<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Exam Date</th>
<th>Q Id</th>
<th>Questions</th>
<th>Answer Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>402</td>
<td>12-02-2020</td>
<td>71</td>
<td>India's first maritime museum is to be established at which of the following sites?</td>
<td>(C)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(A) Navinal</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(B) Amri</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(C) Lothal</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(D) Bet Dwarka</td>
<td></td>
</tr>
<tr>
<td>402</td>
<td>12-02-2020</td>
<td>72</td>
<td>Who was the first Indian Chief of Army Staff of the Indian Army?</td>
<td>(A)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(A) K M Cariappa</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(B) Maharaja Rajendra Singhji</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(C) Sam Manekshaw</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(D) R D Katari</td>
<td></td>
</tr>
<tr>
<td>402</td>
<td>12-02-2020</td>
<td>73</td>
<td>Whose autobiography is &quot;My Life&quot;</td>
<td>(C)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(A) Nelson Mandela</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(B) Margaret Tatcher</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(C) Bill Clinton</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(D) J.M.Lyngdoh</td>
<td></td>
</tr>
<tr>
<td>402</td>
<td>12-02-2020</td>
<td>74</td>
<td>Which of the following awards is not associated with the field of sports?</td>
<td>(D)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(A) Arjuna Award</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(B) Dronacharya Award</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(C) Dhyan Chand Award</td>
<td></td>
</tr>
</tbody>
</table>
| 402 | 12-02-2020 | 75 | **Who has become the Chief Minister of Andhra Pradesh after the assembly elections held in the year 2019?**  
| (A) K. Chandrashekar Rao  
| (B) Naveen Patnaik  
| (C) YS Jagamohan Reddy  
| (D) N Chandrababu Naidu |

| 402 | 12-02-2020 | 76 | **Choose the word which best expresses the meaning of**  
| **Bankrupt**  
| (A) Prosperous  
| (B) Insolvent  
| (C) Well off  
| (D) Blameless |

| 402 | 12-02-2020 | 77 | **Choose the one which can be substituted for 'that which cannot be corrected'**  
| (A) Unintelligible  
| (B) Indelible  
| (C) Incorrigible  
| (D) Illegible |

| 402 | 12-02-2020 | 78 | **Find the correctly spelt word**  
| (A) Enterprenuer  
| (B) Entrepreneur  
| (C) Entrapreneur  
| (D)  |
Read the sentence to find out the grammatical error in it. The error will be in one part of the sentence. The number indicated in that part is the answer.

We are trying to (1) / find out the root cause (2) / of this recurring problem (3) / since the last four days (4)

(A) 1
(B) 2
(C) 3
(D) 4

Match the key-word "Decade" to its closest meaning which is used in the following sentence:-

"She's been working here for a decade."

(A) 1 year
(B) 2 Years
(C) 5 years
(D) 10 years

In a certain code, ‘SPIDER’ is written as ‘PSDIRE’, how will be ‘COMMON’ written in that code?

(A) OCOMMN
(B) OCMMNO
(C) OCMOMN
(D) OCMMON

Pointing towards a person, Mohan said to a
woman, "His mother is the only daughter of your father". How is the woman related to that person?

(A) Daughter
(B) Sister
(C) Mother
(D) Wife

A, B, C, D, E, F, G and H are sitting around a circular table facing center. H is fourth to the left of B and second to the right of F. A is third to the left of C, who is not an immediate neighbor of F. G is second to the left of A. D is second to the right of E. Who is on the immediate right of F?

(A) H
(B) A
(C) G
(D) E

Bird: Wings is same as

(A) Whale : Water
(B) Dog : Lungs
(C) Car : Wheel
(D) Pen : Paper

Complete the following series:

FAG, GAF, HAI, IAH, ____

(A) JAK
(B) HAL
(C) HAK
<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Time</th>
<th>Question</th>
<th>Options</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>402</td>
<td>12-02-2020</td>
<td>86</td>
<td>If 20% of $a = b$, then $b%$ of 20 is the same as:</td>
<td>(A) 4% of $a$</td>
<td>(A)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(B) 5% of $a$</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(C) 20% of $a$</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(D) 10% of $a$</td>
<td></td>
</tr>
<tr>
<td>402</td>
<td>12-02-2020</td>
<td>87</td>
<td>The average monthly income of P and Q is Rs. 5050. The average monthly income of Q and R is Rs. 6250 and the average monthly income of P and R is Rs. 5200. The monthly income of P is:</td>
<td>(A) 3500</td>
<td>(B)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(B) 4000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(C) 4050</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(D) 5000</td>
<td></td>
</tr>
<tr>
<td>402</td>
<td>12-02-2020</td>
<td>88</td>
<td>A farmer travelled a distance of 61km in 9 hours. He travelled partly on foot at 4km/hr and partly on bicycle at 9km/hr. The distance travelled on foot is:</td>
<td>(A) 14km</td>
<td>(C)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(B) 15km</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(C) 16km</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(D) 17km</td>
<td></td>
</tr>
<tr>
<td>402</td>
<td>12-02-2020</td>
<td>89</td>
<td>A can do a piece of work in 20 days. B is 25% more efficient than A. The number of days taken by B to do the same piece of work is:</td>
<td>(A) 15</td>
<td>(B)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(B) 16</td>
<td></td>
</tr>
</tbody>
</table>
A man has some hens and cows. If the number of heads is 48 and the number of feet is 140, then the number of hens will be:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) 22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(B) 23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(C) 24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(D) 26</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A ship will sink if it does not displace water equal to its own:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Volume</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(B) Density</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(C) Surface Area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(D) Weight</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Centrifugal pump is started with its delivery valve:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Kept fully closed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(B) Kept fully open.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(C) Irrespective of any position.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(D) Kept 50% open.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Work done in a free expansion process is:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) positive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(B) negative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(C) zero</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A petrol engine theoretically operates on:

