TSPSC CBRT AMVI Shift 2 8th Nov 2015

Roll No:	
Participants Name:	
Test Date:	
Test Time:	
Subject:	

Q.1 Petrol engine works on

Ans
- ✗ 1. Carnot cycle
- ✗ 2. Joules cycle
- ✗ 3. Diesel cycle
- ✓ 4. Otto cycle

Question ID : **3304**
Chosen Option : **4**

Q.2 Fleet utilization will show efficiency of

Ans
- ✓ 1. Engineering department
- ✗ 2. Traffic department
- ✗ 3. Security wing
- ✗ 4. Administration

Question ID : **3392**
Chosen Option : **1**

Q.3 In order to perform taper turning operation of entire length l, with two end diameters d_1 and d_2, the tail stock set over required is

Ans
- ✗ 1. $\frac{d_1 - d_2}{2l}$
- ✗ 2. $\frac{d_1 - d_2}{l}$
- ✗ 3. $\frac{(d_1 - d_2)2}{l}$
- ✓ 4. $\frac{d_1 - d_2}{2}$

Question ID : **3444**
Chosen Option : **3**

Q.4 In cutout, the current coil is

Ans
- ✓ 1. Shunt wound and made of thin wire
- ✗ 2. Series wound and made of thin wire
- ✗ 3. Shunt wound and made of thick wire
- ✗ 4. Series wound and made of thick wire

Question ID : **3366**
Chosen Option : **2**

Q.5 Duty Roaster is related to

Ans
- ✗ 1. Bus frequency
- ✗ 2. Bus schedule
- ✗ 3. Bus timings
- ✓ 4. Crew Duties

Question ID : **3376**
Chosen Option : **2**

Q.6 Which motor can be used as a self starter?

Ans
- ✗ 1. DC compound motor
- ✓ 2. DC series motor
- ✗ 3. Any AC motor
- ✗ 4. DC shunt motor

Question ID : **3364**
Chosen Option : **1**

Q.7 The service that is operated when a vehicle breakdown enroute

Question ID : **3383**
Chosen Option : **1**

Ans
- ✔ 1. Relief service
- ✘ 2. Express service
- ✘ 3. Ordinary service
- ✘ 4. Luxury service

Q.8 The centre of gravity of a T-section 100 mm x 150 mm x 30 mm

Question ID : **3417**
Chosen Option : **2**

Ans
- ✘ 1. 50 mm
- ✘ 2. 75.6 mm
- ✔ 3. 94.1 mm
- ✘ 4. 120 mm

Q.9 Eutectoid steel contains following percentage of carbon

Question ID : **3439**
Chosen Option : **2**

Ans
- ✘ 1. 0.3%
- ✘ 2. 0.63%
- ✔ 3. 0.8%
- ✘ 4. 0.02%

Q.10 Poisson's ratio for cast iron is

Question ID : **3416**
Chosen Option : **3**

Ans
- ✔ 1. 0.27
- ✘ 2. 0.15
- ✘ 3. 0.36
- ✘ 4. 0.33

Q.11 A body of weight W is required to move up on rough inclined plane w hose angle of inclination with the horizontal is ?. The effort applied pa rallel to the plane is given by

Question ID : **3421**
Chosen Option : **3**

Ans
- ✘ 1. P = W (Cos ? + ? sin ?)
- ✘ 2. P = W tan ?
- ✔ 3. P=W(sin ? + ? cos ?)
- ✘ 4. P = W tan (?+Ø)

Q.12 If resistors of 10 Ohms, 20 Ohms are connected in parallel-mesh the n the equivalent resistance is

Question ID : **3359**
Chosen Option : **2**

Ans
- ✘ 1. 50/3 Ohms
- ✔ 2. 20/3 Ohms
- ✘ 3. 35/3 Ohms
- ✘ 4. 30 Ohms

Q.13 A fully charged battery has specific gravity of electrolyte

Question ID : **3351**
Chosen Option : **3**

Ans
- ✘ 1. 1.820
- ✘ 2. 1.50
- ✔ 3. 1.280
- ✘ 4. 2.50

Q.14 Ignition timing mark is provided on

Question ID : **3362**
Chosen Option : **1**

Ans
- ✘ 1. Cam shaft
- ✔ 2. Fly wheel
- ✘ 3. Pressure plate
- ✘ 4. Crank shaft

Q.15 A car with a closed body and with less than 4 seats is called

Question ID : **3330**

Chosen Option : **3**

Ans
- ✗ 1. Saloon
- ✗ 2. Limousine
- ✓ 3. Coupe
- ✗ 4. Station wagon

Q.16 The dynamic viscosity of most gases with rise in gas temperature

Question ID : **3409**
Chosen Option : **4**

Ans
- ✗ 1. Drecreases
- ✗ 2. Doesnot change significantly
- ✓ 3. Increases
- ✗ 4. Decreases as ? T

Q.17 An ideal fluid is

Question ID : **3402**
Chosen Option : **2**

Ans
- ✗ 1. One which obeys Newton's law of viscosity
- ✓ 2. Frictionless and incompressible
- ✗ 3. One which satisfies continuity equation
- ✗ 4. similar to perfect gas

Q.18 The point of inflexion is a point where

Question ID : **3419**
Chosen Option : **2**

Ans
- ✗ 1. shear force changes sign
- ✓ 2. bending moment changes sign
- ✗ 3. bending moment is maximum
- ✗ 4. shear force is maximum

Q.19 The pitman arm in the steering gear is linked to the front wheel through the

