



Sector: Power
Reference ID: PSS/ Q 0101

Question Bank

Technical Helper (Distribution)

PSS N 0101

(Assisting repair and maintenance of Power Distribution line and Components)

PSS N 0102

(Preparation and assistance for erection and maintenance of Power Distribution line)

PSS N 0103

(Assisting in operation and maintenance of 11/0.433 KV Distribution Substation)

PSS N 0104

(Assisting in laying of underground and AB cables)

PSS N 2001

(Use Basic health and safety practices for Power related work)

CSC/N 1336

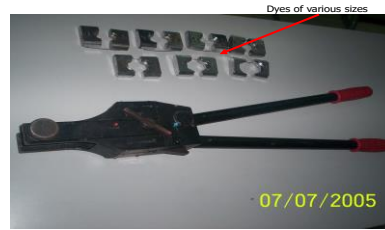
(Work Effectively with Others)

PSS/ N 0101(Assisting repair and maintenance of Power Distribution line and Components)

PSS/ N 0102 (Preparation and assistance for erection and maintenance of Power Distribution line)

PSS/ N 0103 (Assisting in operation and maintenance of 11/0.433 KV Distribution Substation)





PSS/ N 0104 (Assisting in laying of underground and AB cables)






1. What is the use of the tool shown in the image?

- a. It is used to pull underground cables. PSS/ N 0101-4 /PC 8,7,8,7 Easy
- b. It is used for stripping outer insulation of the cables.
- c. It provide electrical path to dissipate overvoltage in the distribution lines.
- d. It is used to crimp socket and ferrule.

2. To avoid drag and damage to cable insulation the tool used for easy laying of cable is?

- a. Twisting wrench 
 - b. wooden ladder 
 - c. Crow bar 
 - d. Roller Stool 
- PSS/ N 0101-4 /PC 8,7,8,7 Easy

3. Which of the following tool is most appropriately used for digging and lifting the soil from the utility pole pit?

- a. Pickaxe 
- b. Shovel 
- c. Hoe 
- d. All of these PSS/ N 0101-4 /PC 8,7,8,7 Easy

4. Which of the following surface is suitable for trench digging?

PSS/ N 0104 /PC 9 Easy

- a. The surface should be firm and undisturbed.
- b. The surface should have drain pipes.
- c. The surface should have pre-installed gas pipes and water pipes.
- d. The surface should be moist and sandy.

5. Which of the following surface is properly backfilled after laying underground power cable?

- a. 
 - b. 
 - c. 
 - d. 
- PSS/ N 0104 /PC 9 Easy



6. What is the use of the equipment in the cable laying process as shown in the image?

PSS/ N 0104 /PC 10 Easy



- a. It is used to increase the length of the cable.
- b. It is used to prevent the cable from twisting while laying.
- c. It is used to clean the ducts.
- d. It supports the cable placed on the rack.

7. Which of the following cables is Single core?

PSS/ N 0103 /PC 10 Easy



8. What is the purpose of the tool shown in the image?

PSS/ N 0101-4 /PC 8,7,8,7 Easy



- a. It is used for cutting metal components of lines.
- b. It is used for tree pruning and cutting.
- c. It is used for shaping wooden poles.
- d. It is used to prepare wooden cleat for cables in double pole structure and transformer.

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PSS/ N 0101-4 /PC 8,7,8,7 Easy



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PSS/ N 0101/PC 10 **Medium**



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11. What is the function of the machine shown in the image?

PSS/ N 0102 /PC 12 **Easy**



- a. It is used to crush the stones for pit filling.
- b. It is used to load/unload wooden poles.
- c. It is used to dig pole holes of appropriate depth.
- d. It is used to remove the pole.



12. What will be the ratio of cement, stone dust and concrete while preparing mortar for placing on the base of pole pit while erecting the utility PCC pole?

PSS/ N 0102/PC 13& 14 Tough

- a. In the ratio of 1 : 3 : 6
- b. In the ratio of 1 : 2 : 3
- c. In the ratio of 1 : 2 : 4
- d. In the ratio of 1 : 1 : 2

13. Which of the following factors will you ensure while erecting the utility pole?

PSS/ N 0101&2/PC 14,8&11

Medium

- a. Poles must tied up with ropes properly so that they may not get loosen while lifting either manually or through crane.
- b. There should be no live lines in the proximity of working area.
- c. At the place of pole erection no materials such as transformers, conductor drums, insulators etc are lying nearby.
- d. A Technical Helper should always ensure all the above mentioned points while erecting the utility pole.

14. State the use of the Lightning Arrestor in Double pole structure?

PSS/ N 0103 /PC 9&10

Medium

- a. It is used to limit over current surge/fault in the line.
- b. It is used to ground all three phases of the cable.
- c. It is used to limit the temperature of the conductors.
- d. It is used to short circuit all three phases of the cable.

15. Across a street minimum Clearance required above ground of the lowest conductor of low and medium voltage (650 V) line shall as per CEA regulation is?

PSS/ N 0101-4 /PC 1,1,1,1 - PSS/ N 0101/PC 11 Tough

- a. 4.3 m
- b. 5.8 m
- c. 8.0 m
- d. 10

16. Minimum clearance from building of low and medium voltage lines and service lines required for vertical and horizontal as per CEA regulations shall be?

PSS/ N 0101-4 /PC 1,1,1,1 - PSS/ N 0101/PC 11 Tough

- a. 2.5 metre and 1.2 metre
- b. 3.7 metre and 1.2 metre
- c. 3.7 metre and 2.0 metre
- d. 4.0 metre and 2.3 metre

17. For drawing overhead lines whether LT or HT normally Aluminium Conductors of following different types and sizes as used?

