Junior Engineer Civil Mechanical and Electrical Examination 2024 Paper I

Roll Number	
Candidate Name	
Venue Name	
Exam Date	05/06/2024
Exam Time	1:00 PM - 3:00 PM
Subject	Junior Engineer 2024 Mechanical Paper I

Section : **General Intelligence and Reasoning**

Q.1 Select the correct mirror image of the given figure when the mirror is placed at MN as shown below.

M

F 4 ¥ X R

N

Ans ✗ 1.

✗ 2.

✓ 3.

✗ 4.

Question ID : **630680456654**
Option 1 ID : **6306801783579**
Option 2 ID : **6306801783580**
Option 3 ID : **6306801783581**
Option 4 ID : **6306801783582**
Status : **Answered**
Chosen Option : **3**

Q.2 15 is related to 230 following a certain logic. Following the same logic, 4 is related to 65. To which of the following is 12 related following the same logic?
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting /multiplying to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

Ans ✗ 1. 187

✗ 2. 186

✓ 3. 185

✗ 4. 180

Question ID : **630680451715**
Option 1 ID : **6306801763946**
Option 2 ID : **6306801763947**
Option 3 ID : **6306801763948**
Option 4 ID : **6306801763949**
Status : **Answered**
Chosen Option : **3**

Q.3 What should come in place of '?' in the given series?
394, 465, 536, 607, 678, ?

Ans ✔ 1. 749

✗ 2. 756

✗ 3. 736

✗ 4. 768

Question ID : **630680378803**
Option 1 ID : **6306801476261**
Option 2 ID : **6306801476259**
Option 3 ID : **6306801476260**
Option 4 ID : **6306801476262**
Status : **Answered**
Chosen Option : **1**

Q.4 A, B, C, D, E and F are sitting around a circular table facing the centre (not necessarily in the same order). B is sitting to the immediate right of F and immediate left of C. C is sitting to the immediate left of E. A is sitting to the immediate right of E and to the immediate left of D. Who is sitting to the immediate left of F?

Ans ✗ 1. A

✗ 2. B

✗ 3. C

✔ 4. D

Question ID : **630680377010**
Option 1 ID : **6306801469105**
Option 2 ID : **6306801469103**
Option 3 ID : **6306801469104**
Option 4 ID : **6306801469106**
Status : **Answered**
Chosen Option : **4**

Q.5 Select the correct option that indicates the arrangement of the following planets according to their size.
1. Mars
2. Jupiter
3. Venus
4. Earth
5. Mercury

Ans ✗ 1. 5, 2, 1, 3, 4

✗ 2. 5, 3, 4, 2, 1

✗ 3. 5, 4, 2, 1, 3

✔ 4. 5, 1, 3, 4, 2

Question ID : **630680565832**
Option 1 ID : **6306802212276**
Option 2 ID : **6306802212278**
Option 3 ID : **6306802212277**
Option 4 ID : **6306802212279**
Status : **Answered**
Chosen Option : **4**

Q.6 In a certain code language, 'FLEW' is coded as '8462' and 'LORD' is coded as '9736'.
What is the code for 'L' in the given code language?

Ans ✗ 1. 9

✓ 2. 6

✗ 3. 4

✗ 4. 7

Question ID : **630680377195**
Option 1 ID : **6306801469844**
Option 2 ID : **6306801469845**
Option 3 ID : **6306801469843**
Option 4 ID : **6306801469846**
Status : **Answered**
Chosen Option : **2**

Q.7 Six friends Abby, Bunny, Chan, Dolly, Emma and Fanny have different weights. Dolly's weight is an odd number. Dolly is heavier than Emma but not the heaviest. Chan is heavier than Fanny but lighter than Dolly. Chan is not heavier than Emma but is heavier than Fanny and Abby. Abby's weight is not an odd number. The lightest weight is 45 kilograms and the heaviest weight is 80 kilograms.
Who is the heaviest person in the group?

Ans ✗ 1. Abby

✓ 2. Bunny

✗ 3. Chan

✗ 4. Emma

Question ID : **630680521125**
Option 1 ID : **6306802036925**
Option 2 ID : **6306802036927**
Option 3 ID : **6306802036926**
Option 4 ID : **6306802036928**
Status : **Answered**
Chosen Option : **2**

Q.8 Select the option figure that can replace the question mark (?) in the figure given below to complete the pattern.

Ans

✔ 1.

✘ 2.

✘ 3.

✘ 4.

Question ID : **630680525486**
Option 1 ID : **6306802054029**
Option 2 ID : **6306802054028**
Option 3 ID : **6306802054031**
Option 4 ID : **6306802054030**
Status : **Answered**
Chosen Option : **1**

Q.9 LQNR is related to PURV in a certain way based on the English alphabetical order. In the same way, OTQU is related to SXUY. To which of the following is GLIM related, following the same logic?

Ans ✘ 1. PKMQ

✘ 2. QPMK

✔ 3. KPMQ

✘ 4. PQMK

Question ID : **630680379505**
Option 1 ID : **6306801479064**
Option 2 ID : **6306801479066**
Option 3 ID : **6306801479065**
Option 4 ID : **6306801479063**
Status : **Answered**
Chosen Option : **3**

Q.10 Madan starts from point A and drives 4 km towards the South. He then takes a left turn and drives 5 km. he then takes a right turn and drives 2 km. He then takes another right turn and drives 3 km. He takes a final right turn and drives 6 km to reach point B. How far (shortest distance) and towards which direction should he drive to reach Point A again? (All turns are 90 degrees turns only unless specified)

Ans ✗ 1. 3 km West

✓ 2. 2 km West

✗ 3. 3 km East

✗ 4. 2 km East

Question ID :	**630680376853**
Option 1 ID :	**6306801468477**
Option 2 ID :	**6306801468475**
Option 3 ID :	**6306801468478**
Option 4 ID :	**6306801468476**
Status :	**Answered**
Chosen Option :	**2**

Q.11 What should come in place of the question mark (?) in the given series based on the English alphabetical order?
RQO, LKI, FEC, ZYW, TSQ, ?

Ans ✗ 1. NML

✗ 2. MNL

✓ 3. NMK

✗ 4. MNK

Question ID :	**630680395304**
Option 1 ID :	**6306801541420**
Option 2 ID :	**6306801541422**
Option 3 ID :	**6306801541423**
Option 4 ID :	**6306801541421**
Status :	**Answered**
Chosen Option :	**3**

Q.12 Select the option that indicates the arrangement of the following words in meaningful and logical order.