Question ID : **3341**
Chosen Option : **2**

Ans
- ✓ 1. Drag link
- ✗ 2. Track rod
- ✗ 3. Tie rod
- ✗ 4. Steering knuckle

Q.20 Toggle lever is used in

Question ID : **3345**
Chosen Option : **2**

Ans
- ✗ 1. Air brakes
- ✓ 2. Mechanical brakes
- ✗ 3. Electric brakes
- ✗ 4. Hydraulic brakes

Q.21 Case hardening is the only method suitable for hardening

Question ID : **3441**
Chosen Option : **3**

Ans
- ✗ 1. High alloy steel
- ✗ 2. High speed steel
- ✗ 3. High carbon steel
- ✓ 4. Low carbon steel

Q.22 Clutch is not transmitting any power from the engine to the gear box. The problem is called

Question ID : **3348**
Chosen Option : **3**

Ans
- ✗ 1. Clutch chattering
- ✗ 2. Clutch dragging
- ✗ 3. Clutch grabbing
- ✓ 4. Clutch slipping

Q.23 Graphical method, Simplex method and Transportation methods are concerned with

Question ID : **3388**
Chosen Option : **1**

Ans
- ✓ 1. Linear programming
- ✗ 2. Queing theory

✗ 3. Value analysis

✗ 4. Break-even analysis

Q.24 The friction that occurs between the layers of oil is called

Question ID : **3307**
Chosen Option : **3**

Ans

✗ 1. Boundary friction

✗ 2. Greasy friction

✓ 3. Viscous friction

✗ 4. Solid friction

Q.25 The instrument used to note the deflection of the frame in bending te st is

Question ID : **3331**
Chosen Option : **3**

Ans

✗ 1. Vernier Caliper

✗ 2. Screw gauge

✓ 3. Dial gauge

✗ 4. Depth gauge

Q.26 The main purpose of double reduction in final drive is to

Question ID : **3347**
Chosen Option : **3**

Ans

✗ 1. reduce the size of the road wheel

✗ 2. avoid the use of differential cage

✓ 3. decrease the size of crown wheel

✗ 4. reduce the size of the drive pinion

Q.27 The function of a governor in an automobile is to

Question ID : **3303**
Chosen Option : **3**

Ans

✗ 1. Effect maximum fuel economy

✗ 2. Limit the speed of the engine

✓ 3. Maintain constant engine speed

✗ 4. Limit the power

Q.28 Two forces of 6N and 8N act at right angles to each other, the result ant force will be

Question ID : **3414**
Chosen Option : **3**

Ans

✓ 1. 10 N

✗ 2. 48 N

✗ 3. 24 N

✗ 4. 14 N

Q.29 A 14mm spark plug has

Question ID : **3352**
Chosen Option : **3**

Ans

✗ 1. A reach of 14 mm

✗ 2. Threaded length of 14 mm

✓ 3. Threaded diameter of 14 mm

✗ 4. Heat path of 14 mm

Q.30 In a 4-stroke 6-cylinder I C engine, the power impulse occurs after 'x' degrees of Crank rotation, where 'x' is

Question ID : **3317**
Chosen Option : **2**

Ans

✓ 1. 120°

✗ 2. 180°

✗ 3. 90°

✗ 4. 240°

Q.31 The motion of shaft in a circular hole is an example of

Question ID : **3411**
Chosen Option : **4**

Ans

✗ 1. completely constrained motion

✗ 2. Simple harmonic motion

✗ 3. Successfully constrained motion

✓ 4. Incompletely constrained motion

Q.32 Coil springs are

Question ID : **3344**
Chosen Option : **1**

Ans

✗ 1. good in both shear load and side thrust

✗ 2. good in shear load and weak in bending loads

✓ 3. good in shear load and weak in side thrust

✗ 4. good in side thrust and weak in bending loads

Q.33 ABC analysis in material management deals with

Question ID : **3397**
Chosen Option : **1**

Ans

✗ 1. analysis of process chart

✓ 2. controlling inventory costs

✗ 3. flow of material

✗ 4. ordering schedule of job

Q.34 In radial Cams the follower moves

Question ID : **3431**
Chosen Option : **3**

Ans

✗ 1. in any direction irrespective of a Cam axis

✗ 2. in a direction parallel to the Cam axis

✓ 3. in a direction perpendicular to the Cam axis

✗ 4. along the Cam axis

Q.35 Break-even analysis consists of

Question ID : **3378**
Chosen Option : **1**

Ans

✓ 1. Fixed costs and Variable costs

✗ 2. Operation costs

✗ 3. Fixed costs

✗ 4. Variable costs

Q.36 The part of the piston where gudgeon pin is fixed is called as

Question ID : **3325**
Chosen Option : **1**

Ans

✓ 1. piston boss

✗ 2. skirt

✗ 3. land

✗ 4. ring groove

Q.37 The main reason for CO emission is due to

Question ID : **3372**
Chosen Option : **2**

Ans

✓ 1. Less amount of air in the air fuel mixture

✗ 2. High amount of hydrogen in the air fuel mixture

✗ 3. Less amount of hydrogen in the air fuel mixture

✗ 4. High amount of air in the air fuel mixture

Q.38 A square engine

Question ID : **3306**
Chosen Option : **3**

Ans

✗ 1. has 4 cylinders

✗ 2. has cylinders arranged in square shape

✓ 3. has cylinder bore equal to stroke length

✗ 4. has 2 cylinders horizontal and 2 cylinders vertical

Q.39 The moment of inertia for a rectangular section 3 cm wide 4 cm deep about x-x axis is