PSS/ N 0101 /PC 15 Medium

- a. AAC (All Aluminum Conductors)



- b. ACSR (Aluminum Conductor Steel reinforced)
- c. AAAC (All Aluminum Alloy Conductors)
- d. All of above

18. Aluminium is preferred in overhead power cables because?

PSS/ N 0101/PC 15 Easy

- a. it is a good conductor better than Copper
- b. it acts as an insulator, in case of lightning
- c. it prevents accidents
- d. it is lighter in weight

19. Poles or supports are made up of?

PSS/ N 0102/PC 11 Easy

- a. Steel
- b. Cement
- c. Wooden
- d. All of above

20. In Aluminium conductors, Steel core (ACSR) is provided to?

PSS/ N 0101/PC 14- PSS/ N 0102/PC 11 Easy

- a. Increase the tensile Strength
- b. Increase the Flexibility
- c. Decrease the Tensile Strength
- d. Decrease the Flexibility

21. In over head system Cross-arms are fixed?

PSS/ N 0102/PC 11&16 Medium

- a. On the top of pole
- b. In middle of the road
- c. On the base of at the ground level
- d. Non of above

22. How many lines are placed over a Cross-Arm in 11 kV over head lines?

PSS/ N 0102/PC 11 Easy

- a. One
- b. Two
- c. Three
- d. Four

23. In 11 kV double circuit how many cross arms will be fitted on pole?

PSS/ N 0102/PC 11 Easy

- a. One
- b. Two
- c. Three
- d. Four

24. Spacers are used in L.T. Lines to protect from high pressure wind / storms as:

PSS/ N 0101/PC 15 Medium

- a. Spiral
- b. Composite



- c. A and b
- d. None of above

25. Top hamper is fitted on the top of HT 11 kV PCC pole to support?

PSS/ N 0101-4 /PC 7 Easy

- a. Pin insulator
- b. Shackle insulator
- c. Disc insulator
- d. Pig insulator

26. Which types of Insulators used in overhead system at the dead end of HT 11 kV line? PSS/ N 0101-4 /PC 7 Easy

- a. Pin Insulator
- b. Shackle Insulator
- c. Disc Insulator
- d. All of above

27. PG Clamp (Pressure Grip clamp) is used along with Disc insulator to support the conductor at the end of over head line termination and at every DP structure to?

PSS/ N 0101-4 /PC 7 Easy

- a. To hold the conductor end firmly
- b. To make jumper connection
- c. To isolate incoming line
- d. To make earth connection

28. Anti climbing device is a safety device fitted on HT PCC pole at? PSS/ N 0101-4 /PC 7 Easy

- a. 1 metre above the ground
- b. 2 metre above the ground
- c. 3 metre above the ground
- d. 5 metre above the ground

29. In LT over head system Two line cross arm is fitted below the line conductors for? PSS/ N 0101-4 /PC 7 Medium

- a. To lay earth line over it
- b. To support guard wire below the live lines
- c. To help lineman to stand on it
- d. All of above

30. Wedge type connectors are used in LT lines to provide reliable electrical and mechanical connections for all types of conductors in making joints between?

PSS/ N 0101-4 /PC 7 Medium

- a. Jumpers
- b. 'T' connections
- c. Service connections
- d. All of above

31. How many over head lines are laid in LT 3 phase distribution system of urban area including street light point?

PSS/ N 0101/PC 7 Medium



- a. 4 numbers
- b. 5 numbers
- c. 6 numbers
- d. 7 numbers

32. Guard wire in LT over head distribution system is connected with?

PSS/ N 0101/PC 7 Medium

- a. Earth and Neutral line
- b. Earth wire connected to bobbin (made of ceramic or PVC) over neutral line
- c. Bobbin over phase and neutral line
- d. Bobbin over phase and earth line

33. The reason for troubles shooting in over head lines is due to?

PSS/ N 0101/PC 11&15 Easy

- a. Loose sag
- b. Snapping of conductors
- c. Tree branches touching the lines
- d. All of above

34. PCC poles are dig and grouted up to its total length?

PSS/ N 012/PC 12 Medium

- a. $\frac{1}{2}$ portion depth
- b. $\frac{1}{4}$ th depth
- c. $\frac{1}{6}$ th depth
- d. $\frac{1}{8}$ th portion depth

35. Utility's distribution line which connected up to the consumer's premises up to meter terminals is called?

- a. Distributor line
- b. Service line
- c. Feeder line
- d. Main line

PSS/ N 0101/PC 7 Easy

36. In LV 3 phase service line at consumer premises phase to phase voltage is available up to?

- a. 11 kV
- b. 1000 V
- c. 650 V
- d. 415 V

PSS/ N 0101-4 /PC 2 Medium

37. Stay wire / Guy assembly is used at dead-end and angular locations to counter balance the load on the supports (pole) due to pulling of the over head conductors, so that supports (pole) remain straight in vertical position is combination of?

PSS/ N 0101/PC 16 Easy

- a. Anchor plate with stay wire
- b. Turn buckle



- c. Guy strain insulator
- d. All of above

38. Where the guy strain insulator is fixed in the stay wire assembly?

PSS/ N 0101/PC 16 **Medium**

- a. At the top of pole near eye bolt
- b. Three metre above the ground
- c. At centre of stay wire
- d. One metre above the ground near

39. In HT 11 kV (DP) double pole structure GO switch is use?

PSS/ N 0101-4 /PC 7 **Easy**

- a. For earthing
- b. To isolate the Distribution Transformer from HT line
- c. To change over the HT line
- d. None of above

40. State which type of fuse are placed beneath the GO switch in HT over head system?

PSS/ N 0101-4 /PC 7 **Easy**

- a. Rewireable
- b. HRC
- c. Barrel (Drop down DD fuse)
- d. Glass

41. Following material is poured to fill the earthing pit?

PSS/ N 0101-4 /PC 3 **Easy**

- a. Salt & charcoal
- b. Wood & paper
- c. Rubber & plastic
- d. Glass & ceramic

42. Now a day's three types of earthing are prepared i.e. Pipe, Plate and Electrolytic (chemical). State how much boring of soil will be carried out below the test pit of 60 sq. centimetres?

PSS/ N 0101-4 /PC 3 **Easy**

- a. 1 metre
- b. 3 metre
- c. 5 metre
- d. 10 metre

43. As per CEA regulation the definitions for different gradation voltages are given as Low Voltage, Medium Voltage, High Voltage and Extra High Voltage where in Medium voltage is up to?

