System

(d) Global Positioning System

Answer: (d)

169. Which of the following statements is correct for class B mode of operation of GPRS MS?

(a) MS is attached to both GPRS and other GSM services and the user can use them simultaneously to make or receive calls.

(b) MS can only be attached to either the GSM network or the GPRS network.

(c) MS is attached to both GPRS and other GSM services, but can only operate one set of services at a time.

(d) MS can only be attached to either CDMA/WCDMA network

Answer: (c)

170. Choose the correct mode of operations for GPRS.

(a) circuit switched mode of operation

(b) packet switched mode of operation

(c) common switched mode of operation

(d) partial switched mode of operation

Answer: (b)

171. GPRS system is used by:

(a) CDMA

(b) GSM

(c) remote sensors

(d) SDMA

Answer: (b)

172. Which is the correct 'class' of GPRS handset m e of operation, where you can be taking a call and receiving data all at the same time?

(a) Class A

(b) Class B

(c) Class C

(d) Class D

Answer: (a)

173. A smallest GPS unit can be fitted in:

(a) four wheelers

(b) aeroplanes

(c) ships

(d) human wrists

Answer: (d)

174. Which of the following statements is INCORRECT with respect to the model of transmission line?

(a) The line is uniform, homogeneous and straight.

(b) The line parameters are not frequency-dependent.

(c) The line parameters R, L, G and C do not vary with change l ambient condition, such as temperature and humidity.

(d) The line does not experience attenuation losses.

Answer: (d)

175. The four-wire transmission line have:

(a) two wires for transmit path and two wires for receive path

(b) one wire for transmit path and three wires for receive path

(c) all wires only for transmit path

(d) half-duplex path

Answer: (a)

176. Which of the following is a correct type of transmission?

(a) 2 wires and 4 wires transmission

(b) 2 wires and 5 wires transmission

(c) 3 wires and 6 wires transmission

(d) 4 wires and 7 wires transmission

Answer: (a)

177. Which of the following is NOT an essential cause of crosstalk?

(a) Electrical coupling between transmission media

(b) Poor control of frequency resonance

(c) Non-linear performance in analog multiplex system.

(d) Signal-to-noise ratio is maximum.

Answer: (d)

178. The number to be dialed or called to reach a sub ber in the same local network or numbering area is called _____.

(a) Telephone number

(b) Subscriber number

(c) Mobile number

(d) Customer care number

Answer: (b)

179. _____ is a sequential circuit that has a specified sequence of states.

(a) Counter

(b) Ripple

(c) Reader

(d) Storage element

Answer: (a)

180. The binary number 10011 is equal to the decimal number:

(a) 19

(b) 12

(c) 27

(d) 21

Answer: (a)

Discipline5

181. The inverter is a/an _____

(a) NOT gate
(b) AND gate
(c) OR gate
(d) NAND gate

Answer: (a)

182. The NAND gate is AND gate followed by:

(a) NAND
(b) NOT
(c) NOR
(d) OR

Answer: (b)

183. The output signal of NAND gate is 0 when two input signals are:

(a) 0
(b) 1
(c) either 0 or 1
(d) 0101

Answer: (b)

184. In Boolean algebra, the addition symbol (+) is r ′red to as:

(a) AND operation
(b) NOT operation
(c) OR operation
(d) NAND operation

Answer: (c)

185. _____ is a device which helps convert BCD to seven segments.

(a) Multiplexer
(b) Encoder
(c) Display decoder
(d) Uniplexer

Answer: (c)

186. Which of the following is also known as ‘data selector' in a digital system?

(a) Flip-flop
(b) Encoder
(c) Multiplexer
(d) Counter

Answer: (c)

187. An LED works only in the ___ condition(s).

(a) forward bias
(b) reverse bias
(c) no bias
(d) reverse bias and forward bias

Answer: (a)

188. LCD is based on:

(a) radiation of light
(b) reflection of light
(c) emission of light
(d) transmission of light

Answer: (b)

189. A thyristor is a:

(a) three-layer, two-junction device
(b) three-layer, three-junction device
(c) four-layer, three-junction device
(d) two-layer, one-junction device

Answer: (c)

190. An oscillator is an electronic circuit that converts

(a) AC power into DC power
(b) DC power into AC power
(c) Mechanical power into AC power
(d) Mechanical power into DC power

Answer: (b)

191. _____ are used to produce infrared LEDs.

(a) GaPs
(b) GaAsPs
(c) GaAs
(d) PbS

Answer: (c)

192. An intrinsic semiconductor behaves as a perfect _____ at absolute zero temperature.

(a) semiconductor
(b) insulator
(c) conductor
(d) protection device

Answer: (b)

193. Small power can be transmitted from a satellite to Earth's station on _____

(a) uplink
(b) downlink
(c) terrestrial
(d) earthbound

Answer: (b)

194. A/An _____ serves the purpose of collecting the extremely weak signal incident upon its surface area.

(a) helical antenna
(b) LNA
(c) satellite dish
(d) TWT

Answer: (c)

195. A/An _____ is the transmitter-receiver combination in the satellite.

(a) repeater
(b) relay
(c) duplexer
(d) transponder

Answer: (d)

196. Which of the following uses the technique of bc bandwidth and time sharing?

(a) QDMA
(b) CDMA
(c) TDMA
(d) FDMA

Answer: (b)

197. Which of the following is NOT one of the classifications of transmission media in telecommunication?

(a) Echo
(b) Unbounded
(c) Guided
(d) Crystal

Answer: (d)

198. Choose the correct range of bandwidth for the multimode step-index fiber.

(a) 1 to 25 MHz km
(b) 10 to 30 MHz km
(c) 6 to 50 MHz km
(d) 4 to 40 MHz km

Answer: (c)

199. In the _____ fibers, the refractive index of the core varies gradually as a function of radial distance from the fiber centre.

(a) step index

(b) graded index

(c) coaxial index

(d) axial index

Answer: (b)

200. In contrast to the conventional analog SD-exchanges, the least expensive and least critical unit is called _____.

(a) the digital exchange switching network

(b) the digital transmission

(c) data link switching network

(d) digital reception exchange network

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.

Mental Ability

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

General Awareness

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

Arithmetic Ability

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

General English

61	**(b)**	62	**(a)**	63	**(b)**	64	**(a)**	65	**(b)**	66	**(c)**	67	**(a)**	68	**(c)**
69	**(b)**	70	**(a)**	71	**(a)**	72	**(c)**	73	**(d)**	74	**(c)**	75	**(a)**	76	**(b)**
77	**(d)**	78	**(b)**	80	**(d)**										

Discipline1

101	**(c)**	102	**(d)**	103	**(c)**	104		05	**(b)**	106	**(a)**	107	**(d)**	108	**(a)**
109	**(d)**	110	**(d)**	111	**(d)**	112	**(d)**	113	**(c)**	114	**(b)**	115	**(c)**	116	**(c)**
117	**(d)**	118	**(c)**	119	**(b)**	120	**(d)**								

Discipline2

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

Discipline3

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

Discipline4

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

Discipline5

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