1. Word
2. Paragraph
3. Sentence
4. Letter
5. Phrase

Ans ✗ 1. 1, 3, 2, 4, 5

✗ 2. 2, 1, 5, 4, 3

✗ 3. 5, 1, 3, 2, 4

✓ 4. 4, 1, 5, 3, 2

Question ID :	**630680404456**
Option 1 ID :	**6306801577324**
Option 2 ID :	**6306801577325**
Option 3 ID :	**6306801577326**
Option 4 ID :	**6306801577327**
Status :	**Answered**
Chosen Option :	**4**

Q.13 142 is related to 92 following a certain logic. Following the same logic, 255 is related to 205. To which of the following is 457 related following the same logic?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

Ans ✔ 1. 407

✘ 2. 417

✘ 3. 427

✘ 4. 437

Question ID : **630680396913**
Option 1 ID : **6306801547720**
Option 2 ID : **6306801547721**
Option 3 ID : **6306801547722**
Option 4 ID : **6306801547723**
Status : **Answered**
Chosen Option : **1**

Q.14 OB 8 is related to UE 3 in a certain way. In the same way, TO 11 is related to ZR 6. To which of the following is IB 8 related, following the same logic?

Ans ✔ 1. OE 3

✘ 2. PF -3

✘ 3. OF 3

✘ 4. PE 3

Question ID : **630680386527**
Option 1 ID : **6306801506818**
Option 2 ID : **6306801506821**
Option 3 ID : **6306801506819**
Option 4 ID : **6306801506820**
Status : **Answered**
Chosen Option : **3**

Q.15 What will come in place of the question mark (?) in the following equation if '+' and '÷' are interchanged and '×' and '−' are interchanged?
21 ÷ 15 × 52 + 13 − 7 = ?

Ans ✘ 1. 10

✘ 2. 7

✔ 3. 8

✘ 4. 12

Question ID : **630680376976**
Option 1 ID : **6306801468970**
Option 2 ID : **6306801468967**
Option 3 ID : **6306801468969**
Option 4 ID : **6306801468968**
Status : **Answered**
Chosen Option : **3**

Q.16 STAR is related to TWCV in a certain way based on the English alphabetical order. In the same way, PARK is related to QDTO. To which of the following is MILK related, following the same logic?

Ans ✗ 1. NLMO

✗ 2. MLNO

✔ 3. NLNO

✗ 4. MLMO

Question ID :	**630680376880**
Option 1 ID :	**6306801468586**
Option 2 ID :	**6306801468584**
Option 3 ID :	**6306801468585**
Option 4 ID :	**6306801468583**
Status :	**Answered**
Chosen Option :	**3**

Q.17 Select the correct mirror image of the given figure when the mirror is placed at MN as shown below.

Ans ✗ 1.

✔ 2.

✗ 3.

✗ 4.

Question ID :	**630680524860**
Option 1 ID :	**6306802051539**
Option 2 ID :	**6306802051540**
Option 3 ID :	**6306802051541**
Option 4 ID :	**6306802051542**
Status :	**Answered**
Chosen Option :	**2**

Q.18 IMPU is related to LPSX in a certain way based on the English alphabetical order. In the same way, BEKN is related to EHNQ. To which of the following is CLQS related, following the same logic?

Ans ✗ 1. IJSH

✔ 2. FOTV

✗ 3. PLNF

✗ 4. ACLK

Question ID :	**630680377696**
Option 1 ID :	**6306801471843**
Option 2 ID :	**6306801471844**
Option 3 ID :	**6306801471845**
Option 4 ID :	**6306801471846**
Status :	**Answered**
Chosen Option :	**2**

Q.19 Select the set in which the numbers are related in the same way as are the numbers of the following sets.
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)
(9, 576, 8)
(7, 252, 6)

Ans ✖ 1. (4, 82, 5)

✖ 2. (8, 650, 10)

✖ 3. (15, 210, 7)

✔ 4. (10, 40, 2)

Question ID : **630680390232**
Option 1 ID : **6306801521373**
Option 2 ID : **6306801521372**
Option 3 ID : **6306801521371**
Option 4 ID : **6306801521370**
Status : **Answered**
Chosen Option : **1**

Q.20 What should come in place of the question mark (?) in the given series based on the English alphabetical order?
INJ, LQM, OTP, RWS, ?

Ans ✖ 1. UVZ

✖ 2. VUZ

✖ 3. VZU

✔ 4. UZV

Question ID : **630680376923**
Option 1 ID : **6306801468756**
Option 2 ID : **6306801468757**
Option 3 ID : **6306801468758**
Option 4 ID : **6306801468755**
Status : **Answered**
Chosen Option : **4**

Q.21 Select the option in which the given figure is embedded (rotation is NOT allowed).

Ans

✗ 1.

✗ 2.

3.

✗ 4.

Question ID :	**630680524478**
Option 1 ID :	**6306802050012**
Option 2 ID :	**6306802050011**
Option 3 ID :	**6306802050014**
Option 4 ID :	**6306802050013**
Status :	**Answered**
Chosen Option :	**3**

Q.22 What should come in place of the question mark (?) in the given series based on the English alphabetical order
KMO, HJL, EGI, BDF, ?

Ans ✗ 1. ZBC

✗ 2. ZAC

✗ 3. YBC

✓ 4. YAC

Question ID :	**630680376901**
Option 1 ID :	**6306801468667**
Option 2 ID :	**6306801468670**
Option 3 ID :	**6306801468668**
Option 4 ID :	**6306801468669**
Status :	**Answered**
Chosen Option :	**4**

Q.23 Jennifer starts from Point D and drives 3 km towards the north. She then takes a left turn and drives 10 km. She then takes another left turn and drives 6 km. She takes one more left turn and drives 5 km. She then takes a right turn and drives 3 km. She takes a final left turn and drives 5 km to reach point E. How far (shortest distance) and towards which direction should she drive in order to reach Point D again? (All turns are 90 degree turns only, unless specified)

Ans ✗ 1. 5 km North

✗ 2. 3 km North

✓ 3. 6 km North

✗ 4. 5 km East

Question ID :	**630680378906**
Option 1 ID :	**6306801476672**
Option 2 ID :	**6306801476671**
Option 3 ID :	**6306801476674**
Option 4 ID :	**6306801476673**
Status :	**Answered**
Chosen Option :	**3**

Q.24 LQKN is related to PUOR in a certain way based on the English alphabetical order. In the same way, INHK is related to MRLO. To which of the following is QVPS related, following the same logic?

Ans ✗ 1. UZWT

✗ 2. WZUT

✓ 3. UZTW

✗ 4. WZTU

Question ID :	**630680376720**
Option 1 ID :	**6306801467945**
Option 2 ID :	**6306801467944**
Option 3 ID :	**6306801467946**
Option 4 ID :	**6306801467943**
Status :	**Answered**
Chosen Option :	**3**

Q.25 In a certain code language,
'A + B' means 'A is the brother of B',
'A − B' means 'A is the mother of B',
'A × B' means 'A is the wife of B' and
'A ÷ B' means 'A is the father of B'.
How is B related to L if 'B × G ÷ T + K − L'?

Ans ✗ 1. Father's father

✗ 2. Sister's daughter

✓ 3. Mother's mother

✗ 4. Brother's daughter

Question ID :	**630680377669**
Option 1 ID :	**6306801471736**
Option 2 ID :	**6306801471738**
Option 3 ID :	**6306801471735**
Option 4 ID :	**6306801471737**
Status :	**Answered**
Chosen Option :	**3**

Q.26 If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+' and 'D' stands for '−', what will come in place of the question mark '?' in the following equation?