PSS/ N 0101-4 /PC 2 **Medium**

- a. Not exceeding 250 Volts
- b. 650 Volts
- c. 33 kV
- d. Exceeding 33 kV

44. Resistance is the?

PSS/ N 0101-4 /PC 2

Medium



- a. property of materials to oppose the flow of electricity
- b. property of materials to flow the electricity
- c. property of materials to generate the electricity
- d. none of above

45. In live LT lines current is measured by instrument?

PSS/ N 0101-4 /PC 8,7,8,7 Easy

- a. Galvano meter
- b. Clamp 'ON' or Tong tester
- c. Multi meter
- d. Megger

46. Batteries are source of
Tough

PSS/ N 0101-4 /PC 7,7,7,6

- a. Direct current (DC)
- b. Alternating current (AC)
- c. High Frequency (HF)
- d. Power Factor (PF)

47. This instrument is known as

PSS/ N 0101-4 /PC 7,7,7,6 Easy



- a. Wattmeter
- b. Voltmeter
- c. Ammeter
- d. none

48. Name of this tool is

PSS/ N 0101-4 /PC 8,7,8,7 Easy



- a. Combination Pliers
- b. Adjustable Wrench
- c. Pipe Wrench
- d. Nose plier



49. Name of this Tool is?

PSS/ N 0101-4 /PC 8,7,8,7 Easy



- a. Plier
- b. Crimping Tool
- c. Chisel
- d. Spanner

50. State which tool used for making a hole?

PSS/ N 0101-4 /PC 8,7,8,7 Easy

- a. Screw driver
- b. Combination Plier
- c. Pipe Wrench
- d. Drill machine

51. What PTW mean in electrical system?

PSS/ N 0101-4 /PC 2 Easy

- a. Permit to work on electrical equipments and lines
- b. Private transport work of vehicle in utility
- c. Private temporary wiring
- d. Potential testing work of line

52. What is the standard depth of trench prepared to lay LT 3 phase cable from ground including sand bed?

PSS/ N 0104 /PC 9 Easy

- a. 1 metre
- b. 0.75 metre
- c. 0.5 metre
- d. 1.25 metre

53. Two types of joints are prepared in the cable first is Straight through and second is end terminal in conventional cast iron joint boxes and heat shrinkable. Which type of joint you will prefer for outdoor application for jointing with other line in 4 pole Bus structure?

PSS/ N 0104 /PC 9 Medium

- a. Straight through joint pre moulded



- b. Heat shrink terminal end joint
- c. Cast iron body straight through
- d. Cast iron end box

54. Which tool is used to tighten Bolts?

PSS/ N 0101-4 /PC 8,7,8,7 Easy

- a. Wrench
- b. Hammer
- c. Screwdriver
- d. Plier

54. Types of transformers are?

PSS/ N 0103 /PC 7 Easy

- a. Power Transformer in Grid station
- b. Distribution Transformer.
- c. Instrument transformer as CT and PT
- d. All of above

55. Types of Circuit Breakers are?

PSS/ N 0103/PC 7 Tough

- a. Minimum oil circuit breakers (MOCB).
- b. Air circuit breakers (ACB).
- c. Vacuum circuit breakers (VCB).
- d. All of above

56. What is the function of LA (Lightning Arrester)?

PSS/ N 0103/PC 7 Easy

- a. Discharges over voltage surges current
- b. For winding of motor
- c. Increase the voltage
- d. All of above

57. where is the location of lightning arrester at DP structure?

PSS/ N 0103/PC 7 Easy

- a. Located near transformer at incoming terminals
- b. Under ground near earth terminals
- c. On ground beneath the poles near LTACB
- d. All of above

58. Lightning arrester always connected between

PSS/ N 0103 /PC 7 Easy

- a. On HT phase & earth terminals
- b. Neutral & earth terminals
- c. On LT phase & earth terminals
- d. On LT phase & neutral terminals



59. which of the following part of transformer visible from outside?

PSS/ N 0103/PC 14 **Easy**

- a. Bushing
- b. Core
- c. Primary Winding
- d. Secondary Winding

60. ACB installed on the outgoing side of transformer got tripped due to fault what will you do?

PSS/ N 0101-4 /PC 19,19,21,12 **Easy**

- a. Retry to operate ACB
- b. Patrol the line to check the fault
- c. Try to restore the supply by bypass the ACB
- d. Insert wooden rod in ACB relay so that the same could not operate

61. Hot oil circulates through the radiator tubes / fins thus it limits?

PSS/ N 0103 /PC 15 **Easy**

- a. Transformer oil temperature to safe limit
- b. It control the flow of oil
- c. It avoid over flow of oil
- d. It keep warm the transformer winding

62. What is the name of transformer part shown in figure?

PSS/ N 0103 /PC 7 **Easy**



- a. Breather
- b. Pipe
- c. Conservator
- d. Ventilator

63. What it indicate when silica gel in the breather turns partially in to pink?

PSS/ N 0103/PC 15 **Easy**



- a. Show moisture in the transformer
- b. Show transformer oil need replacement



- c. Show transformer become defective
- d. Show transformer running over load

64. What will you do when silica gel in the breather turns partially in to pink? PSS/ N 0103/PC 15 Easy



- a. Give the heat treatment of dry air so that colour of gel turn back to blue and reinsert in breather
- b. Replace the gel with new blue coloured pack
- c. Wait till complete gel become pink
- d. Immediately replace transformer oil

65. What is the use of radiator in transformer? PSS/ N 0103/PC 14 Easy

- a. For cooling the oil
- b. For cooling the water
- c. Load transfer
- d. Heat treatment of winding

66. Transformer oil level in conservator tank is viewed from Oil level gauge glass and is kept at?

- a. Minimum level
- b. Maximum level
- c. Middle level
- d. None of the above

67. What is the function of 100 mm diameter GI pipe with diaphragm on its end fitted on top plate over the transformer tank called pressure relief vent or explosion vent? PSS/ N 0103/PC 9 Easy

- a. It is a inhale of air device when breather start malfunctioning
- b. It's a gas pressure release when diaphragm rapture
- c. It control transformer oil level of conservator tank
- d. It indicate property of utility as flag on vent pipe

68. What is the observation to check the quality of Transformer Oil? PSS/ N 0103/PC 15 Easy

- a. Oil Temperature
- b. Oil BDV & acidity
- c. Sludge
- d. All of above

69. what are the causes of physical transformer failure? PSS/ N 0103/PC 14 Easy

- a. Damage of Insulation
- b. Cracking of bushings



- c. Lightening Surge
- d. All of above

70. The transformer rating is usually expressed in terms of?

PSS/ N 0103/PC 7 Easy

- a. Volt
- b. KW
- c. Ampere
- d. KVA

71. One MVA transformer capacity is equivalent to?

PSS/ N 0103/PC 7 Easy

- a. 10 kVA
- b. 100 kVA
- c. 1000 kVA
- d. 10,000 kVA

72. State from following list maximum capacity of transformer could be installed on double pole mount substation?

PSS/ N 0103/PC 7 Tough

- a. 400 kVA
- b. 630 kVA
- c. 1000 kVA
- d. 1200 kVA

73. DD fuse as shown is used for HT protection of the Transformer. It contains a Fuse Wire in it which melts at the time of over current fault. How it is revealed that fuse is blown?

