

Job Role: Mine Electrician

S. No.	NOS Code	PC Code	Question	Option A	Option B	Option C	Option D	Answer	Difficulty Level (E/M/H)
1	MIN/N 0446	PC1	Discussion with Electrical Supervisor is necessary for understanding the work	No	Yes	Not sure	None of these	B	E
		PC1	To understand the work instructions electrician should have	Knowledge of work	Ability to plan and prioritise the work	Communication skill	All of these	D	E
		PC1	As per Ohm's law	$V=R$	$R=I/V$	$R=V/I$	$V=I/R$	C	E
		PC1	Bit of soldering iron is made of	Copper	Nicrome	Carbon	Iron	A	E
		PC1	AC supply frequency in India is _____ Hz	40	50	60	70	B	E
		PC1	In any DC circuit, resistance is 5 ohms and voltage is 10 volts then current flow will be	4	50	2	5	C	M
		PC1	Connected with general mass of earth in such manner as to ensure at all times an immediate discharge of electricity without danger.	Earthed	Connected with earth	Both A&B	None of these	C	M
		PC2	It shows how the electrical cables are connected and also shows where the fixtures, equipments etc. are connected to the system	Physical Layout	Electrical Layout	Mine plan	None of these	B	E
		PC2	A pictogram used to represent various electrical or functions, such as wires, batteries, resistors, circuit breakers, motors etc. in a electrical diagram or layout.	Motor	Symbol	Resistance	Transformer	B	M
		PC2	Restricts current flow	Resistance	Condenser	Diode	All of these	C	E
		PC2	At about earth potential and disconnected from any live system. It is used only with reference to current carrying parts when these parts are not live	Live	Dead	Both A&B	None of these	B	H

		PC2	Adequately covered with insulating material of such quality and thickness as to prevent danger	Covered with insulating material	Covered with non insulating material	Both A&B	None of these	A	M
		PC3	Is usually consists of an enclosure, a variety of electrical components and often a power switch. Includes any machine powered by electricity.	Electrical Equipment	Motor	Diode	None of these	A	H
		PC3	Is a part of electrical generation, transmission and distribution system. Transforms voltage from high to low or the reverse and performs several other important functions.	Electrical Sub-station	Switch Station	Transformer	None of these	A	M
		PC3	Is an electrical installation of cabling and associated devices such as switches, distribution boards, sockets, light fittings in a structure et	Electrical Layout	Electrical Wiring	Electrical Plan	Circuit Diagram	B	H
		PC3	An electrician should know the use of measuring instruments	TRUE	FALSE	Not sure	None of these	A	E
		PC4	The power factor of squirrel cage induction is	Low at light loads only	Low at heavy loads only	Low at rated load only	All of these	A	M
		PC4	Capacitor in split phase induction motor is used to	Improve the starting torque	Improve the power factor	Start the motor	Reduce the harmonics	A	M
		PC4	For very sensitive and wide speed control, the preferable control method is	Armature control	Ward- leonard control	Multiple voltage control	Field control	B	H
		PC4	Thin laminations are used in a order to reduce	Eddy current loss	Hyteresis loss	Both A&B	Copper loss	A	M
		PC4	Often refer to a set of documented requirements to be satisfied by a material, design, product or service. It is also a type of technical standard	Specifacation	Wiring diagram	Plan	Layout	A	H

		PC4	Lines are set of wires called conductors, that carry electrical power from generating plant to the Sub-stations, that delivers power to the customers.	Transmission line	Tram Line	Trolley wire	All of these	A	M
		PC4	Full form of SOP	Standard of Power	Standard Operating Procedures	Supply of Powre	All of these	B	M
		PC4	Which is the bad conductor of electricity	Mica	Copper	Silver	Tin	A	E
		PC4	A transformer transforms	Voltage	Current	Voltage & Current	requency	C	E
		PC5	Is a reproduction of a technical drawing or engineering design.	Blue Print	Print	Both A&B	None of these	A	H
		PC5	Preparing sketches or follow blueprint is necessary to	Keep record	Determine the location of wiring or equipment	Both A&B	None of these	B	M
		PC5	The sequence of induction motor is RYB, then the direction of induction motor can be changed by which of the following sequence	BYR	RBY	BRY	All of these	A	E
		PC5	Full form of MCB is	Middle Circuit Breaker	Main Circuit Breaker	Miniature circuit Breaker	Main line Circuit Breaker	C	E
		PC6	The primary and secondary winding of a transformer are coupled to each other	Electrically	Magnetically	Both A&B	None of these	B	M
		PC6	Means with in physical reach without the use of any appliance or special effort	Not accessible	Accessible	Both A&B	None of these	B	E
		PC6	Installing under rated electrical equipment may result in	Failure of equipment	Equipment shall work satisfactory	Both A&B	None of these	A	E
		PC7	Not covered with insulating material	Bare	Cable	Switch	None of these	A	E
		PC7	Which of the following induction motor has the highest starting torque	Squirrel cage induction motor	Slipring induction motor	Both A&B	None of these	B	M