10 B 2 D 15 A 3 C 7 = ?

Ans ✓ 1. 22

✗ 2. 20

✗ 3. 21

✗ 4. 24

Question ID :	**630680502794**
Option 1 ID :	**6306801964757**
Option 2 ID :	**6306801964758**
Option 3 ID :	**6306801964759**
Option 4 ID :	**6306801964760**
Status :	**Answered**
Chosen Option :	**1**

Q.27 Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.
Statements: All frames are rocks. All rocks are clips. All clips are towels.
Conclusion (I): All frames are towels.
Conclusion (II): At least some clips are frames.

Ans ✗ 1. Only conclusion (I) follows

✗ 2. Only conclusion (II) follows

✓ 3. Both conclusions (I) and (II) follow

✗ 4. Neither conclusion (I) nor (II) follows

Question ID :	**630680376527**
Option 1 ID :	**6306801467175**
Option 2 ID :	**6306801467176**
Option 3 ID :	**6306801467178**
Option 4 ID :	**6306801467177**
Status :	**Answered**
Chosen Option :	**3**

Q.28 What should come in place of the question mark (?) in the given series?
2, 5, 13, 28, 52, 87, ?

Ans ✗ 1. 98

✓ 2. 135

✗ 3. 107

✗ 4. 130

Question ID :	**630680378757**
Option 1 ID :	**6306801476075**
Option 2 ID :	**6306801476078**
Option 3 ID :	**6306801476076**
Option 4 ID :	**6306801476077**
Status :	**Answered**
Chosen Option :	**2**

Q.29 The position(s) of how many letters will remain unchanged if each of the letters in the word FOREIGN is arranged in the English alphabetical order?

Ans ✓ 1. None

✗ 2. One

✗ 3. Two

✗ 4. Three

Question ID :	**630680404425**
Option 1 ID :	**6306801577200**
Option 2 ID :	**6306801577201**
Option 3 ID :	**6306801577202**
Option 4 ID :	**6306801577203**
Status :	**Answered**
Chosen Option :	**1**

Q.30 Select the option figure in which the given figure is embedded as its part (rotation is NOT allowed).

Ans

✗ 1.

✗ 2.

3.

✗ 4.

Question ID : **630680422243**
Option 1 ID : **6306801647408**
Option 2 ID : **6306801647409**
Option 3 ID : **6306801647410**
Option 4 ID : **6306801647411**
Status : **Answered**
Chosen Option : **3**

Q.31 Select the figure from the options that can replace the question mark (?) and complete the given pattern.

Ans

1.

✗ 2.

✗ 3.

✗ 4.

Question ID : **630680524809**
Option 1 ID : **6306802051337**
Option 2 ID : **6306802051335**
Option 3 ID : **6306802051338**
Option 4 ID : **6306802051336**
Status : **Answered**
Chosen Option : **1**

Q.32 In a certain code language,
A + B means 'A is the sister of B'
A # B means 'A is the brother of B'
A × B means 'A is the wife of B'
A @ B means 'A is the father of B'
Based on the above, how is E related to M if 'E # F × H @ G + M'?

Ans ✗ 1. Mother's father

✗ 2. Father

✓ 3. Mother's brother

✗ 4. Brother

Question ID : **630680376959**
Option 1 ID : **6306801468901**
Option 2 ID : **6306801468899**
Option 3 ID : **6306801468900**
Option 4 ID : **6306801468902**
Status : **Answered**
Chosen Option : **3**

Q.33 In a certain code language, 'SANG' is coded as '3618', and 'RANG' is coded as '6438'.
What is the code for 'S' in that language?

Ans ✗ 1. 8

✗ 2. 6

✓ 3. 1

✗ 4. 3

Question ID : **630680376410**
Option 1 ID : **6306801466710**
Option 2 ID : **6306801466708**
Option 3 ID : **6306801466709**
Option 4 ID : **6306801466707**
Status : **Answered**
Chosen Option : **3**

Q.34 A, B, C, D, E, and F are sitting at a circular table facing the centre (not necessarily in the same order). A is to the immediate left of B, E is third to the right of B, D is to the immediate right of C. F is third to the right of C.
Who are the immediate neighbours of E?
a)A and B
b)B and D
c)D and F
d)F and B

Ans ✗ 1. (d)

✗ 2. (b)

✓ 3. (c)

✗ 4. (a)

Question ID : **630680376401**
Option 1 ID : **6306801466674**
Option 2 ID : **6306801466672**
Option 3 ID : **6306801466673**
Option 4 ID : **6306801466671**
Status : **Answered**
Chosen Option : **3**

Q.35 Select the word-pair that best represents a similar relationship to the one expressed in the pair of words given below.
(The words must be considered as meaningful English words and must not be related to each other based on the number of letters/number of consonants/vowels in the word.)

Mycology : Fungi

Ans ✔ 1. Seismology : Earthquakes

✘ 2. Ornithology : Eggs

✘ 3. Paedology : Planets

✘ 4. Entomology : Birds

Question ID :	**630680556091**
Option 1 ID :	**6306802173740**
Option 2 ID :	**6306802173742**
Option 3 ID :	**6306802173743**
Option 4 ID :	**6306802173741**
Status :	**Answered**
Chosen Option :	**1**

Q.36 What should come in place of the question mark (?) in the given series based on the English alphabetical order?
LXC, OZD, RBE, UDF, ?

Ans ✘ 1. YGH

✘ 2. ZDI

✘ 3. XHJ

✔ 4. XFG

Question ID :	**630680386936**
Option 1 ID :	**6306801508455**
Option 2 ID :	**6306801508456**
Option 3 ID :	**6306801508457**
Option 4 ID :	**6306801508454**
Status :	**Answered**
Chosen Option :	**4**

Q.37 In a certain code language, 'apple is healthy' is written as 'di jl ew' and 'apple is red' is written as 'di ko ew'. How is 'red' written in the given language?

Ans ✘ 1. di

✘ 2. jl

✘ 3. ew

✔ 4. ko

Question ID :	**630680388165**
Option 1 ID :	**6306801513222**
Option 2 ID :	**6306801513225**
Option 3 ID :	**6306801513224**
Option 4 ID :	**6306801513223**
Status :	**Answered**
Chosen Option :	**4**

Q.38

Ans

  ✔ 1. 13

  ✘ 2. 14

  ✘ 3. 11

  ✘ 4. 12

Question ID : **630680524413**
Option 1 ID : **6306802049753**
Option 2 ID : **6306802049754**
Option 3 ID : **6306802049751**
Option 4 ID : **6306802049752**
Status : **Answered**
Chosen Option : **1**

Q.39 What will come in the place of the question mark (?) in the following equation, if '+' and
'×' are interchanged and '−' and '÷' are interchanged?
12 + 4 − 24 × 11 ÷ 13 = ?