PSS/ N 0101-4 /PC 8,7,8,7 Medium



- a. Ceramic tube get burst
- b. Barrel get slipped from its upper portion and loosely hang
- c. Colour of barrel get changed
- d. Fuse blown could not be identified on live status

74. Megger is used for measuring the?

PSS/ N 0101-4 /PC 8,7,8,7 Medium

- a. IR value (Insulation resistance)
- b. Contact resistance
- c. Winding resistance



d. All of the above

75. LA (Lightening Arrestor) is designed with respect to?

PSS/ N 0101-4 /PC 8,7,8,7 **Medium**

- a. Line voltage
- b. Phase voltage
- c. Both of the above
- d. None of the above

76. What is the name of following assembly having three 4 metre long 40 mm GI pipes hinged at upper end



- a. Bipod
- b. Tripod
- c. Chain pulley
- d. Hook

PSS/ N 0101-4 /PC 8,7,8,7 **Medium**

77. What is/are the use(s) of the equipment shown in the image?

PSS/ N 0101-4 /PC 8,7,8,7 **Medium**



- a. It is used to check voltage between the wires.
- b. It is used to verify that there is no cut or break in the wire.
- c. It is used to check the amount of current in the wire.
- d. All - A,B and C

78. Why is it necessary to earth distributions poles in ABC lines?

PSS/ N 0104 /PC 13 Medium



- a. To stabilize the system voltage.
- b. To store excess current of the transmission line.
- c. To add stability to a free standing pole structure.
- d. Both to stabilize the system voltage and to store excess current of the distribution line.

79. What is the name of bare conductor surrounded by AB insulated cables

PSS/ N 0104/PC 10 Easy



- a. ACSR conductor
- b. Neutral conductor



- c. Earth conductor
- d. Messenger wire

PSS N 2001

(Use Basic health and safety practices for Power related work)

80. What is the most important during electrical job execution?

PSS/N 2001 PC4 Medium

- a. Safety of self and safety of others
- b. Job knowledge
- c. safety of equipments
- d. all of the above

81. Which points is followed by everybody at the time of work?

PSS/N 2001 PC4 Easy

- a) Safety of the self
- b) Safety of the Co-workers.
- c) Safety of the Public
- d) All of above

82. what are the PPE's (personal protective equipments) should be used during electrical work?

- a. safety helmets with shield or spectacles
- b. safety gloves
- c. safety shoes

PSS/N 2001 PC1 Easy



- d. safety belt.
- e. all of the above

83. It is responsibility of Technical Helper to prepare a safety zone by placing signage, cordon and traffic diversion board because?

PSS/N 2001 PC6 Easy



- a. Unauthorized entry to work station could be avoided
 - b. Public could be aware that man are at work at live lines
 - c. Smooth functioning of job could be carried with safety
 - d. All of above
- 84. which safety precaution to follow before starting the work?**
- a) Do not consume liquor while working or before coming to work
 - b) While working on line avoid cracking of jokes or any foul play
 - c) Make sure about safety precautions
 - d) All of above

PSS/N 2001 PC4 Easy

85. where this danger plate is fitted?

PSS/N 2001 PC12 Easy



- a) On the HT 11 kV pole
- b) In the entry of 11 kV switchgear room of substation
- c) Near the 11 kV Distribution transformer fencing or DP structure
- d) All of above

86. Why we used the hand gloves during work on the live lines?

PSS/N 2001 PC4 Easy

- a) For firm grip of hand tools



- b) For safety from electric shock
- c) So that hands remain clean from dust
- d) All of above

87. Which equipment used in case of fire?

PSS/N 2001 PC26 Easy

- a) Fire extinguishers
- b) Fire buckets filled with clean dry sand
- c) Water Hydrant
- d) All of above

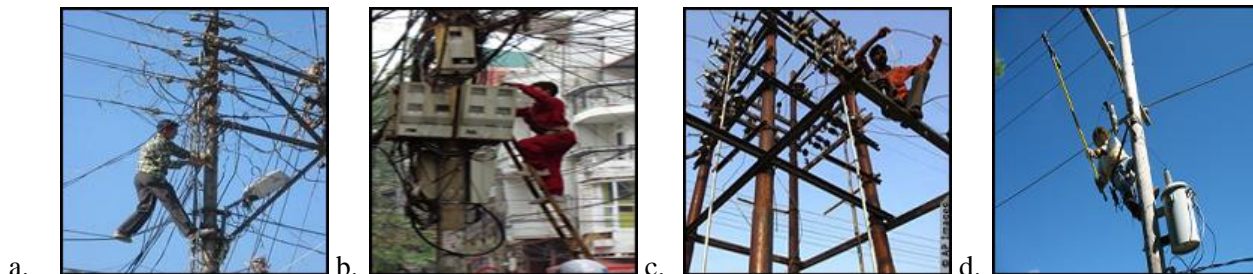
88. How much Clearance required between ground and lowest overhead conductor for 650 volt?

