

**Joint Director, Vocational Education & Training,
Regional Office, Nasik-2
PRACTICAL EXAMINATION - QUESTION PAPER**

Name of the Post : CRAFT INSTRUCTOR (ELECTRICIAN)

Duration : 60 Minutes (Time -1.00 pm to 02.00 pm)

Date : 21/01/2020

Seat No -----

Total Marks -80

Instructions :

- (1) All questions are compulsory each question carry Two mark.
- (2) Questions are of multiple choice type having A,B,C, D alternatives . You have to select one alphabet from A,B,C, D alternatives of a correct answer and darken the corresponding circle against each question number in answer sheet.
- (3) There is no negative marking for wrong answer.
- (4) Any name or any symbol or marking of any type is not allowed on question / answer paper, if observed it will be treated as unfair means

Q.01 DC Generators are installed near the load centers to reduce

- | | |
|-----------------|-------------------|
| (A) Iron losses | (B) Line losses |
| (C) Sparking | (D) Corona losses |

Q.02 which of the following motor is usually used in household refrigerators?

- (A) D.C. Shunt motor
- (B) D.C. Series motor
- (C) Single Phase Induction Motor (Split Phase Motor)
- (D) Reluctance Motor

Q.03 A 18 V Power supply is connected across a coil with a winding resistance of 180Ω. Current flow in the coil is

- | | | | |
|---------|-----------|------------|--------|
| (A) 1mA | (B) 10 mA | (C) 100 mA | (D) 1A |
|---------|-----------|------------|--------|

Q.04 Which of the following motors is used in Mixer.

- | | |
|----------------------|----------------------|
| (A) Repulsion Motor | (B) Reluctance Motor |
| (C) Hysteresis Motor | (D) Universal Motor |

Q.05 A 330 pF capacitor and a 220 pF capacitor are each connected across 6V DC source. The voltage across the 330pF capacitor is

- | | | | |
|---------|--------|--------|--------|
| (A) 3 V | (B) 6V | (C) 4V | (D) 0V |
|---------|--------|--------|--------|

Q. 06 Power Factor of an electrical circuit is equal to

- (A) R/Z
- (B) Cosine of phase angle difference between current and Voltage
- (C) Ratio of useful current to total current (I_w/I)
- (D) all of the above

Q. 07 On which of the following factors does the resistivity of material depends

- | | |
|---------------------------------|-----------------------------------|
| (A) Resistance of the conductor | (B) Area of the conductor section |
| (C) Length of the conductor | (D) All of the above |

Q. 08 Which is Zero temperature co-efficient of resistance ?

- | | |
|---------------|--------------|
| (A) Aluminium | (B) Carbon |
| (C) porcelain | (D) Manganin |

- Q. 09 Laminated cores in electrical machines are used to reduce
 (A) Copper loss (B) eddy current loss
 (C) Hysteresis loss (D) All of the above
- Q. 10 Generally Grounding is provided for
 (A) Only for the safety of the equipment
 (B) Only for the safety of the operating personnel
 (C) Both (A) and (B) (D) None of the Above
- Q. 11 When the specific gravity of the electrolyte of a lead acid cell is reduced to 1.1 & 1.15, the cell is in
 (A) Charged state (B) Dis-Charge state
 (C) Both (A) and (B) (D) Active State
- Q. 12 Which of the following motors is Non-Self starting
 (A) D.C.Series Motor (B) Synchronous motor
 (C) Squirrel cage Induction motor (D) wound round induction motor
- Q. 13 Star-Delta starting of motors is not possible in case of
 (A) Single phase motor (B) Variable speed motors
 (C) Low horse power motors (D) High speed motors
- Q. 14 For 12V and 40mA, the Power is
 (A) 480 mW (B) 0.480W (C) 480,000 μ W (D) all of the above
- Q. 15 A 12 volts are applied across a resistor. A current of 3mA is measured, what is the value of the resistor
 (A) 4 Ω (B) 400 Ω (C) 4k Ω (D) 4.4 Ω
- Q. 16 The purpose of providing an Iron core in transformer is to
 (A) Provide support to windings
 (B) Reduce hysteresis loss
 (C) Decrease the reluctance of magnetic path (D) reduce eddy current losses
- Q. 17 Which method can be used for absolute measurement resistance
 (A) Lorentz method (B) Releigh method
 (C) Ohm's Law (D) Wheatstone bridge method
- Q. 18 Two copper conductor have equal length. The cross sectional area of the conductor is four times that of the other. If the conductor having small cross sectional area has resistance of 40 Ω , the resistance of other conductor will be
 (A) 160 ohms (B) 80 ohms (C) 20 ohms (D) 10 ohms
- Q. 19 A UJT has
 (A) Two PN Junction (B) one PN Junction
 (C) Three PN Junction (D) None of the Above
- Q. 20 Watt meter cannot be designed on the principle of
 (A) Electro static instrument (B) Thermo couple instrument
 (C) Moving Iron instrument (D) Electro dynamic instrument
- Q. 21 Two 1.2 k Ω resistors are in series and this series combination is in parallel with a 3.3 K Ω resistor. The total resistance is
 (A) 138 Ω (B) 1389 Ω (C) 5700 Ω (D) 880 Ω