		PC7	A device capable of making and breaking the circuit under all conditions and unless otherwise specified, so designed as to break the current automatically under abnormal conditions	Circuit	Motor	Circuit Breaker	Link switch	C	H
		PC7	Any wire, cable, bar, tube, rail or plate used for conducting electricity and so arranged as to be electrically connected to a system	Motor	Conductor	Starter	Switch	B	H
		PC7	No conductor of an overhead line, including service lines, erected elsewhere than along or across any street shall at a height less than_____metres for lines of voltage upto and including 11000 volts, if insulated	4	4.6	5	5.2	A	H
2	MIN/N0447	PC1	A transformer can be connected to DC supply	Yes	No	Both A&B	None of these	B	E
		PC1	Auto transformer can do the following	Step up voltage	Step down voltage	Both A&B	None of these	C	M
		PC1	The working principle of transformer depends on	Coulombs law	Faradays law of electromagnetic induction	Amperes law	Newtons law	B	H
		PC1	A transformer is a device	AC	DC	Both A&B	None of these	A	E
		PC1	Is mainly designed for closing or opening of an electrical circuit, also operates automatically to interrupts the abnormal or fault current.	Motor	Circuit Breaker	Link switch	All of these	B	M
		PC1	Is an electrical machine that converts electrical energy in to mechanical energy	Circuit Breaker	Electric Motor	Generator	None of these	B	E
		PC1	Is a strip of bar of copper,brass or alluminium that conducts electricity with in a switchboard, distribution board, sub-station, battery bank etc.	Busbar	Circuit Breaker	Motor	None of these	A	M

		PC1	Is a static electrical device that transforms electrical energy between two or more circuits through electromagnetic induction	Motor	Transformer	Generator	All of these	B	M
		PC1	Is a device that converts mechanical energy in to electrical power	Electric Generator	Motor	Transformer	All of these	A	E
		PC1	In case of mines, minimum clearance above ground of overhead lines or overhead cable where dumpers or trackless vehicles are being operated, shall not be less than _____metres	Twelve	Fifteen	Ten	Eleven	A	H
		PC1	Provision shall be made for suitable oil soakpit where use of more than _____ litres of oil in any one tank	5000	7000	9000	10000	C	H
		PC2	Gas pressure type and winding and oil temperature protection to give alarm and tripping shall be provided on all transformers of rating _____ KVA and above	1000	2000	3000	5000	A	M
		PC2	RPM is	Run per Minute	revolutions per minute	Round per minute	All of these	B	E
		PC2	An electric bulb is rated as 100W, 230V AC. The 230V indicates that	Average Value	Maximum Value	r.m.s. Value	Mean Value	C	H
		PC2	When short circuit current flow in circuit, current will be	Zero	Very low	Normal	Infinite	D	M
		PC2	Which of the following provides protection against overload	Starter	Switch	Isolator	Fuse	D	E
		PC2	Rigid or flexible metallic tubing or mechanically strong and fire resisting non metallic tubing into which a cable or cables may be drawn for the purpose of affording it or them mechanical protection	Conduit	Cable	Conductor	All of these	A	H