Question ID : **3424**
Chosen Option : **2**

Ans

✓ 1. $16\ cm^4$

✗ 2. $9\ cm^4$

✗ 3. $12\ cm^4$

✗ 4. $20\ cm^4$

Q.40 The hoist comprises a platform, which is fixed on the top of ram wor king on

Question ID : **3365**
Chosen Option : **2**

Ans
✓ 1. Hydraulic cylinder
✗ 2. Pneumatic cylinder
✗ 3. Master cylinder
✗ 4. Oil cylinder

Q.41 NO_x are generated when the temperature in combustion - chamber rises above

Question ID : **3322**
Chosen Option : **1**

Ans
✗ 1. $1500^\circ C$
✗ 2. $1600^\circ C$
✗ 3. $1700^\circ C$
✓ 4. $1800^\circ C$

Q.42 Lean air-fuel mixture is required for

Question ID : **3309**
Chosen Option : **3**

Ans
✗ 1. Acceleration
✗ 2. Starting
✗ 3. Idling
✓ 4. Cruising

Q.43 The warpage of cylinder head is checked with a

Question ID : **3374**
Chosen Option : **3**

Ans
✗ 1. micro meter
✗ 2. vernier caliper
✓ 3. metal rule
✗ 4. dial gauge

Q.44 The bending moment in the centre of a simply supported beam carry ing uniformly distributed load of W per unit length is

Question ID : **3425**
Chosen Option : **3**

Ans
✗ 1. $\frac{wl^2}{4}$
✗ 2. $\frac{wl^2}{2}$
✗ 3. Zero
✓ 4. $\frac{wl^2}{8}$

Q.45 The method of governing used in petrol engines is

Question ID : **3311**
Chosen Option : **2**

Ans
✗ 1. combined governing
✓ 2. quantitative governing
✗ 3. qualitative governing
✗ 4. hit and miss governing

Q.46 Mechanical differential lock is operated by

Question ID : **3407**
Chosen Option : **2**

Ans
✗ 1. Electrical system
✗ 2. Automatic system
✓ 3. Manual system

✗ 4. Servo system

Q.47 The fins at the top of a motor cycle engine cylinder are longer than t hose at the bottom because

Question ID : **3319**
Chosen Option : **1**

Ans
✓ 1. Top is the hottest part
✗ 2. they are in an unexposed position
✗ 3. hot air rises
✗ 4. Extra strength is needed at the top

Q.48 The outside diameter of a hollow shaft is twice its inside diameter. T he ratio of the torque carrying capacity to that of a solid shaft of the same material and of the same outside diameter is

Question ID : **3433**
Chosen Option : **1**

Ans
✓ 1. 15/16
✗ 2. 1/2
✗ 3. 3/4
✗ 4. 11/16

Q.49 The power available at the Crankshaft for useful work is

Question ID : **3305**
Chosen Option : **4**

Ans
✗ 1. Total power
✗ 2. Friction power
✓ 3. Brake power
✗ 4. Indicated power

Q.50 In a horn circuit, when the contact points are closed, the current flow s through

Question ID : **3356**
Chosen Option : **3**

Ans
✗ 1. low current wire
✗ 2. low voltage coil
✗ 3. high voltage coil
✓ 4. high current wire

Q.51 A portable drilling machine is specified by

Question ID : **3438**
Chosen Option : **3**

Ans
✗ 1. Spindle speeds and feeds
✗ 2. Size of the table
✓ 3. Maximum diameter of drill it can hold
✗ 4. Maximum spindle travel

Q.52 The ratio of useful power; friction power; exhaust gas losses; coolin g water, air and oil losses for a diesel engine is of the order of

Question ID : **3313**
Chosen Option : **2**

Ans
✗ 1. 25 : 5 : 10 : 60
✓ 2. 25 : 5 : 35 : 35
✗ 3. 25 : 35 : 5 : 35
✗ 4. 5 : 25 : 30 : 50

Q.53 A key connecting a flange coupling to a shaft is likely to fail in

Question ID : **3429**
Chosen Option : **2**

Ans
✓ 1. Shear
✗ 2. Torsion
✗ 3. Bending
✗ 4. Tension

Q.54 Four strokes of an IC engine need ___ degrees of Crank rotation

Question ID : **3301**
Chosen Option : **2**

Ans
✗ 1. 540°
✗ 2. 360°
✗ 3. 180°

4. 720°

Q.55 Apart from hydrocarbons, the main pollutants in the engine exhaust are

Question ID : **3371**
Chosen Option : **1**

Ans
1. CO and NO_x
2. CO_2 and H_2O
3. CO_2 and NO_x
4. CO and CO_2

Q.56 PERT stands for

Question ID : **3380**
Chosen Option : **1**

Ans
1. Programme Evaluation and Review Technique
2. Project Evaluation and Reporting Technique
3. Programme Examination and Review Technique
4. Process Evaluation and Reporting Technique

Q.57 When the no. 1 piston of a 6-cylinder in-line engine is performing suction stroke, the no.6 piston will be performing