(A) constant pressure cycle
(B) constant volume cycle
(C) constant temperature cycle
(D) constant entropy cycle

Ties are load carrying members which carry:

(A) Torsional loads
(B) Axial compressive loads
(C) Axial tension loads
(D) Transverse loads

The phenomenon of weld decay occurs in:

(A) Cast iron
(B) Brass
(C) Bronze
(D) Stainless steel

Continuous chips will be formed when machining speed is:

(A) High
(B) Low
(C) Medium
(D) Irrespective of cutting speed

Critical path moves along the activities having total float of:
(A) positive value  
(B) negative value  
(C) zero  
(D) same value  

The smallest change in measured value to which the instrument will respond is called:  
(A) Accuracy  
(B) Precision  
(C) Resolution  
(D) Sensitivity  

Momentum is defined as:  
(A) force x distance  
(B) mass x acceleration  
(C) mass x time  
(D) mass x velocity  

Rotary compressors are best suited for:  
(A) large quantity of air at high pressure  
(B) small quantity of air at high pressure  
(C) small quantity of air at low pressure  
(D) large quantity of air at low pressure  

The capacity of a compressor is expressed in:  
(A) Kg/m²  
(B) Kg/m³  
(C)
Which of the following is a disadvantage of ball valves:

(A) They are large and heavy.
(B) They have high maintenance costs.
(C) They have relatively poor throttling characteristics.
(D) They are among the most expensive of the valve types.

PERT has the following time estimate:

(A) One time estimate
(B) Two time estimate
(C) Three time estimate
(D) Four time estimate

The process layout is best suited where:

(A) Specialization exists
(B) Machines are arranged according to sequence of operation
(C) Few number of non-standardized units is to be produced
(D) Mass production is envisaged

Two alternatives can produce a product. First have a fixed cost of Rs. 2000 and a variable cost of Rs. 20 per piece. The second method has a fixed cost of Rs. 1500 and a variable cost of Rs. 30. The break even quantity between the two alternatives is:
For two governors A and B, the lift of sleeve of governor A is more than that of governor B, for a given fractional change in speed. It indicates that:

- (A) Governor A is more sensitive than governor B
- (B) Governor B is more sensitive than governor A
- (C) Both governors A and B are equally sensitive
- (D) Inadequate data to make a conclusion

Which of the following is/are example/s of rotary displacement pumps:

- (A) Gear pump
- (B) Vane pump
- (C) Rotary piston pump
- (D) All of the options

One horse power is equal to:

- (A) 102 watts
- (B) 75 watts
- (C) 735 watts
- (D) 550 watts

Which of the following instrument can be used for measuring speed of a submarine moving in...
deep sea:
(A) Venturimeter
(B) Orifice plate
(C) Rotameter
(D) Pitot tube

All the terms of energy in Bernoulli’s equation have dimension of:
(A) Energy
(B) Work
(C) Mass
(D) Length

Charpy test is a:
(A) Bending test
(B) Impact test
(C) Fatigue test
(D) Hardness test

The cause of smoky exhaust in a diesel engine could be:
(A) Fuel is not distributed equally to all cylinders
(B) Fuel injection is late or fuel injector is not correctly adjusted
(C) Water in the fuel
(D) All of the options

Antifreeze solution commonly used in automobiles:
(A)
<table>
<thead>
<tr>
<th>402</th>
<th>12-02-2020</th>
<th>115</th>
</tr>
</thead>
<tbody>
<tr>
<td>The principal applications for <strong>Gaskets</strong> are for static sealing and installations involving reciprocating motion.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| (A) Glycol  
(B) Normal heptane  
(C) Iso octane  
(D) lead ethyl |

<table>
<thead>
<tr>
<th>402</th>
<th>12-02-2020</th>
<th>116</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity is described as the rate a lubricant will flow at a known:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| (A) Pressure  
(B) Temperature  
(C) Factor  
(D) Time |