		PC2	An arrangement of conductor or conductors for the purpose of conveying electricity and forming a system or a branch of a system	Starter	Circuit	Circuit Breaker	Link switch	B	M
		PC3	Power Factor of an inductive circuit is generally improved by connecting	Capacitor	Bulbs	Motor	None of these	A	M
		PC3	Power Factor of an inductive circuit is generally improved by connecting a capacitor in	Series	Parallel	Either series or parallel	All of these	B	M
		PC3	With the rise in temperature the resistance of carbon	Decreases	Increases	Remain constant	None of these	A	H
		PC3	The Form factor of an alternating electric current is the ratio of	Average value to the r.m.s. value	Maximum value to the average value	r.m.s. Value to the average value	Maximum value to the r.m.s. value	C	H
		PC3	Why motors are rated in KW/HP instead of KVA	Motor has fixed power factor	Power factor of motor is not fixed	Motor is resistive load	None of these	A	H
		PC3	With rise in temperature the resistance of conductors	Increases	Decreases	Remain constant	None of these	A	M
		PC4	If the number of resistances are connected in parallel then the equivalent resistance	Decreases	Increases	Remain constant	None of these	A	M
		PC4	Ohm's law is not applicable to	High voltage	High current	DC circuits	Semi conductor	D	M
		PC4	AC ammeter generally determine the	Maximum value	Average value	r.m.s. value	peak to peak value	C	H
		PC4	AC voltmeter generally determine the	Maximum value	Average value	r.m.s. value	peak to peak value	C	H
		PC4	When 10 bulbs are operating in parallel in a AC circuit, if two additional bulbs are operated in parallel with these bulbs the effective resistance of the circuit	Increases	Decreases	Remain same	None of these	B	M
		PC4	A voltmeter must always connected in	Series	Parallel	Series parallel	All of these	B	M

		PC5	A Amperemeter must always connected in	Series	Parallel	Series parallel	All of these	A	M
		PC5	As per CEA (measures relating to safety and electric supply) Regulations 2010, earth fault current shall be limited to _____ in Open Cast mines in installations of voltage exceeding 1100V and upto 11KV	5 ampere	50 ampere	7 ampere	70 ampere	B	H
		PC5	As per CEA (measures relating to safety and electric supply) Regulations 2010, earth fault current shall not be more than _____ in below ground mines and oil fields in installations of voltage exceeding 250V and upto 1100V	900 milli ampere	750 milli ampere	1 ampere	500 milli ampere	B	H
		PC5	IDMT Relay is	Inverse Definite Minimum Time Relay	Individually driven Minimum Time Relay	Both A&B	None of these	A	H
		PC5	A cable consisting of one or more cores each formed of a group of wires, the diameter and the physical properties of the wires and insulating material being such as to afford flexibility	Flexible cable	Cable	Armoured cable	All of these	A	M
		PC5	No conductor of an overhead line, including service lines, erected elsewhere than along or across any street shall at a height less than _____ metres for lines of voltage upto and including 11000 volts, if bare	5	4.6	5.2	4	B	H
3	MIN/N0448	PC1	On application of 500V DC between each live conductor and earth for a period of one minute the insulation resistance of installation and equipment of voltage not exceeding 650V shall be at least _____ mega ohms	one	two	three	five	A	H

		PC1	On application of 2.5kV DC between each live conductor and earth for a period of one minute the insulation resistance of installation and equipment of voltage exceeding 650V but not exceeding 33kV shall be at least _____ mega ohms	three	five	seven	ten	B	H
		PC1	Which of following are the starting methods of squirrel cage induction motor	Auto transformer starting	DOL starting	Star Delta starting	All of these	D	E
		PC1	Which of following is the best way of starting a slipring induction motor	Auto transformer starting	Stator resistance starting	Star Delta starting	Rotor resistance starting	D	M
		PC2	The advantage of double squirrel cage induction motor over single squirrel cage induction motor is that its	Slip is large	Efficiency is higher	Starting current is lower	Power factor is higher	C	H
		PC2	Which of the following is self starting motor	3 phase induction motor	1 phase induction motor	Both A&B	None of these	A	M
		PC2	What is the highest possible speed of AC induction motors excluding universal motors	1500 rpm	3000 rpm	1000 rpm	5000 rpm	B	M
		PC2	As compare to DOL starting, a squirrel cage induction motor with star delta starting shall have	More starting torque	More starting time	Reduced starting current	Smoother acceleration	C	H
		PC3	The basic function of transformer is to change	The power level	The power factor	The level of the voltage	The frequency	C	E
		PC3	In a transformer, the frequency of voltage at the secondary	Greater than primary	Equal to primary	Less than primary	Any of these	B	E
		PC3	Transformer core is laminated to reduce	Eddy current loss	Hysteresis loss	Both A&B	Copper loss	A	M