PSS/N 2001 PC21 Tough

- a) 5.8 meter
- b) 10 meter
- c) 20 meter
- d) None of above

89. Which of the following is the proper way of working with live wire?

PSS/N 2001 PC11 Easy



90. How electrical shock occurs?

PSS/N 2001 PC32 Medium

- a) when above 100 V electrical current passes through the body
- b) Touching a LV –MV live wire and an electrical ground
- c) Touching a live wire and another wire at a different voltage above 100 V
- d) All of above

91. What precautions to be taken while working on live line?

PSS/N 2001 PC 5 Easy

- A) Circuit is in off condition
- B) Line clear permit is taken from authorities
- C) Equipment / Line is properly earthed.
- D) All of above

92. Which tool required for working on heights?

PSS/N 2001 PC7 Easy

- a) Ladder



- b) Zola & rope
- c) Safety belt
- d) All of above

93. Portable ladders are normally types of...

PSS/N 2001 PC7 Easy

- a) Straight
- b) Extension
- c) Step-ladders
- d) All of above

94. Portable ladders are normally made of?

PSS/N 2001 PC7 Easy

- a) Wood
- b) Aluminium
- c) Fibreglass
- d) All of above

95. What is the first requirement to take up work on the live line?

PSS/N 2001 PC5 Medium

- a) PTW for shut down
- b) Ladder
- c) Tools and tackles
- d) Safety sign board

96. Permit to work system provides to workmen engaged in electrical work?

PSS/N 2001 PC5 Medium

- a. in built safety
- b. Free to execute the job under dead condition
- c. No suspect of back up supply
- d. All the above

97. CAUTION ORDER TAG is always used in conjunction with a PTW?

PSS/N 2001 PC5 Medium

- a. To ensure line is clear dead from all source
- b. Earth chain on line is provided
- c. HT line is dead and earth from isolator
- d. All of above

98. In safety Tagging system DO NOT OPERATE (DNoP) TAG acts as lock?

PSS/N 2001 PC5 Medium

- a. Once the tag is attached to a equipment that equipment cannot be connected to known sources of electricity
- b. Could be taken up for testing purpose
- c. Operation can be carried in emergency
- d. All of above

99. Who is authorized for issue the permit?

PSS/N 2001 PC5 Medium



- a) Manager or Executive Engineer
- b) Assistant Manager or SDO
- c) Authorised nominated officer
- d) Executive or Junior Engineer

100. What is Discharge Rod?

PSS/N 2001 PC8 Medium

- a) A insulated rod having hook at on side connected with earth lead
- b) A bamboo of 8 feet having arrow on one side
- c) A rod having wet cloth to cool down the hot spot
- d) A neon sign rod which indicate and beep when put close to live line

101. What is the function of discharge rod?

PSS/N 2001 PC8 Medium

- a) The discharge rod is used to discharge the static & induction charge to earth
- b) The discharge rod is used for cutting the branches of tree touching the HT line
- c) The discharge rod is used for removing the birds nest, kites from live line
- d) The discharge rod is used to hook the jumpers for connections in over head lines

102. How to Maintain the Discharge – Rod?

PSS/N 2001 PC8 Medium

- a) The rod should not be kept in wet condition.
- b) Ensure that the continuity of all wires of discharge rod is intact.
- c) The continuity of wires should be tested regularly.
- d) All of above

103. What is the use of a Chain in over head lines?

PSS/N 2001 PC8 Medium

- a) Cordon the area for traffic diversion
- b) Used to give tools and accessories by ground staff to lineman
- c) For connecting the separate over head lines
- d) Use to short circuit the over head line to earth to avoid back feed of supply

104. What is this?

PSS/N 2001 PC1 Easy





- a) Safety Gloves for hot line work
- b) Warm gloves for winter season
- c) Medicated gloves to avoid infection
- d) None of above

105. What is process after getting the shutdown of a equipment / line? PSS/N 2001 PC12 Easy

- a. Switch off incoming
- b. test the same by neon tester
- c. should be earthed after discharge rod
- d. All of above

106. Where Full body harness safety belt is used? PSS/N 2001 PC7 Easy

- a) While working on the live line LT on pole for repair of jumpers
- b) While working on the live line LT on pole for replacing service line
- c) While working on the dead line on HT pole for repair and maintenance
- d) All of above

107. What is fire? PSS/N 2001 PC23 Medium

- a) Combination of Fuel, Heat and Air
- b) Combination of water and air
- c) Combination of oil and water
- d) None of above

108. Cause of fire due to electricity is? PSS/N 2001 PC19 Medium

- a) Over load and loose joint cause short circuit in the wiring
- b) Bad Housekeeping
- c) Welding without fire precautions
- d) All of above

109. Identify the warning sign that depicts an emergency exit. PSS/N 2001 PC20 Easy



110. How many types of fire Extinguishers?

PSS/N 2001 PC23 Medium

- a. Dry Chemical Power Type (Class A, B, C and electrical fire)
- b. Mechanical Foam Type (Class 'B' fire)
- c. Carbon Dioxide (CO₂)



d. All of above

111. The below image shows two fire extinguishers extinguishing fire. Which of these is the correct way to extinguish the fire?
PSS/N 2001 PC26 Easy



a. A

b. B

c. A & B

d. None of these

112. What does this sign Indicates?

PSS/N 2001 PC20 Easy



- a. Broken arrows likely
- b. Danger: High Volt electricity
- c. Take a sharp left, then a sharp right
- d. Accident prone area

113. What Does Sign Indicates?

PSS/N 2001 PC20 Easy



- a. Smoking Area
- b. Caution fire ahead
- c. No Smoking



d. No Matchstick

114. What does this sign Indicates?

PSS/N 2001 PC20 Easy



- a. Danger cause fatal
- b. Caution
- c. No Entry
- d. Electric crematorium

115. This is a symbol stand for?

PSS/N 2001 PC20 Medium



- a. Caution
- b. No – Horn
- c. Tripping hazard
- d. Biological Hazard

116. Identify the fire extinguisher that is used to extinguish fire caused by electrical appliances only.

PSS/N 2001 PC23 Medium



a.



b.



c.



d.



