Q.28 Explain the end of generation in Train lighting system
Q.29 Explain kando system.
Q.30 Enlist the various equipment used in railway coach air conditioning.
Q.31 Enlist any five points of maintenance of batteries used in railway.
Q.32 Explain the desirable characteristics of the insulator used in traction system.
Q.33 Give the constituents of substation used in traction system
Q.34 Explain main line service
Q.35 Give the types of Electric traction system.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Explain the working of Electric locomotive with the help of a diagram.
Q.37 Explain the speed time curve for different types of services.
Q.38 Explain the desirable characteristics of the traction motor.

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6th Sem / Branch : Electrical Engineering
Subject:- Modern Electric Traction System

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 During the_____period the power supply to the motor is cut off and train is allowed to run due to its own momentum
a) Free running b) Notching up
c) Coasting d) Breaking

Q.2 Motor used in traction system is
a) Squirrel cage induction motor
b) Dc Shunt Motor
c) Dc Series Motor
d) Synchronous motor

Q.3 In single phase to Dc system supply used is
a) 25 KV, 50 hz b) 16 KV, 25 hz
c) 33 KV, 50 hz d) None of these

Q.4 In electric traction, Coefficient of adhesion is represented by
a) Φ b) λ
c) Y d) μ

Q.5 The speed-time curve for the urban service has no
a) Coasting period
b) Free running Period

c) Acceleration Period
d) Breaking Period

Q.6 _____Breaking is used where load on the motor has very high inertia.
a) Regenerative Breaking
b) Rheostat Breaking
c) plugging
d) None of these

Q.7 Battery operated trucks are used in
a) Steel mills
b) Power stations
c) Narrow gauge traction
d) Factories for material transportation

Q.8 Tractive effort is required tp
a) Overcome component of train mass the gravity
b) Overcome friction, windage and curve resistance
c) Accelerate the train mass
d) All of the above

Q.9 Systems used for train lighting is
a) Single battery system
b) Double battery parallel block system
c) Modified system
d) All of the above

Q.10 An ideal traction system should have
a) Complex speed control
b) Low starting tractive effort
c) Equipment capable of withstanding large temporary loads
d) All of the above

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 EMU, stands for_____

Q.12 _____is used as a material for conductor used in traction system

Q.13 There is no free running period in Sub urban service (T/F)

Q.14 Give the types of Electric Breaking System.

Q.15 Tell the principle of linear induction Motor.

Q.16 Single battery system is more reliable than double battery system. (T/F)

Q.17 Define Coasting.

Q.18 Give the role of counter weight hanged on pole.

Q.19 Give the composition of OHE

Q.20 Give the formula of Specific energy consumption.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Give the comparison between AC and DC system of traction electrifications.

Q.22 Enlist and explain the factors affecting traction effort

Q.23 Give any five advantages of Electric traction system.

Q.24 Give the advantages of series parallel control of Electric traction motors.

Q.25 Explain regenerative breaking.

Q.26 Compare mechanical and electric breaking system.

Q.27 Explain the role of catenary in Electric traction system