<table>
<thead>
<tr>
<th>402</th>
<th>12-02-2020</th>
<th>117</th>
</tr>
</thead>
<tbody>
<tr>
<td>The forces, which meet at one point and their lines of action also lie on the same plane, are known as</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| (A) coplaner concurrent forces  
(B) coplaner non-concurrent forces  
(C) non-coplaner concurrent forces  
(D) non-coplaner non-concurrent forces |

<table>
<thead>
<tr>
<th>402</th>
<th>12-02-2020</th>
<th>118</th>
</tr>
</thead>
<tbody>
<tr>
<td>In one dimensional flow, the flow</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| (A) is steady and uniform  
(B) |
(B) takes place in straight line  
(C) takes place in curve  
(D) takes place in one direction

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>
| 402 | 12-02-2020 | 119 | According to equation of continuity  
(A) \( w_1a_1 = w_2a_2 \)  
(B) \( w_1v_1 = w_2v_2 \)  
(C) \( a_1v_1 = a_2v_2 \)  
(D) \( a_1/v_1 = a_2/v_2 \)  

The pressure less than atmospheric pressure is known as  
(A) suction pressure  
(B) vacuum pressure  
(C) negative gauge pressure  
(D) All of the options

The temperature at which the new grains are formed in the metal is called  
(A) lower critical temperature  
(B) upper critical temperature  
(C) eutectic temperature  
(D) recrystallisation temperature

For high speed engines, the cam follower should move with  
(A) uniform velocity  
(B) simple harmonic motion  
(D)
<table>
<thead>
<tr>
<th>Question Number</th>
<th>Date</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>123</td>
<td>12-02-2020</td>
<td>(C) uniform acceleration and retardation (D) cycloidal motion</td>
</tr>
<tr>
<td>124</td>
<td>12-02-2020</td>
<td>The pressure angle of a cam is the angle between the direction of the follower motion and a normal to the (A) pitch circle (B) base circle (C) pitch curve (D) prime circle (C)</td>
</tr>
<tr>
<td>125</td>
<td>12-02-2020</td>
<td>The cam follower generally used in automobile engines is (A) knife edge follower (B) flat faced follower (C) spherical faced follower (D) roller follower (C)</td>
</tr>
<tr>
<td>126</td>
<td>12-02-2020</td>
<td>The gas turbine cycle with regenerator improves (A) thermal efficiency (B) work ratio (C) avoids pollution (D) plasma stage (A)</td>
</tr>
<tr>
<td>127</td>
<td>12-02-2020</td>
<td>Gantt chart is used for (A) inventory control (B) material handling (C) production schedule (D) repair schedule (C)</td>
</tr>
<tr>
<td>Question Number</td>
<td>Date</td>
<td>Time</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------</td>
<td>--------</td>
</tr>
</tbody>
</table>
| 127             | 12-02-2020 | 127    | Fixed position layout is also known as  
(A) analytical layout  
(B) synthetic layout  
(C) static product layout  
(D) None of the options                                                                                                                  | (C)    |
| 128             | 12-02-2020 | 128    | _____ is equal to the differences of the two limits of size of the part  
(A) Tolerance  
(B) Low limit  
(C) High limit  
(D) design size                                                                                                                          | (A)    |
| 129             | 12-02-2020 | 129    | Which plate cutting method is economically and performance wise most suitable for large ship building industry  
(A) Laser  
(B) Plasma  
(C) Water jet  
(D) Oxy fuel                                                                                                                                | (B)    |
| 130             | 12-02-2020 | 130    | Antisieze lubricating compounds are used in  
(A) Gears  
(B) Threaded connections  
(C) wire ropes  
(D) Brakes                                                                                                                                     | (B)    |
| 131             | 12-02-2020 | 131    | SAE Engine oil grade  
(A) 320                                                                                                                                                                                                 | (C)    |
EP in grease specification denotes its ability of
(A) Earth protection
(B) Elongation protection
(C) Extreme Pressure
(D) Extra Power

Discolouration found in failed bearing components. It is due to
(A) adequate lubrication
(B) heat
(C) low rpm
(D) shock load

Steel wire rope examination carried by competent person with reference to the following standard
(A) ISO:2301
(B) ISO:4309
(C) ISO:1302
(D) ISO:9034

Before shotblasting of steelplates the following process is carried out for better outcome.
(A) Shearing
(B) Mangling
Preventive maintenance is carried out for
(A) extended life of equipment
(B) to find root cause of failure
(C) avoiding unexpected breakdown
(D) completing routine schedule

NACE is associated with
(A) Engineering standards
(B) corrosion control
(C) Oil industry
(D) lifting tools and tackles

Shackles for easy handling are made up of
(A) mild steel
(B) galvanised iron
(C) alloy steel
(D) cast iron

Extra improved plough steel is used for the construction of
(A) shackles
(B) wire ropes
(C) blasting material
(D) crane hook
| 402 | 12-02-2020 | 140 | For instant inspection the following is used
(A) vernier calipers
(B) screw gauge
(C) go no-go gauge
(D) manometer | (C) |