S.B. Roll No.....

MODERN ELECTRIC TRACTION
6th /Elect/5235/6252/Nov' 2016

Duration: 3 hours **Max marks: 75**

SECTION A

Q 1: Fill in the blanks **(15x1=15)**

a) In train lighting system dynamo has to operate in _____ with batteries.
b) In a "Kando system' _____motors are used
c) The area of speed time curve represents _____
d) During coasting period of speed-time curve power required is _____
e) OHE stands for_____
f) _____ smoothens out the ripples in the DC output of the rectifier.
g) In AC electric locomotive, _____ collects the current from the overhead equipment.
h) The type of DC motor used in electric traction is _____
i) Characteristic of good traction system is _____
j) The co-efficient of adhesion is _____ on wet tracks as compared to dry tracks.
k) The effective force required on the wheels of locomotive is known as _____
l) In Tramways return circuit is through _____
m) The traction sub-stations are fed by means of _____ transmission lines
n) The purpose of tap changer in AC locomotive is to provide _____ voltage
o) In linear induction motor _____ motion is obtained

SECTION B

Q 2. Attempt any six questions **(6x5=30)**

(i) Explain speed time curve with a neat sketch.
(ii) What are the advantages of 25 KV AC systems over DC system?
(iii) Explain OHE supporting structure.
(iv) Explain various types of electric braking.
(v) Describe the types of air condition installation used in Indian railway coaches.
(vi) Describe the vaious traction systems in India.
(vii) Explain linear induction motor.
(viii) Explain sectioning insulators.

SECTION C

Q 3. Attempt any three questions **(3x10=30)**

(i) Explain the block diagram of Electric locomotive.
(ii) Explain the working of double battery parallel block system.
(iii) Explain the following:
    a. Circuit breakers.
    b. DC series motor.
(iv) Explain the various desirable characteristics of traction motors.
(v) Explain the following:
    a. Feeding posts.
    b. Sectioning and paralleling posts.