Ans ✘ 1. −20

  ✘ 2. 10

  ✔ 3. 0

  ✘ 4. −10

Question ID : **630680377614**
Option 1 ID : **6306801471515**
Option 2 ID : **6306801471518**
Option 3 ID : **6306801471517**
Option 4 ID : **6306801471516**
Status : **Answered**
Chosen Option : **3**

Q.40 What should come in place of the question mark (?) in the given series.
6, 3, 12, 6, 24, ?, 48, 24, 96

Ans ✘ 1. 48

  ✔ 2. 12

  ✘ 3. 6

  ✘ 4. 24

Question ID : **630680379055**
Option 1 ID : **6306801477270**
Option 2 ID : **6306801477269**
Option 3 ID : **6306801477267**
Option 4 ID : **6306801477268**
Status : **Answered**
Chosen Option : **2**

Q.41 In a certain code language, 'HAIR' is coded as '7935' and 'AGED' is coded as '4892'.
What is the code for 'A' in the given language?

Ans ✗ 1. 3

✗ 2. 4

✗ 3. 5

✓ 4. 9

Question ID : **630680376549**
Option 1 ID : **6306801467263**
Option 2 ID : **6306801467266**
Option 3 ID : **6306801467264**
Option 4 ID : **6306801467265**
Status : **Answered**
Chosen Option : **4**

Q.42 What will come in the place of the question mark (?) in the following equation, if '+' and '÷' are interchanged and '×' and '−' are interchanged?
10 + 2 − 10 ÷ 5 × 10 =?

Ans ✗ 1. 40

✓ 2. 45

✗ 3. 35

✗ 4. 32

Question ID : **630680377708**
Option 1 ID : **6306801471892**
Option 2 ID : **6306801471893**
Option 3 ID : **6306801471894**
Option 4 ID : **6306801471891**
Status : **Answered**
Chosen Option : **2**

Q.43 The position(s) of how many letters will remain unchanged if each of the letters in the word STAMPED is arranged in the English alphabetical order?

Ans ✓ 1. Two

✗ 2. Three

✗ 3. Four

✗ 4. One

Question ID : **630680396640**
Option 1 ID : **6306801546652**
Option 2 ID : **6306801546653**
Option 3 ID : **6306801546654**
Option 4 ID : **6306801546655**
Status : **Answered**
Chosen Option : **1**

Q.44 Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusion(s) logically follow(s) from the statements.
Statements: Some cars are grass. All trucks are cars.
Conclusion 1: Some trucks are not cars.
Conclusion 2: Some trucks are grass.

Ans ✔ 1. Neither conclusion 1 nor 2 follows

✘ 2. Only conclusion 1 follows

✘ 3. Only conclusion 2 follows

✘ 4. Both conclusion 1 and 2 follow

Question ID : **630680381042**
Option 1 ID : **6306801485145**
Option 2 ID : **6306801485143**
Option 3 ID : **6306801485144**
Option 4 ID : **6306801485146**
Status : **Answered**
Chosen Option : **1**

Q.45 Select the option in which the numbers share the same relationship as that shared by the given number triads.
120-100-60
240-220-180
(NOTE: Operations should be performed on the whole number, without breaking down the numbers into its constituent digits. E.g. 13- Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is NOT allowed.)

Ans ✘ 1. 220-210-200

✘ 2. 150-160-140

✘ 3. 90-80-75

✔ 4. 200-180-140

Question ID : **630680387173**
Option 1 ID : **6306801509387**
Option 2 ID : **6306801509388**
Option 3 ID : **6306801509389**
Option 4 ID : **6306801509386**
Status : **Answered**
Chosen Option : **4**

Q.46 Select the set in which the numbers are related in the same way as are the numbers of the following sets.
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)
(45, 23, 73)
(19, 27, 51)

Ans ✘ 1. (31, 17, 48)

✘ 2. (22, 29, 52)

✔ 3. (16, 14, 35)

✘ 4. (12, 19, 30)

Question ID : **630680376817**
Option 1 ID : **6306801468333**
Option 2 ID : **6306801468332**
Option 3 ID : **6306801468334**
Option 4 ID : **6306801468331**
Status : **Answered**
Chosen Option : **3**

Q.47 **This question consists of a pair of words which have a certain relationship to each other. Select the pair which has the same relationship.**

(The words must be considered as meaningful English words and must not be related to each other based on the number of letters/number of consonants/vowels in the word.)

Altimeter : Altitudes

Ans ✓ 1. Hygrometer : Humidity

✗ 2. Protractor : Light

✗ 3. Fathometer : Presure

✗ 4. Taseometer : Wind

Question ID : **630680556096**
Option 1 ID : **6306802173761**
Option 2 ID : **6306802173762**
Option 3 ID : **6306802173760**
Option 4 ID : **6306802173763**
Status : **Answered**
Chosen Option : **1**

Q.48 **What should come in place of the question mark (?) in the given series based on the English alphabetical order?**
DMY, BKW, ZIU, XGS, ?

Ans ✗ 1. UDP

✗ 2. UFR

✓ 3. VEQ

✗ 4. WCR

Question ID : **630680382493**
Option 1 ID : **6306801490889**
Option 2 ID : **6306801490888**
Option 3 ID : **6306801490890**
Option 4 ID : **6306801490887**
Status : **Answered**
Chosen Option : **3**

Q.49

Ans ✗ 1. MVT

✓ 2. MUT

✗ 3. MXT

✗ 4. MNT

Question ID : **630680378698**
Option 1 ID : **6306801475839**
Option 2 ID : **6306801475842**
Option 3 ID : **6306801475841**
Option 4 ID : **6306801475840**
Status : **Answered**
Chosen Option : **2**

Q.50 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Select the set in which the numbers are related in the same way as are the numbers of the following sets.
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g., 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)
(6, 34)
(8, 46)

Ans   ✗ 1. (7, 38)

   ✗ 2. (4, 24)

   ✗ 3. (12, 76)

   ✓ 4. (10, 58)

Question ID :	**630680377730**
Option 1 ID :	**6306801471981**
Option 2 ID :	**6306801471982**
Option 3 ID :	**6306801471980**
Option 4 ID :	**6306801471979**
Status :	**Answered**
Chosen Option :	**4**

Section : **General Awareness**

Q.1 To cherish and follow the noble ideals that inspired our national struggle for freedom is a _____ fundamental duty in the list of fundamental duties enshrined in our Indian Constitution.

Ans   ✗ 1. first

   ✓ 2. second

   ✗ 3. third

   ✗ 4. fourth

Question ID :	**630680493470**
Option 1 ID :	**6306801927619**
Option 2 ID :	**6306801927620**
Option 3 ID :	**6306801927621**
Option 4 ID :	**6306801927622**
Status :	**Answered**
Chosen Option :	**3**

Q.2 Who was the leader of the temple entry movement in 1930 at Kalaram temple, Nashik?