		PC3	Conservator tank is used	To take up the expansion of oil due to temperature rise	To act as an oil storage	For better cooling of transformer	All of these	A	H
		PC3	Transformer oil is used as	An insulator	A coolant	Both A&B	None of these	C	M
		PC4	No conductor of an overhead line, including service lines, erected across a street shall at any part there of be at a height less than_____metres for line voltage not exceeding 650 volts	6.1	5.8	5.5	6	B	M
		PC4	No conductor of an overhead line, including service lines, erected across a street shall at any part there of be at a height less than_____metres for line voltage exceeding 650 volts but not exceeding 33kV	6.1	5.8	5.5	6	A	M
		PC4	No conductor of an overhead line, including service lines, erected along any street shall at any part there of be at a height less than_____metres for line voltage not exceeding 650 volts	6.1	5.5	5.8	6	B	M
		PC4	No conductor of an overhead line, including service lines, erected across a street shall at any part there of be at a height less than_____metres for line voltage exceeding 650 volts but not exceeding 33kV	5.8	5.5	6.1	6	A	M
		PC4	Reversing the direction of rotation of split phase motor is done by	Reversing the terminals	Reversing the terminals of starting winding	Interchanging the capacitor from starting to main winding or vice versa	All of these	D	H

				of main winding					
		PC5	Tachometer is used for	Measuring rpm	Measuring power factor	Both A&B	None of these	A	E
		PC5	Tong tester is used for	Measuring voltage	Measuring current	Both A&B	None of these	B	E
		PC5	Used to detect whether the system is electrically charged or not in low & medium voltage	Plair	Line tester	Ampere meter	None of these	B	E
		PC5	Full form of DOL starter	Direct on line starter	Double operating line starter	Direct over line starter	All of these	A	E
		PC6	Megger is used for	Measuring the insulating resistance	Measuring the current	Measuring the voltage	None of these	A	E
		PC6	Ampere meter is used for	Measuring the voltage	Measuring the current	Both A&B	None of these	B	E
		PC6	Volt meter is used for	Measuring the voltage	Measuring the current	Both A&B	None of these	A	E
		PC6	Multimeter is used for	Measuring the voltage	Measuring the current	Measuring the resistance	All of these	D	E
		PC6	Ohm meter is used for	Measuring the voltage	Measuring the current	Measuring the resistance	All of these	C	E
		PC6	Wattmeter is used for	Measuring the voltage	Measuring the current	Measuring the resistance	Measuring the power	D	E

		PC7	The effectiveness of the switchgear and the protective system shall always be kept and maintained in working order, shall be checked once every	Day	Month	two months	Three months	D	M
		PC8	The operation of the switchgear and the relays shall be recorded _____ at the sub- station or switch station	Daily	Once in two days	Weekly	Monthly	A	E
		PC8	All conductors of an earthing system shall have conductivity, at all parts and all joints, at least equal to _____ of that of the largest conductor used solely to supply the apparatus a part of which desired to be earthed	25%	50%	75%	100%	B	H
		PC8	No conductor of an earthing system shall have a cross-sectional area less than _____ of copper conductor	0.15 sq. cm.	0.16 sq. cm.	0.20 sq. cm.	0.25 sq. cm.	A	H
		PC8	_____ shall be inserted in any earth conductor	Switch, fuse or circuit breaker	No Switch, fuse or circuit breaker	Link switch	None of these	B	M
		PC8	Flexible cable used with portable apparatus where the voltage does not exceed 125 volts, and the cross-sectional area and conductance of the earth core is not less than that of the	Largest of the live conductor in the cable	50% of the largest of the live conductor in the cable	75% of the largest of the live conductor in the cable	None of these	A	H
4	MIN/N0901	PC1	For every electrical installation including factory, mines and oil fields where more than _____ of electrical load is connected, the owner of the installation or the management of the factory or mines as the case may be shall designate Electrical Safety Officer	500 KW	250 KW	1000 KW	750 KW	B	H

		PC1	The owner of every installation of voltage exceeding _____ shall affix permanently in a conspicuous position danger notice in Hindi or English and local language of district, with a sign of skull and bones	250V	440V	1100V	650V	A	M
		PC2	Electricity shall not be transmitted in to a below ground mine at a voltage exceeding	11000 volts	6600 volts	33000 volts	1100 volts	A	M
		PC2	Electricity shall not be used in to a below ground mine at a voltage exceeding	11000 volts	6600 volts	33000 volts	1100 volts	B	M
		PC2	Where hand held portable apparatus is used in a mine, the voltage shall not exceed	250 volts	125 volts	440 volts	30 volts	B	M
		PC2	In underground mines, the lighting system voltage shall not exceed 125 volts between	Phases	Phase and neutral	Both A&B	None of these	A	M
		PC3	On the surface of a mine or in an open cast mine, the lighting system voltage shall not exceed 250 volts between	Phase and neutral	Phases	Both A&B	None of these	B	M
		PC3	Voltage of portable hand lamps used in underground working of mine shall not exceed	50 volts	30 volts	15 volts	25 volts	B	M
		PC4	In underground mines where any circuit is used for the remote control or electrical - interlocking of apparatus, the circuit voltage shall not exceed	50 volts	30 volts	15 volts	25 volts	B	H
		PC4	In underground mine of gassy coal seam of _____ the main mechanical ventilator operated by electricity shall be interlocked with the switchgear so as to automatically disconnect the power supply in the event of stoppage of main mechanical ventilator	Second degree	Third degree	Second and third degree	None of these	C	H