Question ID : **3320**
Chosen Option : **3**

Ans
1. suction stroke
2. compression stroke
3. exhaust stroke
4. power stroke

Q.58 The Motor Vehicle Act in India was introduced in the year

Question ID : **3384**
Chosen Option : **2**

Ans
1. 1935
2. 1949
3. 1936
4. 1939

Q.59 The cutting tool in a milling machine is mounted on

Question ID : **3450**
Chosen Option : **2**

Ans
1. Column
2. Tool holder
3. Spindle
4. Arbor

Q.60 Frequency of a service can be calculated by

Question ID : **3382**
Chosen Option : **1**

Ans
1. $\frac{R.T.+S.T.}{N}$
2. $\frac{R.T.+N}{S.T.}$
3. $\frac{R.T.}{N+S.T.}$
4. $\frac{R.T.-S.T.}{N}$

Q.61 The ratio of static friction to dynamic friction is always

Question ID : **3415**
Chosen Option : **2**

Ans
1. greater than one
2. equal to one
3. less than one
4. half

Q.62 In straight polarity welding

Question ID : **3440**
Chosen Option : **2**

Ans
- ✗ 1. Holder is positive and work is earthed
- ✗ 2. Electrode holder is connected to the positive and work to negative
- ✗ 3. Work is positive and holder is earthed
- ✓ 4. Electrode holder is connected to the negative and work to positive

Q.63 Eye bolts are used for

Question ID : **3426**
Chosen Option : **4**

Ans
- ✗ 1. Absorption of shocks and vibrations
- ✓ 2. Lifting and transporting heavy pieces
- ✗ 3. Transmission of power
- ✗ 4. Locking devices

Q.64 CPM has following time estimates

Question ID : **3390**
Chosen Option : **3**

Ans
- ✗ 1. Three time estimates
- ✓ 2. One time estimate
- ✗ 3. Four time estimates
- ✗ 4. Two time estimates

Q.65 In the case of a fly wheel the maximum fluctuation of energy is the

Question ID : **3427**
Chosen Option : **1**

Ans
- ✗ 1. Ratio of maximum and minimum energies
- ✗ 2. Sum of maximum and minimum energies
- ✗ 3. Ratio of minimum and maximum energies
- ✓ 4. Difference between the maximum and minimum energies

Q.66 The process in which hydrocarbons are decomposed into smaller hydrocarbons is called

Question ID : **3310**
Chosen Option : **2**

Ans
- ✗ 1. Reforming
- ✗ 2. Evaporation
- ✓ 3. Cracking
- ✗ 4. Isomerisation

Q.67 The electronic ignition system has a module kit that improves

Question ID : **3370**
Chosen Option : **1**

Ans
- ✓ 1. The coil performance
- ✗ 2. The battery performance
- ✗ 3. The C.B. Points performance
- ✗ 4. The condenser performance

Q.68 The increase in hardness due to cold working is called

Question ID : **3445**
Chosen Option : **2**

Ans
- ✗ 1. Age hardening
- ✗ 2. Induction hardening
- ✓ 3. Work hardening
- ✗ 4. Flame hardening

Q.69 Normal heptane

Question ID : **3314**
Chosen Option : **1**

Ans
- ✓ 1. accelerates auto ignition
- ✗ 2. helps to resist auto ignition
- ✗ 3. does not effect auto ignition
- ✗ 4. retards auto ignition

Q.70 In a torque tube drive, the torque tube takes

Question ID : **3339**

Ans
✔ 1. Torque reaction and driving thrust
✘ 2. Side thrust and torque reaction
✘ 3. Side thrust and vehicle weight
✘ 4. Vehicle weight and torque reaction

Chosen Option : **3**

Q.71 The cylinder bore oversize for reboring is calculated on the basis of

Question ID : **3375**
Chosen Option : **2**

Ans
✔ 1. maximum ovality in any cylinder
✘ 2. average value of ovality in the cylinder
✘ 3. minimum ovality in any cylinder
✘ 4. size of the piston available

Q.72 The disadvantage of alternator is

Question ID : **3353**
Chosen Option : **3**

Ans
✔ 1. High initial cost
✘ 2. Maximum output is less
✘ 3. Poor current output characteristics
✘ 4. Output to weight ratio is less

Q.73 When compared to leaf springs, the energy stored in a torsion bar is

Question ID : **3335**
Chosen Option : **3**

Ans
✘ 1. four times
✘ 2. half
✔ 3. double
✘ 4. equal

Q.74 A dealer sells a set of tools for Rs.900 which is 80% more than he pa id for it. At what price must he sell the same set to make 120% on th e cost?

Question ID : **3400**
Chosen Option : **4**

Ans
✘ 1. Rs.1000
✘ 2. Rs.1200
✔ 3. Rs.1100
✘ 4. Rs.900

Q.75 Large speed reduction (greater than 20) in one stage of a gear train are possible through

Question ID : **3434**
Chosen Option : **2**

Ans
✘ 1. Bevel gearing
✔ 2. Worm gearing
✘ 3. Spur gearing
✘ 4. Helical gearing

Q.76 In a planer

Question ID : **3449**
Chosen Option : **1**

Ans
✘ 1. Tool moves over reciprocating work
✘ 2. Tool moves over stationary work
✘ 3. Work is stationary and tool reciprocates
✔ 4. Tool is stationary and work reciprocates

Q.77 Which of the following is correct relation for finding mean effective pressure if Area of indicator diagram (A), Spring Constant (K) and Length of indicator diagram (l)

Question ID : **3312**
Chosen Option : **3**

Ans
✘ 1. $\frac{K}{A} xl$
✘ 2. $\frac{K}{lA}$
✔ 3. $\frac{A}{l} xK$

4. $\frac{A}{K} xl$

Q.78 The number of valves provided in the telescopic shock absorber is

Question ID : **3329**
Chosen Option : **3**

Ans
1. Four
2. One
3. Two
4. Three

Q.79 Mass density of liquid is given by

Question ID : **3405**
Chosen Option : **4**

Ans
1. $\frac{volume}{mass}$
2. specific gravity/mass
3. mass x volume
4. $\frac{mass}{volume}$

