



## Department of Electrical and Electronics Engineering

### EE 8015 – Electric Energy Generation Utilization and Conservation

#### Unit IV – MCQ Bank

1. A train has a mass of 500 tonne. Its weight is

- (A) 500 t.wt
- (B) 500,000 kg-wt
- (C) 4,900,000 newton
- (D) all of the above**

**Answer: (D)**

2. The free-running speed of a train does NOT depend on the

- (A) duration of stops**
- (B) distance between stops
- (C) running time
- (D) acceleration.

**Answer: (A)**

3. In a train, the energy output of the driving axles is used for

- (A) accelerating the train
- (B) overcoming the gradient
- (C) overcoming train resistance
- (D) all of the above.**

**Answer: (D)**

4. Longer coasting period for a train results in

- (A) higher acceleration
- (B) higher retardation
- (C) lower specific energy consumption**
- (D) higher schedule speed.

**Answer: (C)**

5. Tractive effort of an electric locomotive can be increased by

- (A) increasing the supply voltage
- (B) using high kW motors
- (C) increasing dead weight over the driving axles
- (D) both (b) and (c)**
- (E) both (a) and (b).

**Answer: (D)**

6. Skidding of a vehicle always occurs when

- (A) braking effort exceeds its adhesive weight**
- (B) it negotiates a curve
- (C) it passes over points and crossings
- (D) brake is applied suddenly.

**Answer: (A)**

7. Which of the following is an advantage of electric traction over other methods of traction?

- (A) Faster acceleration

- (B) No pollution problems
- (C) Better braking action
- (D) All of the above**

**Answer: (D)**

8. Which of the following is the voltage for single phase A.C. system?

- (A) 22 V
- (B) 440 V
- (C) 5 kV
- (D) 15 kV**

**Answer: (D)**

9. Long distance railways use which of the following?

- (A) 200 V D.C.
- (B) 25 kV single phase A.C.**
- (C) 25 kV two phase A.C.
- (D) 25 kV three phase A.C.

**Answer: (B)**

10. The speed of a locomotive is controlled by

- (A) flywheel
- (B) gear box
- (C) applying brakes
- (D) regulating steam flow to engine**

**Answer: (D)**

11. Main traction system used in India are, those using

- (A) electric locomotives
- (B) diesel engine locomotives
- (C) steam engine locomotives
- (D) diesel electric locomotives
- (E) all of the above**

**Answer: (E)**

12. In India diesel locomotives are manufactured at

- (A) Ajmer
- (B) Varanasi**
- (C) Bangalore
- (D) Jamalpur

**Answer: (B)**

13. For diesel locomotives the range of horsepower is

- (A) 50 to 200
- (B) 500 to 1000
- (C) 1500 to 2500**
- (D) 3000 to 5000

**Answer: (C)**

14. The horsepower of steam locomotives is

- (A) upto 1500

**(B)1500 to 2000**

(C)2000 to 3000

(D)3000 to 4000

**Answer: (B)**

15.The overall efficiency of steam locomotive is around

**(A)5 to 10 percent**

(B)15 to 20 percent

(C)25 to 35 percent

(D)35 to 45 percent

**Answer: (A)**

16.In tramways which of the following motors is used?

(A) D.C. shunt motor

**(B) D.C. series motor**

(C) A.C. three phase motor

(D) A.C. single phase capacitor start motor

**Answer: (B)**

17.In a steam locomotive electric power is provided through

(A) overhead wire

(B) battery system

**(C) small turbo-generator**

(D) diesel engine generator

**Answer: (C)**

18. Which of the following drives is suitable for mines where explosive gas exists?

- (A) Steam engine
- (B) Diesel engine
- (C) Battery locomotive**
- (D) Any of the above

**Answer: (C)**

19. In case of locomotives the tractive power is provided by

- (A) single cylinder double acting steam engine
- (B) double cylinder, single acting steam engine
- (C) double cylinder, double acting steam engine**
- (D) single stage steam turbine

**Answer: (C)**

20. Overload capacity of diesel engines is usually restricted to

- (A) 2 percent
- (B) 10 percent**
- (C) 20 percent
- (D) 40 percent

**Answer: (B)**

21. The braking retardation is usually in the range

- (A) 0.15 to 0.30 km phps
- (B) 0.30 to 0.6 km phps**

(C)0.6 to 2.4 km phps

**(D)3 to 5 km phps**

(E)10 to 15 km phps

**Answer: (D)**

22.The rate of acceleration on suburban or urban service is in the range

(A)0.2 to 0.5 km phps

**(B)1.6 to 4.0 km phps**

(C)5 to 10 km phps

(D)15 to 25 km phps

**Answer: (B)**

23.The coasting retardation is around

**(A)0.16 km phps**

(B)1.6 km phps

(C)16 km phps

(D)40 km phps

**Answer: (A)**

24.which of the following track is electrified

(A) Delhi-Bombay

(B) Delhi-Madras

**(C) Delhi-Howrah**

(D) Delhi-Ahmedabad

**Answer: (C)**

25. For which of the following locomotives the maintenance requirements are the least?

- (A) Steam locomotives
- (B) Diesel locomotives
- (C) Electric locomotives**
- (D) Equal in all of the above

**Answer: (C)**

26. For 600 V D.C. line for tramcars, brack is connected to

- (A) positive of the supply
- (B) negative of the supply**
- (C) mid voltage of 300 V
- (D) none of the above

**Answer: (B)**

27. In case of-----free running and coasting periods are generally long.

- (A) main-line service**
- (B) urban wervice
- (C) sub-urban service
- (D) all of the above

**Answer: (A)**

28. Overhead lines for power supply to tramcars are at a minimum height of

- (A) 3m
- (B) 6 m



(C)10 m

(D)20 m

**Answer: (C)**

29.The return circuit for tram cars is through

(A) neutral wire

**(B) rails**

(C) cables

(D) common earthing

**Answer: (B)**

30.Energy consumption in propelling the train is required for which of the following?

(A) Work against the resistance to motion

(B) Work against gravity while moving up the gradient

(C) Acceleration

**(D) All of the above**

**Answer: (D)**