Ans   ✗ 1. Swami Achhutanand

   ✗ 2. NG Ranga

   ✗ 3. Mahatma Gandhi

   ✓ 4. Dr. BR Ambedkar

Question ID :	**630680572381**
Option 1 ID :	**6306802238364**
Option 2 ID :	**6306802238365**
Option 3 ID :	**6306802238366**
Option 4 ID :	**6306802238367**
Status :	**Answered**
Chosen Option :	**4**

Q.3 What is the primary focus of the ASPIRE scheme of the Ministry of Micro, Small & Medium Enterprises, Government of India?

Ans ✗ 1. Urban development

✗ 2. Technology innovation

✗ 3. Environmental conservation

✓ 4. Establishment of livelihoods business incubation centres

Question ID : **630680488098**
Option 1 ID : **6306801906451**
Option 2 ID : **6306801906452**
Option 3 ID : **6306801906453**
Option 4 ID : **6306801906454**
Status : **Answered**
Chosen Option : **4**

Q.4 Who said "a cherry that will drop into our mouth one day" about the kingdom of Awadh?

Ans ✗ 1. Lord Lytton

✗ 2. Lord Curzon

✗ 3. Lord Mountbatten

✓ 4. Lord Dalhousie

Question ID : **630680511542**
Option 1 ID : **6306801999292**
Option 2 ID : **6306801999290**
Option 3 ID : **6306801999293**
Option 4 ID : **6306801999291**
Status : **Answered**
Chosen Option : **4**

Q.5 Who among the following musicians received the Padma Bhushan Award 2022 for his contributions in the field of art?

Ans ✓ 1. Rashid Khan

✗ 2. Madan Singh Chauhan

✗ 3. Manilal Nag

✗ 4. Chhannulal Mishra

Question ID : **630680701418**
Option 1 ID : **6306802747612**
Option 2 ID : **6306802747610**
Option 3 ID : **6306802747609**
Option 4 ID : **6306802747611**
Status : **Answered**
Chosen Option : **1**

Q.6 Match the following states with their percentage urban population in India, as per Census 2011.

i) Kerala a) 10.04%
ii) Madhya Pradesh b) 47.72%
iii) Tamil Nadu c) 27.63%
iv) Himachal Pradesh d) 48.45%

Ans ✗ 1. i) d, ii) c, iii) b, iv) a

✗ 2. i) a, ii) d, iii) c, iv) b

✗ 3. i) a, ii) b, iii) c, iv) d

✓ 4. i) b, ii) c, iii) d, iv) a

Question ID : **630680488637**
Option 1 ID : **6306801908567**
Option 2 ID : **6306801908568**
Option 3 ID : **6306801908569**
Option 4 ID : **6306801908570**
Status : **Answered**
Chosen Option : **1**

Q.7 The valency of Ca is 2^+. The valency of O is 2^-. What is the simplified chemical formula of Calcium oxide?

Ans ✗ 1. Ca_2O_2

✓ 2. CaO

✗ 3. CaO_2

✗ 4. Ca_2O

Question ID : **630680401862**
Option 1 ID : **6306801567218**
Option 2 ID : **6306801567219**
Option 3 ID : **6306801567220**
Option 4 ID : **6306801567221**
Status : **Answered**
Chosen Option : **2**

Q.8 Arachnids belong to which subphylum of the phylum Arthropoda?

Ans ✗ 1. Crustacea

✗ 2. Hexapoda

✓ 3. Chelicerata

✗ 4. Myriapoda

Question ID : **630680540420**
Option 1 ID : **6306802112768**
Option 2 ID : **6306802112770**
Option 3 ID : **6306802112767**
Option 4 ID : **6306802112769**
Status : **Answered**
Chosen Option : **4**

Q.9 Which of the following values is subtracted from the numerical value of temperature expressed in Kelvin to obtain the temperature in degrees Celsius?

Ans ✗ 1. 293

✓ 2. 273

✗ 3. 253

✗ 4. 313

Question ID : **630680403022**
Option 1 ID : **6306801571661**
Option 2 ID : **6306801571660**
Option 3 ID : **6306801571659**
Option 4 ID : **6306801571662**
Status : **Answered**
Chosen Option : **2**

Q.10 Identify the INCORRECT pair (railway zone and headquarters) from the following.

Ans ✗ 1. North Western Railway Zone – Jaipur

✗ 2. South Western Railway Zone – Hubli

✓ 3. Central Railway Zone – Kolkata

✗ 4. South-East Central Railway Zone – Bilaspur

Question ID : **630680510977**
Option 1 ID : **6306801997039**
Option 2 ID : **6306801997040**
Option 3 ID : **6306801997038**
Option 4 ID : **6306801997041**
Status : **Answered**
Chosen Option : **3**

Q.11 Which compound is used to neutralise fatty acids and convert them into salts in a process called saponification?

Ans ✓ 1. Sodium hydroxide

✗ 2. Sodium acetate

✗ 3. Sodium chlorate

✗ 4. Sodium fluoride

Question ID : **630680403012**
Option 1 ID : **6306801571620**
Option 2 ID : **6306801571619**
Option 3 ID : **6306801571622**
Option 4 ID : **6306801571621**
Status : **Answered**
Chosen Option : **1**

Q.12 Sange Meel Se Mulaqat is a documentary on the life of _____, directed by Gautam Ghosh.

Ans ✗ 1. Pandit Ram Narayan

✓ 2. Pandit Bismillah Khan

✗ 3. Pandit Biswajit Roy Chowdhury

✗ 4. Pandit Bhimsen Joshi

Question ID : **630680701402**
Option 1 ID : **6306802747546**
Option 2 ID : **6306802747548**
Option 3 ID : **6306802747547**
Option 4 ID : **6306802747545**
Status : **Answered**
Chosen Option : **1**

Q.13 **Which of the following sentences is/are correct?**
i. According to the Census of India 2011, the total population of India is 141 crores.
ii. Between 1911 and 1921, there was a negative rate of growth of India's population.
iii. Between 1901 and 1951, the average annual growth of India's population did not exceed 1.33%.

Ans ✗ 1. Only i and ii

✗ 2. Only i and iii

✗ 3. Only i

✓ 4. Only ii and iii

Question ID : **630680488238**
Option 1 ID : **6306801907011**
Option 2 ID : **6306801907012**
Option 3 ID : **6306801907013**
Option 4 ID : **6306801907014**
Status : **Answered**
Chosen Option : **4**

Q.14 **How do estuaries serve as critical habitats for various species?**

Ans ✗ 1. Estuaries have no ecological significance.

✓ 2. Estuaries provide breeding grounds and nurseries for marine organisms.

✗ 3. Estuaries contribute to desertification.

✗ 4. Estuaries are only important for recreational activities.

