

MAHARASHTRA STATE BOARD OF VOCATIONAL EXAMINATION, MUMBAI

SUPPLEMENTARY EXAMINATION – JANUARY 2013

CERTIFICATE COURSE IN ELECTRICAL EQUIPMENT SERVICES (302211)

TIME ALLOWED - 3 Hrs.

MARKS – 100

SUBJECT :- FUNDAMENTAL OF ELECTRICITY (THEORY-I)

Q.1) A) Fill in blanks

(5)

- 1) maximum load should be connected on one lighting circuit. (1200W, 800W, 100W)
- 2) If insulation resistance between conductor and earth is not less than..... then it is consider as good.
(1M Ω , 5M Ω , 10M Ω)
- 3) Taps use for Threading. (Internal, External, Both)
- 4) Fire extinguisher does not use to extinguish fire caused by electricity.
(carbon dia oxide, Foam, carbon tetra chloride)
- 5) The rating of fuse is given in.....
(Ampere, Volt, Kilo-Watt)

Q. 1) B) Match the following

(5)

‘A’

‘B’

- | | |
|-----------------------------|------------------------------|
| 1) Moving iron instrument | a) Thread on pipe |
| 2) Auto transformer starter | b) slip ring induction motor |
| 3) Tap | c) For A. C. & D. C. both |
| 4) Nycrome | d) up to 20 H.P. motor |
| 5) Rotor resister starter | e) Electric iron |
| | f) Internal thread |

Q. 1) C) True or False

(5)

- 1) The heating element of an electric iron is made of a copper conductor
- 2) Single phase supply is used for domestic installation.
- 3) The resistance of a conductor is measured by an ohm meter
- 4) Electrically electron are positively charged particles.
- 5) Voltage are same in series circuit.

Q. 1) D) Write the long form (5)

- 1) PVC 2) ICTP 3) MHP 4) PD 5) MMF

Q. 2) Answer the following. (any Two) (16)

- 1) difference between 1Φ and 3Φ power supply.
- 2) What is the fuse explain necessary of fuse.
- 3) Explain types of pliers and give details of any one with fig.

Q. 3) Answer the following. (any Two) (16)

- 1) Explain an effect of electric current.
- 2) Explain characteristics of Parallel circuit with diagram.
- 3) Explain working of megger with diagram.

Q.4) Answer the following (any Two) (16)

- 1) Draw diagram of capacitor start induction run motor.
- 2) Explain farad's law of electromagnetic induction.
- 3) Explain V – I characteristics of full wave rectifier.

Q.5) Answer the following (any four) (16)

- 1) What is the self Induction?
- 2) What is specific resistance and it's unit.
- 3) Define ohm's law with formula.
- 4) Write a note on electromagnet.
- 5) Draw the symbol of A.C., Variable resistance, Capacitor, Ammeter.

Q. 6) Answer in brief (any two) (16)

- 1) Explain construction and working of 3 point starter with sketch.
- 2) Difference between star and delta connection.
- 3) Which precaution should be taken to prevent shock.