Q.80 Moment of inertia of a rectangular section having width (b) and depth (d) about an axis passing through its C.G and parallel to depth (d) is

Question ID : **3413**
Chosen Option : **3**

Ans
1. $\frac{db^3}{24}$
2. $\frac{bd^3}{36}$
3. $\frac{bd^3}{12}$
4. $\frac{db^3}{12}$

Q.81 Condenser is provided to

Question ID : **3367**
Chosen Option : **4**

Ans
1. prevent arcing between the C.B. point
2. allow the arcing between the spark plug electrodes
3. allow arcing between the C.B. Point
4. prevent sudden arcing between spark plug electrodes

Q.82 Which of the following are correct pair pistons for a 6-cylinder in-line engine

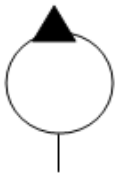
Question ID : **3318**
Chosen Option : **2**

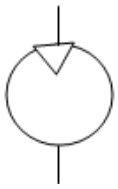
Ans
1. 1-5, 4-6, 2-3
2. 1-4, 2-6, 3-5
3. 1-6, 2-5, 3-4
4. 1-2, 3-4, 5-6

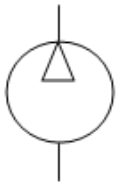
Q.83 Which of the following symbols is used to represent air compressor in a pneumatic circuit

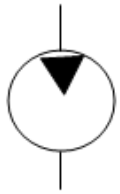
Question ID : **3410**
Chosen Option : **1**

Ans

✗ 1. 

✗ 2. 

✓ 3. 

✗ 4. 

Q.84 The time which results in the least possible direct cost of an activity is known as

Question ID : **3386**
Chosen Option : **3**

Ans
- ✗ 1. Normal time
- ✓ 2. Slow time
- ✗ 3. Standard time
- ✗ 4. Crash time

Q.85 The depth of soil cut can be set by

Question ID : **3404**
Chosen Option : **3**

Ans
- ✓ 1. depth wheel
- ✗ 2. Drag link
- ✗ 3. straight handle
- ✗ 4. depth locator

Q.86 In a tubeless tyre

Question ID : **3338**
Chosen Option : **4**

Ans
- ✗ 1. a non-return valve is fitted to the bottom of tyre
- ✗ 2. It takes more time for repairing
- ✗ 3. a repaired and replaced tyre gives a good air tight joint
- ✓ 4. air leakage is slow when tyre is punctured by a nail as long as it remains in the tyre

Q.87 Gear hobbing process is faster than milling because

Question ID : **3443**
Chosen Option : **2**

Ans
- ✗ 1. Indexing time is less
- ✓ 2. Several teeth cut at a time
- ✗ 3. Hob rotates faster
- ✗ 4. Work rotates faster

Q.88 The optimum electrode temperature of sparkplug is

Question ID : **3357**
Chosen Option : **2**

Ans
- ✗ 1. $300 \text{ to } 500\ ^{\circ}C$
- ✗ 2. $800 \text{ to } 1000\ ^{\circ}C$

✔ 3. 500 to 600 °C

✘ 4. 600 to 800 °C

Q.89 The difference between a machine and a structure is

Question ID : **3422**
Chosen Option : **2**

Ans

✘ 1. The machine serves to modify and transmit forces only where as structures serve to modify and transmit mechanical work.

✔ 2. The machine serves to modify and transmit mechanical work w here as structure serve to modify and transmit forces only

✘ 3. The relative motion exists between the parts structure where a s it doesnot exist in machine

✘ 4. Structures are temporary constructions where as machines are permanent construction

Q.90 The chassis where the engine is mounted completely inside the driv er's cabin

Question ID : **3337**
Chosen Option : **1**

Ans

✘ 1. Integral type chassis

✘ 2. Conventional chassis

✘ 3. Semi-forward chassis

✔ 4. Fully forward chassis

Q.91 Braking efficiency is generally kept at

Question ID : **3328**
Chosen Option : **1**

Ans

✔ 1. 50 to 80%

✘ 2. 100%

✘ 3. 90 to 100%

✘ 4. 30 to 50%

Q.92 Annealing of white cast iron results in the production of

Question ID : **3436**
Chosen Option : **3**

Ans

✔ 1. Malleable cast iron

✘ 2. Gray cast iron

✘ 3. Spheroidal cast iron

✘ 4. Nodular cast iron

Q.93 The purpose of belt pulley is to

Question ID : **3408**
Chosen Option : **3**

Ans

✘ 1. To control differential unit

✘ 2. supply hydraulic fluid to steering

✔ 3. run the water pumps and threshers

✘ 4. run the plough

Q.94 The maximum number of spells of duty for Crew in a day is

Question ID : **3391**
Chosen Option : **1**

Ans

✔ 1. 2

✘ 2. 5

✘ 3. 4

✘ 4. 3

Q.95 Soot formation is due to the lack of ____ in combustion chamber dur ing fuel burning