Question ID : **630680615281**
Option 1 ID : **6306802407798**
Option 2 ID : **6306802407799**
Option 3 ID : **6306802407800**
Option 4 ID : **6306802407801**
Status : **Answered**
Chosen Option : **2**

Q.15 **Who was elected as the 16th Speaker of the Himachal Pradesh Legislative Assembly in January 2023?**

Ans ✓ 1. Kuldeep Singh Pathania

✗ 2. Anurag Thakur

✗ 3. Jai Ram Thakur

✗ 4. Suresh Bhardwaj

Question ID : **630680804277**
Option 1 ID : **6306803150840**
Option 2 ID : **6306803150841**
Option 3 ID : **6306803150839**
Option 4 ID : **6306803150842**
Status : **Answered**
Chosen Option : **1**

Q.16 The particles that form the main part of the nucleus of an atom are together known as:

Ans ✘ 1. ions

✘ 2. electrons

✔ 3. nucleons

✘ 4. isotopes

Question ID : **630680401910**
Option 1 ID : **6306801567387**
Option 2 ID : **6306801567386**
Option 3 ID : **6306801567389**
Option 4 ID : **6306801567388**
Status : **Answered**
Chosen Option : **3**

Q.17 The office of the Registrar General and Census Commissioner works under which Ministry of Government of India?

Ans ✘ 1. Ministry of Finance

✘ 2. Ministry of Personnel, Public Grievances and Pensions

✔ 3. Ministry of Home Affairs

✘ 4. Ministry of Social Justice and Empowerment

Question ID : **630680477183**
Option 1 ID : **6306801863901**
Option 2 ID : **6306801863902**
Option 3 ID : **6306801863903**
Option 4 ID : **6306801863904**
Status : **Answered**
Chosen Option : **1**

Q.18 When was Swami Vivekananda born?

Ans ✘ 1. 12 January 1866

✘ 2. 12 January 1859

✔ 3. 12 January 1863

✘ 4. 12 January 1853

Question ID : **630680511596**
Option 1 ID : **6306801999509**
Option 2 ID : **6306801999507**
Option 3 ID : **6306801999508**
Option 4 ID : **6306801999506**
Status : **Answered**
Chosen Option : **1**

Q.19 Which are the two major branches of the southwest monsoon in India?

Ans ✔ 1. The Arabian Sea branch and the Bay of Bengal branch

✘ 2. The Arabian Sea branch and the Tibetan plateau branch

✘ 3. The Himalayan Mountain branch and the Gulf of Mannar branch

✘ 4. The Tibetan plateau branch and the Bay of Bengal branch

Question ID : **630680510958**
Option 1 ID : **6306801996962**
Option 2 ID : **6306801996963**
Option 3 ID : **6306801996965**
Option 4 ID : **6306801996964**
Status : **Answered**
Chosen Option : **1**

Q.20 What is the SI unit of force?

Ans ✗ 1. Watt

✗ 2. Joule

✗ 3. Volt

✓ 4. Newton

Question ID : **630680407778**
Option 1 ID : **6306801590051**
Option 2 ID : **6306801590050**
Option 3 ID : **6306801590052**
Option 4 ID : **6306801590053**
Status : **Answered**
Chosen Option : **4**

Q.21 If an earthquake happens at the sea floor and one tectonic plate dips under the another, this will most probably lead to a natural disaster known as:

Ans ✗ 1. Typhoon

✗ 2. Tornado

✓ 3. Tsunami

✗ 4. Cyclone

Question ID : **630680546842**
Option 1 ID : **6306802137938**
Option 2 ID : **6306802137937**
Option 3 ID : **6306802137935**
Option 4 ID : **6306802137936**
Status : **Answered**
Chosen Option : **3**

Q.22 Which of the following committees was responsible for making recommendations that led to the 42nd Constitutional Amendment for the declaration of Fundamental Duties?

Ans ✓ 1. Swaran Singh Committee

✗ 2. Abid Hussain Committee

✗ 3. Khusro Committee

✗ 4. Raja Chelliah Committee

Question ID : **630680618079**
Option 1 ID : **6306802418621**
Option 2 ID : **6306802418622**
Option 3 ID : **6306802418623**
Option 4 ID : **6306802418624**
Status : **Answered**
Chosen Option : **1**

Q.23 The government of which of the following states launched the 'Nand Baba Milk Mission' scheme in June 2023?

Ans ✗ 1. Bihar

✗ 2. Madhya Pradesh

✗ 3. Himachal Pradesh

✔ 4. Uttar Pradesh

Question ID : **630680513786**
Option 1 ID : **6306802007772**
Option 2 ID : **6306802007770**
Option 3 ID : **6306802007771**
Option 4 ID : **6306802007769**
Status : **Answered**
Chosen Option : **2**

Q.24 In 1800, which of the following experimental achievements was made by William Nicholson?

Ans ✔ 1. Discovery of water electrolysis

✗ 2. Discovery of thermionic emission

✗ 3. Discovery of electric bulb

✗ 4. Discovery of low-cost filters for polarizing light

Question ID : **630680402063**
Option 1 ID : **6306801567951**
Option 2 ID : **6306801567953**
Option 3 ID : **6306801567950**
Option 4 ID : **6306801567952**
Status : **Answered**
Chosen Option : **1**

Q.25 Which of the following is a heart-related disease?

Ans ✗ 1. Acromegaly

✗ 2. Diabetes

✗ 3. Goiter

✔ 4. Angina

Question ID : **630680544738**
Option 1 ID : **6306802129715**
Option 2 ID : **6306802129714**
Option 3 ID : **6306802129716**
Option 4 ID : **6306802129717**
Status : **Answered**
Chosen Option : **1**

Q.26 What is the primary function of the Golgi apparatus?

Ans   ✗ 1. Lipid production

    ✓ 2. Sorting and packaging of cellular products

    ✗ 3. Cellular respiration

    ✗ 4. Protein synthesis

Question ID : **630680540550**
Option 1 ID : **6306802113276**
Option 2 ID : **6306802113277**
Option 3 ID : **6306802113278**
Option 4 ID : **6306802113275**
Status : **Answered**
Chosen Option : **2**

Q.27 Which of the following is the shortcut key to create a new paragraph in MS Word?

Ans   ✗ 1. Ctrl + N

    ✗ 2. Ctrl + P

    ✓ 3. Enter

    ✗ 4. Shift + Enter

Question ID : **630680571752**
Option 1 ID : **6306802235916**
Option 2 ID : **6306802235917**
Option 3 ID : **6306802235918**
Option 4 ID : **6306802235919**
Status : **Answered**
Chosen Option : **3**

Q.28 Which of the following is/are a gymnosperm?

Ans   ✗ 1. Mosses

    ✗ 2. Fern

    ✗ 3. Rose

    ✓ 4. Cycas

Question ID : **630680542129**
Option 1 ID : **6306802119459**
Option 2 ID : **6306802119460**
Option 3 ID : **6306802119458**
Option 4 ID : **6306802119457**
Status : **Answered**
Chosen Option : **2**

Q.29 Which of the following is the correct option for using 'justify' alignment to a paragraph in a document?

