Source: Workshop Calculation and Science
Year 1: NIMI

(Adopted for educational social service purpose only).

1 : What is the carbon percentage in medium carbon steel?
A : 0.05% to 0.15%
B : 0.15% to 0.25%
C : 0.25% to 0.5%
D : 0.5% to 1.5%

Ans : C

2 : What is the carbon percentage in low carbon steel?
A : 0.02% to 0.03%
B : 0.15% to 0.25%
C : 0.25% to 0.50%
D : 0.50% to 1.50%

Ans : B

3 : What is the carbon percentage in high carbon steel?
A : 0.02% to 0.03%
B : 0.15% to 0.25%
C : 0.25% to 0.50%
D : 0.50% to 1.50%

Ans : D

4 : What is the ore of aluminium?
A : Hematite
B :Mallatite
C : Bauxite
D :Lemonite

Ans : C

5 : Which property of a metal enables it by which it can be drawn out into wires under tension without rupture?

A : Ductility
B : Malleability
C : Hardness
D : Brittleness

Ans : A

6 : Which among the following is an insulator?
A : Copper
B : Aluminium
C : Silver
D : Mica

Ans : D

7 : Which rubber is used as insulator for power cables and control wires?
A : Butyl
B :Hypalone
C : Silicon
D : Nitrite butadiene

Ans : C

8 : Which alloy steel is used to make permanent magnets?
A : Silicon steel
B : Manganese steel
C : Vanadium steel
D : Cobalt steel

Ans : D

9 : Which insulator is used in over head lines?
A : Mica
B : Rubber
C : PVC
D : Porcelain

Ans : D

10 : Which insulating material is used for making electricswitches?
A : Porcelain
B : PVC
C : Bakelite
D : Ebonite

Ans : C

11 : What is the name of the property of an insulation that should brakedown or puncture on application of high voltage?
A : Di-electric strength
B : Specific resistance
C : Mechanical strength
D : Non absorption

Ans : A

12 : Which alloy steel is used for making precious instrument?
A : Silicon steel
B : Manganese steel
C : Invar steel
D : Vanadium

Ans : C

13 : Which steel is used for making files and cold chisel?
A : Low carbon steel
B :Midium carbon steel
C : High carbon steel
D : Stainless steel

Ans : C

14 : What is termed as the quantity of matter contained in a body?
A : Density
B : Volume
C : Mass
D : Specific gravity

Ans : C

15 : What is the force with which a body is attracted by the earth towards its centre?
A : Mass
B : Weight
C : Volume
D : Density

Ans : B

16 : What is called mass per unit volume of a substances?
A : Mass
B : Weight
C : Density
D : Volume

Ans : C

17 : What is called the ratio between the density of a substances density of water at 4°C?
A : Density
B : Specific gravity
C : Mass
D : Weight

Ans : B

18 : What is the density of aluminium?
A : 2.7 g/cm^3
B : 3.7 g/cm^3
C : 4.7 g/cm^3
D : 5.7 g/cm^3

Ans : A

19 : What is the mass if the density of a body is 7.6 g/cm^3 and its volume is 25 cm^3?
A : 190 gram
B : 200 gram
C : 210 gram
D : 220 gram

Ans : A

20 : What is the specific gravity of the solid, if density of the solid is 19.5 g/cm^3?
A : 18.0
B : 18.5
C : 19.0
D : 19.5

Ans : D

21 : What is the density (r) in g/cm^3 of an iron cube, if it weighs (W) 4.8 kg and volume (V) is 640 cm^3?
A : 6.6 g/cm^3
B : 6.9 g/cm^3
C : 7.2 g/cm^3
D : 7.5 g/cm^3

Ans : D

22 : What is the volume (V) of mercury in cm3, if mass (m) of mercury is 1 kg and density (ρ) is 13.6 g/cm^3?
A : 73.53 cm^3
B : 73.43 cm^3
C : 73.33 cm^3
D : 73.23 cm^3

Ans : A

23 : What is the mass in gram, if a force of 15 dynes acting on a mass m producing an acceleration of 2.5 cm/sec^2?
A : 9 gram
B : 8 gram
C : 7 gram
D : 6 gram

Ans : D

24 : What is the specific gravity of the metal, if the piece of metal weighs 150 gram in air and 125 gram in water?
A : 6
B : 10

C : 15
D : 25

Ans : A

25 : What is the volume of mercury in cm3, if the mass (m) of mercury is 136 gram and density (ρ) of mercury is 13.6 g/cm^3?
A : 136 cm^3
B : 13.6 cm^3
C : 10.6 cm^3
D : 10.0 cm^3