- Q. 22 A double Squirrel-cage induction motor has
 (A) Two rotors moving in opposite direction
 (B) Two parallel winding in stator
 (C) Two parallel winding in rotor
 (D) Two series winding in Stator
- Q. 23 An OR gate has 6 inputs. The number of input words in its Truth table is
 (A) 6 (B) 32 (C) 64 (D) 128
- Q. 24 Which of the following application requires high starting torque
 (A) Lathe Machine (B) Centrifugal Pump
 (C) Locomotive (D) Air Blower
- Q. 25 if the field of D.C. shunts motor gets opened while motor is running
 (A) The speed of motor will be reduced
 (B) The armature current will reduce
 (C) The motor will attain dangerously high speed
 (D) The motor will continue to run at constant speed
- Q. 26 Speed control of a Universal motor is achieved by
 (A) Varying field flux with tapped field winding
 (B) Connecting rheostat in series
 (C) Applying variable voltage by means of silicon controlled rectifier
 (D) All of the above method
- Q. 27 In a three phase induction motor, the number of poles in the rotor winding is always
 (A) Zero
 (B) More than the number of poles in stator
 (C) Less than the number of poles in stator
 (D) Equal to the number of poles in stator
- Q. 28 Minimum voltage regulation occurs when the power factor of the load is
 (A) Unity (B) Lagging
 (C) Leading (D) Zero
- Q. 29 Iron loss in D.C. machines are independent of variations in
 (A) Speed (B) Load
 (C) Voltage (D) Speed & Voltage
- Q. 30 0.025W means
 (A) 25 kW (B) 0.00025 mW
 (C) 2500 μ W (D) 25 mW
- Q. 31 The field coils of DC generators are usually made of
 (A) Mica (B) Copper
 (C) Cast Iron (D) carbon

- Q. 32 5HP, 50Hz, 3 phase, 440V, 4 pole induction motor are available for the following RPM
- (A) 1500 RPM (B) 1800 RPM
(C) 750 RPM (D) 3000 RPM
- Q. 33 The insulating material for a cable should have
- (A) low cost (B) High dielectric Strength
(C) High Mechanical Strength (D) All of the above
- Q. 34 A squirrel cage induction motor is not selected when
- (A) Initial cost is main consideration
(B) Maintenance cost is main consideration
(C) Higher starting is main consideration
(D) All Above considerations are involved
- Q. 35 In a mercury arc rectifier, the anode is usually made of
- (A) Copper (B) Aluminium
(C) Silver (D) Graphite
- Q. 36 A power transformer is usually rated in
- (A) KW (B) KVAR (C) KWh (D) KVA
- Q. 37 The An induction motor is
- (A) self starting with zero torque
(B) self starting with High torque
(C) self starting with low torque
(D) Non self starting
- Q. 38 The capacitors used in single phase capacitor motors have no
- (A) Voltage rating (B) Dielectric Medium
(C) Polarity Marking (D) Definite value
- Q. 39 Which of the following motor will have relatively higher power factor
- (A) Capacitor run motor (B) shaded pole motor
(C) Capacitor start motor (D) split phase motor
- Q. 40 which of the following loss in a DC generator is dissipated in the form heat
- (A) Mechanical loss (B) core loss (C) Copper loss (D) All of the above