Ans   ✗ 1. Aligns text only to the left

    ✗ 2. Aligns text only to the right

    ✓ 3. Aligns text to both left and right edges

    ✗ 4. Align text in the center

Question ID : **630680571762**
Option 1 ID : **6306802235952**
Option 2 ID : **6306802235953**
Option 3 ID : **6306802235954**
Option 4 ID : **6306802235955**
Status : **Answered**
Chosen Option : **3**

Q.30 Which of the following Ministers introduced the Central Goods and Services Tax (Amendment) Bill 2023 and the Integrated Goods and Services Tax (Amendment) Bill 2023 in the Lok Sabha?

Ans ✓ 1. Nirmala Sitharaman

✗ 2. Harpal Singh

✗ 3. Bikram Keshari Arukha

✗ 4. Manohar Lal Khattar

Question ID : **630680469607**
Option 1 ID : **6306801834191**
Option 2 ID : **6306801834192**
Option 3 ID : **6306801834193**
Option 4 ID : **6306801834194**
Status : **Answered**
Chosen Option : **1**

Q.31 Which of the following bacterial infections often affects the lungs?

Ans ✓ 1. Tuberculosis

✗ 2. Herpes

✗ 3. Meningitis

✗ 4. Influenza

Question ID : **630680404156**
Option 1 ID : **6306801576110**
Option 2 ID : **6306801576111**
Option 3 ID : **6306801576112**
Option 4 ID : **6306801576113**
Status : **Answered**
Chosen Option : **1**

Q.32 Which Chief Justice of India was sworn in as the acting President of India on 20th July 1969?

Ans ✗ 1. Justice Harilal Jekisundas Kania

✗ 2. Justice M Patanjali Sastri

✗ 3. Justice Sudhi Ranjan Das

✓ 4. Justice Mohammad Hidayatullah

Question ID : **630680407827**
Option 1 ID : **6306801590246**
Option 2 ID : **6306801590247**
Option 3 ID : **6306801590248**
Option 4 ID : **6306801590249**
Status : **Answered**
Chosen Option : **4**

Q.33 _____ is referred to as paper taxes.

Ans ✓ 1. Gift tax

✗ 2. Corporation tax

✗ 3. Customs duty

✗ 4. Excise tax

Question ID : **630680402051**
Option 1 ID : **6306801567904**
Option 2 ID : **6306801567905**
Option 3 ID : **6306801567906**
Option 4 ID : **6306801567907**
Status : **Answered**
Chosen Option : **3**

Q.34 **Name the scheme launched by the Prime Minister on 17 September 2023 that aims to improve the lives of artisans.**

Ans ✔ 1. PM Vishwakarma

✘ 2. PM Shilpgram

✘ 3. PM Anantakalpaaya

✘ 4. PM Kalashi

Question ID : **630680411164**
Option 1 ID : **6306801603412**
Option 2 ID : **6306801603413**
Option 3 ID : **6306801603414**
Option 4 ID : **6306801603415**
Status : **Answered**
Chosen Option : **1**

Q.35 **Name the first Finance Minister of independent India, whose statue was inaugurated by the Union Textiles Minister in Coimbatore .**

Ans ✔ 1. RK Shanmugam Chetty

✘ 2. CD Deshmukh

✘ 3. TT Krishnamachari

✘ 4. Sachindra Chaudhuri

Question ID : **630680412664**
Option 1 ID : **6306801609479**
Option 2 ID : **6306801609480**
Option 3 ID : **6306801609481**
Option 4 ID : **6306801609482**
Status : **Answered**
Chosen Option : **2**

Q.36 **Which of the following is a macronutrient?**

Ans ✘ 1. Vitamins

✔ 2. Carbohydrates

✘ 3. Minerals

✘ 4. Antioxidants

Question ID : **630680411618**
Option 1 ID : **6306801605307**
Option 2 ID : **6306801605308**
Option 3 ID : **6306801605309**
Option 4 ID : **6306801605310**
Status : **Answered**
Chosen Option : **2**

Q.37 **It is a fact that if you drink from a plastic bottle and throw it in the dustbin, it will still be there when your grandchildren are old. What is the reason behind this?**

Ans ✘ 1. Plastics are biodegradable.

✘ 2. Plastics are radioactive.

✔ 3. Plastics are non-biodegradable.

✘ 4. Plastics are heavy metals.

Question ID : **630680403334**
Option 1 ID : **6306801572845**
Option 2 ID : **6306801572846**
Option 3 ID : **6306801572847**
Option 4 ID : **6306801572848**
Status : **Answered**
Chosen Option : **3**

Q.38 Which of the following articles of the Constitution of India provides measures to ensure the enforcement of Fundamental Rights?

Ans ✔ 1. Article 32

✘ 2. Article 19

✘ 3. Article 14

✘ 4. Article 29

Question ID : **630680511439**
Option 1 ID : **6306801998889**
Option 2 ID : **6306801998887**
Option 3 ID : **6306801998886**
Option 4 ID : **6306801998888**
Status : **Answered**
Chosen Option : **1**

Q.39 Private income minus tax payment minus non-tax payment will give us the estimate for _____.

Ans ✘ 1. private income

✘ 2. gross income

✔ 3. personal disposable income

✘ 4. national income

Question ID : **630680512477**
Option 1 ID : **6306802002879**
Option 2 ID : **6306802002880**
Option 3 ID : **6306802002878**
Option 4 ID : **6306802002881**
Status : **Answered**
Chosen Option : **3**

Q.40 Who introduced the Anusandhan National Research Foundation Bill, 2023, in the Lok Sabha?

Ans ✔ 1. Dr. Jitender Singh

✘ 2. Gopal Rai

✘ 3. Imran Hussain

✘ 4. Piyush Goyal

Question ID : **630680469598**
Option 1 ID : **6306801834155**
Option 2 ID : **6306801834156**
Option 3 ID : **6306801834157**
Option 4 ID : **6306801834158**
Status : **Answered**
Chosen Option : **1**

Q.41 Narmada Bachao Andolan (Save Narmada Movement) is a/an _____.

Ans ✔ 1. Social movement

✘ 2. forest conservation movement

✘ 3. government initiative

✘ 4. project of Jal Shakti Ministry

Question ID : **630680564468**
Option 1 ID : **6306802206804**
Option 2 ID : **6306802206805**
Option 3 ID : **6306802206803**
Option 4 ID : **6306802206806**
Status : **Answered**
Chosen Option : **1**

Q.42 You grew a small plant in a planter. On maturity, you observed that the plant has green stem, very few branches and the stem is so soft that you could easily break it with your hands. Under which category will you put this plant?

Ans ✖ 1. Tree

✖ 2. Creeper

✖ 3. Shrub

✔ 4. Herb

Question ID : **630680403058**
Option 1 ID : **6306801571801**
Option 2 ID : **6306801571802**
Option 3 ID : **6306801571803**
Option 4 ID : **6306801571804**
Status : **Answered**
Chosen Option : **4**

Q.43 Who among the following is the author of the book published in December 2021, 'The Monk Who Transformed Uttar Pradesh'?