117. What does this sign Indicates?

PSS/N 2001 PC20 **Easy**



- a. Drinking Water
- b. Fire Extinguisher
- c. First Aid
- d. Danger

118. Gloves are made of rubber because:

PSS/N 2001 PC1 **Easy**

- a. Rubber is elastic
- b. Rubber is durable
- c. Rubber is cheaper
- d. Rubber is an insulator

119. Rubber mats are placed in front of electric panel for:

PSS/N 2001 PC11 **Medium**

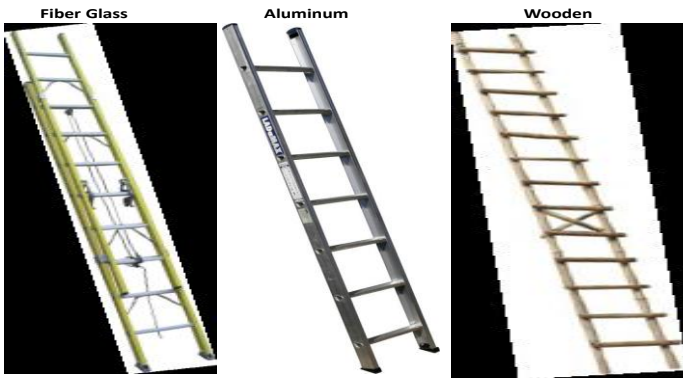
- a. Electric safety during operation
- b. Workplace decoration
- c. To avoid injury due to fall
- d. To avoid slippage

120. The ladders used in electricity departments are made of?

PSS/N 2001 PC7 **Easy**

- a. Wooden (Bamboo)
- b. Fibre Glass
- c. Aluminium with rubber collar base on both sides
- d. All of these

121. The ladder is placed at an angle from ground to inclined vertical plane at? PSS/N 2001 PC7 **Medium**



- a. 90°
- b. 75°
- c. 60°
- d. 45°

122. Which of the following safety equipment shown in the image is/are used while working with overhead live line?

PSS/N 2001 PC7 Medium



- a. Only A
- b. Both A and B
- c. Both A and C
- d. All - A, B, C and D



CSC/N 1336

(Work Effectively with Others)

123. A plan shut down has been availed by your supervisor for duration of 4 hrs of the entire rural feeder for tree trimming. Supply has been switched 'OFF' and your team has been instructed to report at site at 6.00 AM sharp in the morning. What you will you do? CSC/N 1336 PC1 Easy

- a. Take up the assigned work allotted as per schedule
- b. Wait for other colleagues respond
- c. You won't report because it is too early
- d. Prepare for excuse to avoid the assignment

124. All employees are required to abide by the Code of conduct rules applicable to them. Employee's behavior not in consonance with conduct rule is liable to attract? CSC/N 1336 PC2 Easy

- a. Disciplinary action
- b. Deduction in the salary
- c. Debar from service
- d. All of above

125. Your one of colleague gets badly injured at site. What will you do after first aid?

- a. Immediately bring him to nearby hospital CSC/N 1336 PC3 Easy
- b. Report the matter to seniors
- c. Pass on the information to all colleagues
- d. All of above

126. While carrying jointly at a work site the drill bit of one of your colleague gets broken thus his work become held up for want of drill bit. You are also equipped with drill machine having same size drill bit in spare. What you will do in this situation? CSC/N 1336 PC4 Easy

- a. You will give your drill machine with bit knowing that he is not have so much skill to operate your drill machine



- b. You will give him only drill bit with the assurance the same will be returned back after completion of work
- c. You will give him drill bit with obligation that his work was held up and propagate
- d. You won't provide him any assistance

127. pole fallen on the road during a storm causing obstruction to traffic vehicular movement and creating chaos supply has been made dead but you are alone at site waiting for your colleagues who did not turn up due to public wrath. What will you do? CSC/N 1336 PC5 Easy

- a. Argue with public for poor administration
- b. Take up to shift pole on road side with the help of public
- c. Run away from site to save your self
- d. Wait for your colleagues

128. You are unable to dig a trench due to defective handle of pickaxe. What will you do in this case?

- a. Report the matter to supervisor and leave the site. CSC/N 1336 PC6 Easy
- b. Get help from colleague who is having the pickaxe
- c. Complaint to seniors that you have been issued defective handle pickaxe
- d. Argue with store keeper for giving defective handle pickaxe

129. Supply of entire area of your locality is fail due to load shedding. Public gathered at your complaint centre and agitated. How you will deal with annoyed consumers? CSC/N 1336 PC7 Easy

- a. Remain calm, patient and pacify the customers giving full illustration of shedding period
- b. Act ruthlessly to consumers and argue
- c. Ready to fight with consumers
- d. Close and lock the complaint centre and run away

130. Your one of colleague has pronounced by public on an unethical act. What will you do?

- a. Report the matter to your seniors CSC/N 1336 PC8 Easy
- b. Call your colleagues to fight with public
- c. Try to settle the matter with public
- d. Warn the audience for dire consequence

131. The supply of consumers fail, the same is restored within time and please with your service. Now what will you do when consumer offer you some sort of obligation? CSC/N 1336 PC9 Medium

- a. Accept the obligation and keep it



- b. Accept the obligation and share with your supervisor
- c. Show etiquette behaviour and say no to accept bribe
- d. Disconnect the consumer line and report to supervisor

132. Teamwork is?

CSC/N 1336 PC9 Medium

- a) Effective way for completion of large-scale project on time
- b) Teamwork is key success of company
- c) Work is carried out in coordinated way jointly
- d) All of above

133. Characteristics of disciplined behaviour are

CSC/N 1336 PC9 Easy

- a) Be Punctual
- b) Maintain work standards
- c) Right attitude towards work
- d) All of above

134. Benefit of Positive Attitude

CSC/N 1336 PC10 Tough

- a) It enables you to achieve your goals successfully
- b) It lends more dynamism and energy to your life
- c) It helps you to turn difficult situations into opportunities to learn
- d) All of above

135. Why would you need good listening skills? CSC/N 1336 PC10 Medium

- a. The ability to listen well allows you to understand your daily tasks better
- b. Being a good listener helps you build a good relationship with your family, friends and superiors.
- c. Good listening skills are a key ingredient for building good team spirit.
- d. All of above



Practical test of Technical Helper (Distribution)
Total question -8, Time of execution of each assignment – 30 minute

Question No. 1

Job role Preparing pit for erection of 9 metre PCC Pole

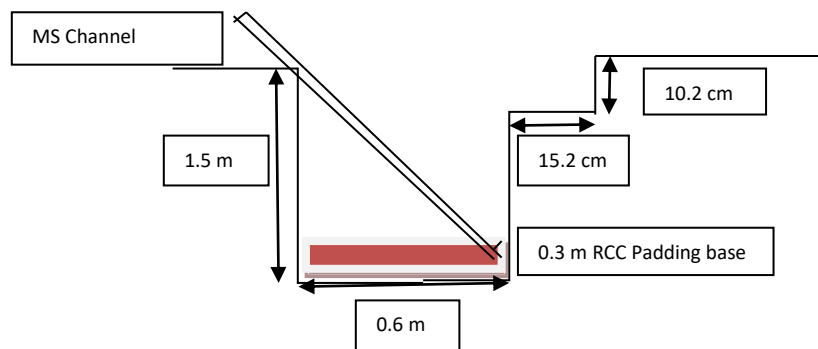
Material required

1. Tools and Tackles: pickaxe, crow bars, and shovel, Sprit level (For checking verticality)
2. M.S. channel (one metre length)

Participant will demonstrate pit making and digging procedure

The dimensions of the pit and the centre to centre distance of pits are required.