Question ID : **3373**
Chosen Option : **1**

Ans

✘ 1. Sulphur

✘ 2. Nitrogen

✘ 3. Hydrogen

✔ 4. Oxygen

Q.96 The stand time at both terminals is given as

Question ID : **3381**
Chosen Option : **2**

Ans

✔ 1. 5% of running time

✗ 2. 20% of running time

✗ 3. 10% of running time

✗ 4. 15% of running time

Q.97 The colour indication of informatory signs

Question ID : **3394**
Chosen Option : **4**

Ans

✓ 1. Blue

✗ 2. Green

✗ 3. Red

✗ 4. Black

Q.98 The produced current in d.c. generator is collected by

Question ID : **3369**
Chosen Option : **3**

Ans

✗ 1. Pole shoe

✓ 2. Commutator

✗ 3. Pole core

✗ 4. Armature

Q.99 Free wheel unit is mounted between

Question ID : **3349**
Chosen Option : **1**

Ans

✗ 1. propeller shaft and rear axle

✗ 2. clutch and gear box

✓ 3. gear box and propeller shaft

✗ 4. engine and clutch

Q.100 The daily maintenance time for a Bus varies from

Question ID : **3377**
Chosen Option : **1**

Ans

✗ 1. 4 to 6 hrs

✗ 2. 4 to 5 hrs

✓ 3. 2 to 3 hrs

✗ 4. 1 to 2 hrs

Q.101 Two forces of each equal to T/2 act at right angles. Their effect may be neutralized by a third force acting along their bisector in the opposite direction with a magnitude of

Question ID : **3420**
Chosen Option : **3**

Ans

✗ 1. 2T

✗ 2. T

✓ 3. T/?2

✗ 4. ?2T

Q.102 Propeller shaft is subjected to

Question ID : **3333**
Chosen Option : **1**

Ans

✓ 1. Torsional loads and Vibrations

✗ 2. Bending loads

✗ 3. Torsional loads

✗ 4. Both bending and torsional loads

Q.103 The pitch point of Cam is

Question ID : **3435**
Chosen Option : **3**

Ans

✗ 1. any point on the pitch curve

✗ 2. a point on the pitch curve having minimum pressure angle

✓ 3. a point on the pitch curve having maximum pressure angle

✗ 4. any point on the pitch circle

Q.104 In over running clutch ___ is provided to actuate the starter switch on self starter

Question ID : **3358**
Chosen Option : **1**

Ans

✗ 1. A high tension spring

2. rubber brush

3. Shift lever

4. Collar

Q.105 A flat belt drive is

Question ID : **3412**

Chosen Option : **2**

Ans

1. not a positive drive

2. Used only when the two shafts have parallel axis

3. used for high torque transmission only

4. positive drive

Q.106 Work cost implies

Question ID : **3389**

Chosen Option : **1**

Ans

1. Primary cost + Factory expenses

2. Primary cost

3. Factory cost

4. Factory expenses

Q.107 The central part of the front axle is provided with

Question ID : **3346**

Chosen Option : **2**

Ans

1. downward sweep

2. backward sweep

3. upward sweep

4. forward sweep

Q.108 Which valve is used in air compressor to regulate pressure in the reservoirs?

Question ID : **3360**

Chosen Option : **2**

Ans

1. Inlet valve

2. Unloader valve

3. Spool valve

4. Check valve

Q.109 In the hydraulic braking system, the movement of the piston in the wheel cylinder is transmitted to the brakeshoe by

Question ID : **3334**

Chosen Option : **3**

Ans

1. Trunnions

2. Cables

3. Springs

4. Actuating pins

Q.110 Tippers are used for

Question ID : **3403**

Chosen Option : **2**

Ans

1. Long hauling jobs

2. Carrying hard rock to long distance

3. Small hauling jobs

4. Carrying garbage

Q.111 Power output of a diesel engine is controlled by

Question ID : **3323**

Chosen Option : **1**

Ans

1. Varying compression ratio

2. Regulating the quantity of air induced

3. Varying the pump timing

4. Regulating the quantity of fuel injected

Q.112 Correct sequence of Coolant circulation in an I.C. Engine cooling system is

Question ID : **3308**

Chosen Option : **1**

Ans
- ✗ 1. pump-block-radiator-head
- ✗ 2. pump-radiator-head-block
- ✗ 3. pump-head-radiator-block
- ✓ 4. pump-block-head-radiator

Q.113 The final drive consists of

Question ID : **3326**
Chosen Option : **2**

Ans
- ✗ 1. rear axle and road wheel
- ✗ 2. gear box and propeller shaft
- ✓ 3. bevel pinion and crown wheel
- ✗ 4. propeller shaft and bevel pinion

Q.114 A vehicle chassis is designated as 6 x 4, this indicates that

Question ID : **3327**
Chosen Option : **2**

Ans
- ✗ 1. The length of chassis is 6 metres and wheel base is 4 metres
- ✗ 2. The length of chassis is 6 metres and ground clearance is 4 metres
- ✓ 3. The total number of wheels is 6 and the driving wheels are 4
- ✗ 4. The total number of wheels is 6 and the 4 wheels are mounted on front axle

Q.115 The gear train usually employed in clocks

Question ID : **3430**
Chosen Option : **1**

Ans
- ✗ 1. sun and planet gear
- ✗ 2. differential gear
- ✗ 3. simple gear train
- ✓ 4. reverted gear train

Q.116 Dressing of grinding wheels to restore sharpness is done by

Question ID : **3437**
Chosen Option : **1**

Ans
- ✗ 1. Solid carbon steel bar
- ✗ 2. Tool steel dresser
- ✓ 3. Diamond dresser
- ✗ 4. Sharped edge H.S.S. cutter