Ans : D

26 : What is the block weighs (W) in kg, if volume (V) is 320 cm^3 and density 8.9 g/cm^3?
A : 2.948 kg
B : 2.848 kg
C : 2.648 kg
D : 2.448 kg

Ans : B

27 : What is the specific gravity of the metal, if it weighs 6.5 kgf in air and 3.5 kgf in water?
A : 6.166
B : 3.166
C : 2.166
D : 1.166

Ans : C

28 : What is the weight force of a car has a mass of 800 kg?(Take g = 9.81m/sec)
A : 7848 Newton
B : 7748 Newton
C : 7847 Newton
D : 7487 Newton

Ans : A

29 : What is the formula for speed?
A : Distance covered/Time

B : Change in velocity/Time
C : Distance in definite direction /Time
D : Change in momentum/Time

Ans : A

30 : What is the unit of speed?
A :metre/second
B : metre/second^2
C : metre/minute
D : metre/hour

Ans : A

31 : What is the formula for velocity?
A : Distance covered/Time
B : Displacement/Time
C : Change in velocity/Time
D : Change of momentum/Time

Ans : B

32 : What is the unit for velocity?
A : metre/second
B : metre/second^2
C :metre/minute
D : metre/hour

Ans : A

33 : What is called if a body posses only magnitude or size alone?
A : Speed
B : Velocity
C : Vector quantity
D : Scalar quantity

Ans : D

34 : What is called if a body posses both magnitude and direction of velocity?
A : Speed

B : Velocity
C : Vector quantity
D : Scalar quantity

Ans : C

35 : What is the rate of change of displacement of a body?
A : Body at rest
B : Body at motion
C : Speed
D : Velocity

Ans : D

36 : What is called if a body does not change its position with respect to its surroundings?
A : Body at motion
B : Body at rest
C : Speed
D : Velocity

Ans : B

37 : What is called if a body changes its position with respect to its surroundings?
A : Body at rest
B : Body at motion
C : Speed
D : Velocity

Ans : B

38 : What is velocity of a body travels a distance of 168 metres in a line in 21 second?
A : 6 m/sec
B : 8 m/sec
C : 10 m/sec
D : 12 m/sec

Ans : B

39 : What is the speed of a train of 80 metre long train passes a railway station platform of 120 metre length in 20 second?

A : 30 km/hour
B : 32 km/hour
C : 34 km/hour
D : 36 km/hour

Ans : D

40 : What is the unit of acceleration of an object?
A :metre/second
B : metre/second^2
C : metre/minutes
D : metre/minutes^2

Ans : B

41 : What is the acceleration of a car if the speed of the car has increased from 25 km per hour to 40 km per hour in one minute?
A : 0.059 m/sec^2
B : 0.59 m/sec^2
C : 0.069 m/sec^2
D : 0.69 m/sec^2

Ans : C

42 : What is the retardation of a car moving with a velocity of 50 km/hr is brought to rest in 45 second?
A : 0.40 m/sec^2
B : 0.30 m/sec^2
C : 0.20 m/sec^2
D : 0.10 m/sec^2

Ans : B

43 : What is the acceleration of an aeroplane taking off from landing field has to run 700 m if it leaves the ground in 10 second from the start?
A : 8 metre/sec^2
B : 10 metre/sec^2
C : 12 metre/sec^2
D : 14 metre/sec^2

Ans : C

44 : What maximum height a stone will reach if it is thrown upwards with a velocity of 20m/sec?(g = 10m/sec^2)
A : 10 m
B : 20 m
C : 30 m
D : 40 m

Ans : B

45 : What is the work done in unit time?
A : Energy
B : Power
C : Force
D : Acceleration

Ans : B

46 : What is the capacity of a body to do work is called?
A : Energy
B : Power
C : Acceleration
D : Force

Ans : A

47 : What is the ratio of power output to power input?
A : Work
B : Energy
C : Efficiency
D : Acceleration

Ans : C

48 : What is called if a force of 1Newton acts on a body and moves it through a distance of 1 metre?
A : 1 Joule
B : 10 Joule

C : 1 dyne
D : 10 dyne

Ans : A

49 : How many ergs for 1 Joule?
A : 10^3 erg
B : 10^5 erg
C : 10^7 erg
D : 10^9 erg

Ans : C

50 : How many Newton for 1 kilogram?
A : 981 Newton
B : 98.1 Newton
C : 9.81 Newton
D : 0.981 Newton

Ans : C