Pits having a dimension of about 1.2 m x 0.6 m should be excavated with its longer axis in the direction of the line. The planting depth should be about 1/6 length of the support (1.5 m for LT pole). Excavation is generally done by using pickaxe, crow bars, and shovel, with a slope towards the direction of line so that smooth sliding and perfect placement of pole in the pit, an inclined trench having 15.2 cm (6 in.) width and 10.2 cm (4 in.) length may be dug adjacent to the pit as shown below. A piece of M.S. channel may be placed in the inclined position at the other end of the pit for enabling the pole to slip smooth inside the pit. The following figure shows the procedure for erection of pole. The trench would facilitate the pole to skid smoothly into the pit with jerks.



Question No. 2

Job role preparation of cement concrete mixture and prepare 0.3 metre RCC padding base for pole pit

Material required

Mortar material along with tools and tackles

Participant will demonstrate the complete process till preparation of padding base



General proportion of Concrete Mixer is as below:-

Material	Proportion	Proportion	Proportion
	1:3:6	1:2:4	1:4:8
1) 1*1/4" Stone	100 Cft.	100 Cft.	100 Cft.
2) Sand	50 Cft.	50 Cft.	50 Cft.
3) Cement	13 bag.	20 bag.	10 bag.
4) Water	484 Ltr.	484 Ltr.	484 Ltr.

The concreting mixture 1 : 3 : 6 ratios would mean 12.8 bags of cement 100 cubic ft of V/z size concrete and 50 cubic ft of stone dust/sand. It may be noted that while preparing the concrete mixture large quantities of water should not be used as this would wash away cement and sand.

Question No. 3

Job role erection of 9 metre PCC Pole and refilling

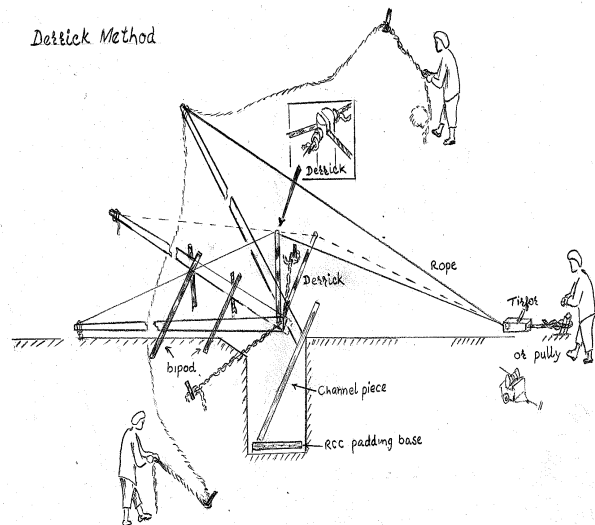
Material required

1. LT PCC pole (Taken as broken up to 3 metre length)
2. Complete tools and Tackles: rope, pickaxe, crow bars, and shovel, Sprit level (For checking verticality), bipod etc.
3. M.S. channel (one metre length)

Participant will demonstrate PCC pole erection and refilling

Procedure: Bring the pole by manual labour or by hand cart. The pole is slid along the line route. The pole is tied with 3 ropes. The rope at the bottom prevents the pole from being dragged in the direction of the pull. To prevent the support from moving side in rising, two guy ropes are fixed on both sides and attached to temporary anchor.

The bipod is placed in position and attached to the pole by means of tie wire. The pull for lifting the poles is provided by rope pulley. When the pole has reached at an angle of (35° to 40°) the Derrick and bottom holding rope is slowly released. When the pole assumes the vertical position, the holding ropes should be tightened.



It should be ensured that the time of erection, the two men shifting the bipod as required while rising the pole when it is free at 40 degree angle, will also join other two men who are at the holding rope and the supervisor should be at a distance for guiding correct position so that in the event of breaking of rope, if pole falls, it will not result into an accident.

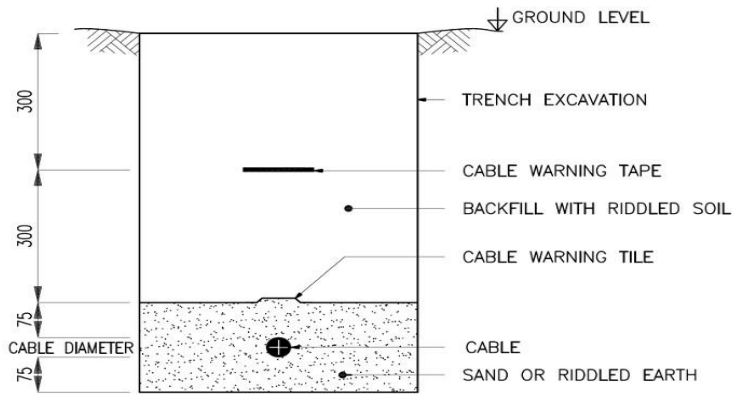
Then the pole is erected inside the pit. The padding will distribute the density of the pressure due to weight of the pole on the soil.

The verticality of the poles is to be checked with a spirit level. After the pole erection has been completed, and having satisfied that the verticality and alignments are all right, earth filling and ramming is to be done up to $\frac{2}{3}$ of its depth and balance by cement mortar up to ground level.

Question No. 4

Job role Trench digging for laying of LT cable in open pavement (depth 0.75 metre)

Depth of cable trench for LT cable



**CABLE LAYING DETAIL
DIRECT BURIED CABLES
415V CABLES**

A trench of 2 metres be prepared as per aforesaid dimensions

Material required

1. Two sand bag
2. SS Flat scale one meter
3. Tools & Tackles: pickaxe, crow bars, and shovel etc

Participant is asked to prepare LT cable trench of two metres according to dimensions stated above. Show the depth of cable trench, height of sand bed, in centimeters with the help of scale.