Q.117 Scheduling gives information about

Question ID : **3387**
Chosen Option : **3**

Ans
- ✗ 1. proper utilisation of machines
- ✗ 2. how the idle time can be minimised
- ✓ 3. when work should start and how much work should be completed during a certain period
- ✗ 4. when work should complete

Q.118 The thermal efficiency of a 2 - stroke cycle engine as compared to a four stroke cycle engine is

Question ID : **3315**
Chosen Option : **4**

Ans
- ✗ 1. same
- ✓ 2. less
- ✗ 3. more upto certain load and then less
- ✗ 4. more

Q.119 The middle finger of Fleming's left hand rule represents

Question ID : **3368**
Chosen Option : **3**

Ans
- ✗ 1. direction of force
- ✓ 2. direction of current
- ✗ 3. direction of magnetic field

✗ 4. capacitance

Q.120 Contact breaker point gap should be maintained at

Question ID : **3355**
Chosen Option : **2**

Ans
✓ 1. 0.3 to 0.5 mm
✗ 2. 0.2 to 0.3 mm
✗ 3. 0.4 to 0.8 mm
✗ 4. 0.1 to 0.2 mm

Q.121 Cetane number of a diesel fuel is measure of its

Question ID : **3302**
Chosen Option : **3**

Ans
✓ 1. Ignition quality
✗ 2. Delay period
✗ 3. Volatility
✗ 4. Viscosity

Q.122 Austenite is a combination of

Question ID : **3446**
Chosen Option : **2**

Ans
✓ 1. Cementite and gamma iron
✗ 2. Ferrite and cementite
✗ 3. Ferrite and pearlite
✗ 4. Pearlite and cementite

Q.123 Break-even point can be calculated by using the relation, where F=Total Fixed costs, S=Total Sales Volume, V = Total Variable costs.

Question ID : **3396**
Chosen Option : **2**

Ans
✗ 1. $\frac{F}{V}$
✓ 2. $\frac{F}{1-\frac{V}{S}}$
✗ 3. $\frac{F}{F-\frac{S}{V}}$
✗ 4. $\frac{F}{\frac{S}{V}-F}$

Q.124 A pressure relief valve is fitted to the main oil gallery to

Question ID : **3321**
Chosen Option : **3**

Ans
✗ 1. stop oil flow to bearings at low pressure
✗ 2. open when the oil is hot
✓ 3. limit the maximum oil pressure
✗ 4. maintain supply if the gallery is blocked

Q.125 In steering mechanism a drag link connects

Question ID : **3336**
Chosen Option : **4**

Ans
✓ 1. drop arm and steering arm
✗ 2. drop arm and link rod
✗ 3. drop arm and tie rod
✗ 4. drop arm and track rod

Q.126 Cautionary signs are indicated in

Question ID : **3395**
Chosen Option : **2**

Ans
- ✗ 1. Circle
- ✓ 2. Triangle
- ✗ 3. Rectangle
- ✗ 4. Square

Q.127 According to Rowan plan, if H=hourly rate, A=actual time and S=standard time, then wages will be

Question ID : **3393**
Chosen Option : **2**

Ans
- ✓ 1. $HA+\frac{(S-A)}{S}HA$
- ✗ 2. $HA+\frac{(S-A)}{S}H$
- ✗ 3. HA
- ✗ 4. $HA+\frac{(S-A)}{2}H$

Q.128 Steering pulling or wobbling is due to

Question ID : **3361**
Chosen Option : **2**

Ans
- ✗ 1. Worn out piston
- ✗ 2. Worn out cylinder
- ✗ 3. Loosened clutch cable
- ✓ 4. Less tyre pressure

Q.129 The kingpin inclination is usually

Question ID : **3342**
Chosen Option : **2**

Ans
- ✗ 1. 7° to 9°
- ✗ 2. Between $1/2^\circ$ to 2°
- ✓ 3. 2° to 5°
- ✗ 4. Less than $1/2^\circ$

Q.130 An engine has a swept volume of 300 CC. If the compression ratio is 8 : 1, then the clearance volume is

Question ID : **3316**
Chosen Option : **2**

Ans
- ✗ 1. 50 CC
- ✗ 2. 36.66 CC
- ✓ 3. 42.86 CC
- ✗ 4. 33.33 CC

Q.131 The following anti roll device is used in independent suspension system

Question ID : **3343**
Chosen Option : **3**

Ans
- ✗ 1. Torsion bar
- ✓ 2. Stabilizer bar
- ✗ 3. Wishbone arm
- ✗ 4. Torque rod

Q.132 Function of hand primer during air lock is to

Question ID : **3324**
Chosen Option : **3**

Ans
- ✗ 1. supply diesel to injector
- ✗ 2. supply diesel from FIP to injector
- ✓ 3. supply diesel from tank to fuel injection pump

✗ 4. supply diesel to engine cylinder

Q.13 3 Gantt charts are used for

Question ID : **3379**
Chosen Option : **3**

Ans
✗ 1. linear programming
✗ 2. sales forecasting
✗ 3. scheduling and routing
✓ 4. production schedule

Q.13 4 A hydraulic Jack is a device used to

Question ID : **3406**
Chosen Option : **2**

Ans
✗ 1. increase the intensity of pressure of water by means of energy available from a large quantity of water at low pressure
✓ 2. lift larger load by the application of a comparatively much small force
✗ 3. store pressure energy which may be supplied to a machine later on
✗ 4. decrease the pressure energy which is supplied to the machine