		PC5	The fire extinguishers shall be tested for satisfactory operation as per relevant Indian Standard at least _____	Once in two years	Once a year	Once in six months	None of these	B	M
		PC5	Which type of fire extinguishers are used for electrical fire	Dry powder	CO2	Both A&B	None of these	C	M
		PC5	Fire extinguishers shall be kept and maintained at all	Sub-stations	Switch stations	Both A&B	None of these	C	E
		PC6	In mines machines of voltage exceeding 650 volts but not exceeding 33kV _____ connector shall be used with trailing cable	Bolted type	Plug and socket	Both A&B	None of these	A	H
		PC6	In mines, all flexible cable attached to any transportable apparatus shall be provided with flexible metallic screening or pliable armouring on all the power and power cores, if the voltage exceeds	250 volts	440 volts	125 volts	650 volts	A	H
		PC7	In the mines in the case of separately screened flexible cables the conductance of each screen shall not be less than _____ of that of the power conductor	25%	50%	75%	100%	A	H
		PC7	In the mines in the case of separately screened flexible cables combined conductance of each such screen shall in no case be less than _____ of copper conductor	0.15 sq. cm.	0.16 sq. cm.	0.25 sq.cm.	0.20 sq. cm.	A	M
		PC7	Flexible cable when used with coal cutting machine or cutter or loader or armoured face conveyor for longwall operation or with shuttle cars or load haul dumpers or cutter loader or all alike equipment for development and de-pillaring operation shall not exceed _____ in length	100 metres	90 metres	250 metres	None of these	C	H

		PC7	Flexible cables in case of opencast mines when used with electrically operated heavy earth moving machinery shall not exceed _____ in length	250 metres	300 metres	100 metres	1000metres	B	H
		PC8	Flexible cables in case of opencast mines when used with bucket wheel excavator at 11kV shall not exceed _____ in length	250 metres	300 metres	100 metres	1000metres	D	H
		PC8	In below ground mines aii apparatus including portable and transportable apparatus including lighting fitting used at any place which lies in-bye of the last ventilation connection shall be	Intrinsically safe	Flameproof	Both A&B	None of these	B	M
		PC8	In below ground mine all signalling, telecommunication, remote control and insulation tester circuit shall be so constructed, installed, protected, operated and maintained as to be	Flameproof	Intrinsically safe	Increased safety type "e"	None of these	B	M
		PC9	In below ground mine , all apparatus used at any place with in ninety metres of any working face or goaf in case of _____ shall be flameproof	First degree gassy mine	Second degree gassy mine	Third degree gassy mine	All of these	B	H
		PC9	In below ground mine , all apparatus used at any place with in two hundred and seventy metres of any working face or goaf in case of _____ shall be flameproof	First degree gassy mine	Second degree gassy mine	Third degree gassy mine	All of these	C	H
		PC9	In any DC circuit, resistance is 5 ohms and voltage is 10 volts then current flow will be	5 ampere	2 ampere	10 ampere	50 ampere	B	E
		PC10	In any coal seam of degree second and degree third gassiness or the hazerdous area of oil mine the supply shall be disconnected immediately	If open spark occurs	If main mechanical ventilator stops	Both A&B	None of these	A	H

		PC10	In any coal seam of degree second and degree third gassiness or the hazardous area of oil mine the supply shall be disconnected immediately in the event of percentage of inflammable gas exceeds	One and one quarter	one	Both A&B	None of these	A	H
		PC10	Which safety gear is used for the safety of head	Helmet	Gloves	Safety shoes	All of these	A	E
		PC10	Which safety gear is used for the safety of hands	Helmet	Hand Gloves	Safety shoes	All of these	B	E
		PC10	What are the safety gears used during welding	Helmet	Hand Gloves	Welding screen	All of these	D	E
		PC11	Is it necessary to follow the manufacturer's instructions for safe operation of the equipment	Yes	No	May be followed	None of these	A	E