Related Query (Why sand bed is prepared in the trench?)

Question No. 5

Job role Trench digging for laying of HT cable (11 or 33 kV) in open pavement (depth 1.2 metre)

Material required

1. Two sand bag
2. SS Flat scale one meter
3. Tools & Tackles: pickaxe, crow bars, and shovel etc.

General standard of cable depth in a trench

1. For 33 kV depth is taken as 1.2 meter minimum below ground level
 2. For 11 kV depth is taken as 1.0 meter minimum below ground level
 3. For LT three 440 V depth is taken as 0.6 meter minimum below ground level
- For LT Single phase taken 500 centimetre minimum below ground level

Participant is asked to prepare HT cable trench of two metres according to dimensions stated above. Show the depth of cable trench, height of sand bed, in centimeters with the help of scale.

Related Query (Why the depth of HT cable trench is kept more?)



Question No. 6

Job role: Laying of LT cable in open pavement or foot path

Material required

1. 50 or 95 sq. mm LT PVC 3½ or 4 core armoured cable Length-3 metre
2. Two sand bag, bricks (or RCC ducts)
3. SS Flat scale one meter and complete Tools & Tackles: pickaxe, crow bars, and shovel etc.
4. Cable route marker MS or RCC slab and tape

Participant is asked to lay LT cable in trench according to dimensions stated above. Show the depth of cable trench, height of sand bed, height of cable and height of sand bed over cable in centimeters with the help of scale. Lay the bricks (or ducts) over cable, place tag over bricks, place cable route marker (showing detail), refill soft soil and dressing. Keep the area tidy and clean.

Related Query (Why sand bed is prepared to engulf cable in trench?)

Question No. 7

Job role: Laying of HT cable in open pavement or foot path and refilling

Material required

1. 50 sq. mm (or any similar size available) HT 3 core armoured cable Length-3 metre
2. Two sand bag, bricks (or RCC ducts)
3. SS Flat scale one meter and complete Tools & Tackles: pickaxe, crow bars, and shovel etc.
4. Cable route marker MS or RCC slab and tape

In similar procedure HT cables are laid where depth of cable is maintain as 1.2 meter for 33 kV lines as per regulation 76.

Participant is asked to lay HT cable according to dimensions stated above. Show the depth of cable trench, height of sand bed, height of cable and height of sand bed over cable in centimeters with the help of scale. Lay the bricks (or ducts) over cable, place tag over bricks, place cable route marker (showing detail), refill soft soil and dressing. Keep the area tidy and clean.

Related Query (Why the depth of HT cable trench is kept more?)

Question No. 8

Dehydration of Silica gel and cleaning of breather of transformer

Material required

- 1 Complete set of silica gel breather bottle
- 2 Lineman tool comprising of spanner set, combination plier, nose plier, screw drivers etc
- 3 Transformer oil one cup
- 4 Cotton waste



Participant is asked to open the Silica gel bottle, dehydrate the gel, clean the bottle and refit the same ensure he had clean the cup and filled the cup with transformer oil for dust free breathe.

Related query

Silica gel in breather is used for absorbing moisture in air during breathing. Due to the absorption of moisture, the blue colour of silica gel crystals turns to pink. Such pink coloured crystals of Silica gel are to be re-activated by heating either by spreading it on a paper in sun or by heating it slowly in a metallic vessel. Whenever the crystals turn white, it renders useless and are to be replaced by new. Oil in the bottom cup of the breather also needs replacement if it becomes dirty.

- (a) Silica gel needs to be heated between 150°C to 200°C for proper activation.
- (b) While replacing Silica gel; oil in the bottom cup of the breather should also be replaced.
(Oil gets contaminated due to dust in air)

All the aforesaid activities are to carry by participant in sequential order.

Viva (Technical Helper (Distribution))

Total question - 15

(Answering of each steps in sequence carry equal marks with total 4/5 viva in each question)

Question No.1 State the units of following electrical parameters

- a. **Current**
- b. **Voltage**
- c. **Resistance**
- d. **Power**
- e. **Energy**

Question No.2 Select proper tool to assist lineman

- a. **Screw driver**
- b. **Combination Pliers**
- c. **Spanner Set**
- d. **Pipe Wrench**



- e. **Hacksaw**

Question No.3 Select proper tool to assist lineman

- a. **Hammer**
- b. **Chisel**
- c. **File**
- d. **Wood-Saw**
- e. **Center Punch**

Question No. 4 Select proper tool to assist lineman

- a. **Electric Drill Machine**
- b. **Line Vice**
- c. **Blow Lamp**
- d. **Crimping tool**
- e. **Tripod**

Question No.5 Select proper tool to assist lineman

- a. **Crow Bar**
- b. **Pickaxes**
- c. **Hoe**
- d. **Shovels**
- e. **Hand Cart**

Question No.6 Ladder in electrical system

- a. **Types in use**
- b. **Why rubber pad is fitted**
- c. **At what angle ladder is inclined**
- d. **How ladder is transported**
- e. **At top of ladder how many steps are left for climbing**

Question No.7 Safety tools

- a. **State the function of discharge rod**
- b. **State the function of copper hook placed on tip of discharge rod**
- c. **State the function of metallic chain**
- d. **State the function of rope in overhead system**
- e. **State the function of Neon (Power) Tester**

Question No.8

- a. **What is function of stay wire**
- b. **State the components of stay wire assembly**
- c. **Where stay wires are grouted**
- d. **State the height of pig insulator above the ground in stay wire**

Question No.9

- a. **State the types of insulators used in overhead lines**
- b. **Where disc insulator is fitted**
- c. **Name of clamp fitted with disc insulator**



- d. Where shackle insulators are used

Question No.10 PPE (Personnel Protective Equipment)

- a. State function of HELMET
- b. What precaution you will ensure while wearing helmet
- c. What is the function of GLOOVES
- d. DANGER & SAFETY SIGN BOARDS
- e. State the function of guard wire

Question No.11

- a. What is function of cross arm
- b. Where the top hamper fitted on HT pole
- c. What do you know about double circuit how you will manage with single pole line
- d. What happen when one conductor snapped from X-arm

Question No.12

- a. What is function of anti climbing device
- b. At what height Anti climbing device is fitted on pole
- c. What is written on danger plate
- d. At what height danger plate is fitted on pole