Q.13 5 Brinnell hardness number is expressed by the equation

Question ID : **3447**
Chosen Option : **1**

Ans
✗ 1. $BHN = \frac{2L}{\pi D(D+\sqrt{D^2-d^2}}$

✗ 2. $BHN = \frac{L}{\pi D(D+\sqrt{D^2-d^2}}$

✗ 3. $BHN = \frac{L}{\pi D(D-\sqrt{D^2-d^2}}$

✓ 4. $BHN = \frac{2L}{\pi D(D-\sqrt{D^2-d^2}}$

Q.13 6 Which of the following tractor is based on type of drive

Question ID : **3401**
Chosen Option : **1**

Ans
✗ 1. Earth moving tractor
✗ 2. Row Crop tractor
✗ 3. Industrial tractor
✓ 4. Full track tractor

Q.13 7 If t_o, t_m and t_p represent the Optimistic, most probable and pessimistic time for a project, then by probability analysis, most probable expected time t_e =

Question ID : **3398**
Chosen Option : **1**

Ans
✗ 1. $\frac{t_o+6t_m+t_p}{6}$

✗ 2. $\frac{2t_o+4t_m+t_p}{6}$

✗ 3. $\frac{t_o+6t_m+4t_p}{6}$

✓ 4. $\frac{t_o+4t_m+t_p}{6}$

Q.138 Which tool is used for tightening cylinder head nuts

Question ID : **3354**
Chosen Option : **2**

Ans
- ✔ 1. Torque wrench
- ✘ 2. Ring spanner
- ✘ 3. Tubular spanner
- ✘ 4. DE spanner

Q.139 When taking a turn, the differential without differential lock supplies

Question ID : **3350**
Chosen Option : **2**

Ans
- ✘ 1. Less torque to outer wheel
- ✔ 2. Equal torque to both inner and outer wheels
- ✘ 3. no torque to the inner wheel
- ✘ 4. More torque to outer wheel

Q.140 Salvaging means

Question ID : **3399**
Chosen Option : **4**

Ans
- ✘ 1. adjusting losses against assets
- ✘ 2. disposing off property in as such condition
- ✘ 3. mortgaging property
- ✔ 4. disposing off property which is no longer useful in present situation

Q.141 The method of centreless grinding used to produce taper is

Question ID : **3448**
Chosen Option : **3**

Ans
- ✘ 1. In feed grinding
- ✔ 2. End feed grinding
- ✘ 3. Cylindrical grinding
- ✘ 4. Through feed grinding

Q.142 A bolt of M 24 x 2 means that

Question ID : **3432**
Chosen Option : **1**

Ans
- ✔ 1. The nominal diameter of bolt is 24mm and pitch is 2mm
- ✘ 2. Cross sectional area of the threads is $24mm^2$
- ✘ 3. the effective diameter of bolt is 24mm and there are 2 threads per cm
- ✘ 4. The pitch of the thread is 24mm and depth is 2mm

Q.143 The wastage of material in the store is taken into account by the following method in the evaluation of the materials issued from the stores

Question ID : **3385**
Chosen Option : **2**

Ans
- ✔ 1. Inflated system
- ✘ 2. Variable price method
- ✘ 3. Primary cost method
- ✘ 4. Current value method

Q.144 Two shafts A and B are made of the same material. The diameter of shaft B is twice that of shaft A. The ratio of power which can be transmitted by shaft A to the shaft B is

Question ID : **3428**
Chosen Option : **2**

Ans
- ✔ 1. 1/8
- ✘ 2. 1/2
- ✘ 3. 1/4
- ✘ 4. 1/16

Q.145 The moment of inertia of a triangular section of base (b) and height (h) about an axis through its base is

Question ID : **3418**
Chosen Option : **2**

Ans

✗ 1. $\frac{bh^3}{36}$

✓ 2. $\frac{bh^3}{12}$

✗ 3. $\frac{bh^3}{8}$

✗ 4. $\frac{bh^3}{4}$

Q.146 **Hardenability of steel**

Question ID : **3442**
Chosen Option : **2**

Ans

✗ 1. is the ability of steel to resist abrasion, wear and penetration

✓ 2. is the property which determines the depth of the hardened zone induced by quenching

✗ 3. is its ability to withstand shocks

✗ 4. is achieved throughout its full depth, when the actual cooling rate equals the critical cooling rate

Q.147 **When a bar lengthened or shortened by a load, it simultenously becomes narrower or wider. The ratio of this strain in the direction of width to the simultenous strain in the direction of the length is called**

Question ID : **3423**
Chosen Option : **1**

Ans

✗ 1. Young's modulus

✗ 2. Hooke's ratio

✗ 3. Euler's ratio

✓ 4. Poisson's ratio

Q.148 **Engine overheating may result due to**

Question ID : **3363**
Chosen Option : **1**

Ans

✗ 1. Radiator pressure cap stuck closed

✓ 2. Broken fan belt

✗ 3. Thermostat stuck open

✗ 4. Excess coolant in the system

Q.149 **The most widely used type of stub axle used in heavy vehicles**

Question ID : **3332**
Chosen Option : **2**

Ans

✗ 1. Elliot type

✗ 2. Reversed Lamoine type

✓ 3. Reversed elliot type

✗ 4. Lamoine type

Q.150 **The rear axle half shaft is connected to**

Question ID : **3340**
Chosen Option : **4**

Ans

✓ 1. Sun gear

✗ 2. Crown wheel

✗ 3. Drive pinion

✗ 4. Differential cage