Ans ✖ 1. Yashika Dutta

✔ 2. Shantanu Gupta

✖ 3. Shashi Tharoor

✖ 4. Amish Tripathi

Question ID : **630680394949**
Option 1 ID : **6306801540065**
Option 2 ID : **6306801540064**
Option 3 ID : **6306801540067**
Option 4 ID : **6306801540066**
Status : **Answered**
Chosen Option : **1**

Q.44 The total number of bishops in a chess game is _____.

Ans ✖ 1. one

✖ 2. two

✖ 3. three

✔ 4. four

Question ID : **630680430544**
Option 1 ID : **6306801680197**
Option 2 ID : **6306801680198**
Option 3 ID : **6306801680199**
Option 4 ID : **6306801680200**
Status : **Answered**
Chosen Option : **4**

Q.45 In plant cells, which organelle is responsible for photosynthesis?

Ans ✔ 1. Chloroplast

✖ 2. Mitochondrion

✖ 3. Lysosome

✖ 4. Peroxisome

Question ID : **630680411646**
Option 1 ID : **6306801605419**
Option 2 ID : **6306801605420**
Option 3 ID : **6306801605421**
Option 4 ID : **6306801605422**
Status : **Answered**
Chosen Option : **1**

Q.46 Olympic medalist Vijender Singh belongs to which State of India?

Ans ❌ 1. Punjab

❌ 2. Delhi

✅ 3. Haryana

❌ 4. Maharashtra

Question ID : **630680435739**
Option 1 ID : **6306801700873**
Option 2 ID : **6306801700874**
Option 3 ID : **6306801700875**
Option 4 ID : **6306801700876**
Status : **Answered**
Chosen Option : **3**

Q.47 Which of the following places receives rainfall from the Bay of Bengal branch of southwest monsoon?

Ans ❌ 1. Ratnagiri

✅ 2. Kolkata

❌ 3. Surat

❌ 4. Panaji

Question ID : **630680511048**
Option 1 ID : **6306801997323**
Option 2 ID : **6306801997322**
Option 3 ID : **6306801997325**
Option 4 ID : **6306801997324**
Status : **Answered**
Chosen Option : **2**

Q.48 During which years did Khalji dynasty ruled over Delhi?

Ans ❌ 1. 1451 - 1526

❌ 2. 1414 - 1451

❌ 3. 1320 - 1414

✅ 4. 1290 - 1320

Question ID : **630680511634**
Option 1 ID : **6306801999661**
Option 2 ID : **6306801999660**
Option 3 ID : **6306801999659**
Option 4 ID : **6306801999658**
Status : **Answered**
Chosen Option : **3**

Q.49 The National Defense Fund is governed by an Executive Committee, which is chaired by the:

Ans ❌ 1. President

✅ 2. Prime Minister

❌ 3. Vice President

❌ 4. Defence Minister

Question ID : **630680493649**
Option 1 ID : **6306801928324**
Option 2 ID : **6306801928325**
Option 3 ID : **6306801928326**
Option 4 ID : **6306801928327**
Status : **Answered**
Chosen Option : **2**

Q.50 Which organelle contains enzymes for digesting cellular waste and foreign materials?

Ans ✗ 1. Nucleus

✗ 2. Mitochondrion

✓ 3. Lysosome

✗ 4. Vacuole

Question ID : **630680411632**
Option 1 ID : **6306801605363**
Option 2 ID : **6306801605364**
Option 3 ID : **6306801605365**
Option 4 ID : **6306801605366**
Status : **Answered**
Chosen Option : **3**

Section : **General Engineering Mechanical**

Q.1 In the vapour compression refrigeration cycle with dry saturated vapour after compression, the entropy at the end of compression is the same as the _____.

Ans ✗ 1. entropy at the end of condensation

✓ 2. entropy at the end of evaporation

✗ 3. entropy at the end of expansion

✗ 4. entropy at the start of expansion

Question ID : **630680506398**
Option 1 ID : **6306801979105**
Option 2 ID : **6306801979107**
Option 3 ID : **6306801979106**
Option 4 ID : **6306801979108**
Status : **Answered**
Chosen Option : **2**

Q.2 In which of the following compressors, the top cover is bolted to the compressor housing instead of the welded steel shell?

Ans ✓ 1. Semi-hermetic sealed compressor

✗ 2. Hermetic sealed compressor

✗ 3. Axial compressor

✗ 4. Open compressor

Question ID : **630680506436**
Option 1 ID : **6306801979258**
Option 2 ID : **6306801979257**
Option 3 ID : **6306801979260**
Option 4 ID : **6306801979259**
Status : **Answered**
Chosen Option : **4**

Q.3 Which of the following impellers are best suited to medium sized pumps with a small amount of soft solids?

Ans ✔ 1. Semi-open impellers

✘ 2. Closed impellers

✘ 3. Semi-closed impellers

✘ 4. Open impellers

Question ID : **630680508726**
Option 1 ID : **6306801988207**
Option 2 ID : **6306801988205**
Option 3 ID : **6306801988206**
Option 4 ID : **6306801988204**
Status : **Answered**
Chosen Option : **2**

Q.4 The given figure shows the p-V diagram of:

Ans ✘ 1. vapour absorption refrigeration system

✘ 2. aircraft refrigeration system

✘ 3. Electrolux refrigeration system

✔ 4. vapour compression refrigeration system

Question ID : **630680332164**
Option 1 ID : **6306801292102**
Option 2 ID : **6306801292104**
Option 3 ID : **6306801292103**
Option 4 ID : **6306801292101**
Status : **Answered**
Chosen Option : **4**

Q.5 Calculate the polar moment of inertia and the maximum torque transmitted by a solid shaft of diameter 100 mm and length 1.0 m. Let the angle of twist be 2° and the modulus of rigidity, G = 80 GPa.

Ans

✗ 1.

✗ 2.

✓ 3.

✗ 4.

Question ID : **630680205982**
Option 1 ID : **630680798731**
Option 2 ID : **630680798734**
Option 3 ID : **630680798733**
Option 4 ID : **630680798732**
Status : **Answered**
Chosen Option : **3**

Q.6 Which of the following is the assumption of Air Standard Cycles?

Ans ✗ 1. The working medium is assumed to be a real gas

✗ 2. Heat is assumed to be supplied from chemical reactions during the cycle

✓ 3. Some heat is assumed to be rejected to a constant low temperature sink

✗ 4. The working medium has variable specific heat with varying temperature

Question ID : **630680502664**
Option 1 ID : **6306801964238**
Option 2 ID : **6306801964239**
Option 3 ID : **6306801964241**
Option 4 ID : **6306801964240**
Status : **Answered**
Chosen Option : **3**

Q.7 Which of the following is the effect of frictional resistance to the flow of the steam jet over the blade in steam turbines?

Ans ✓ 1. The velocity of flow at the outlet to the moving blade is less than that of flow at the inlet to the moving blade.

✗ 2. The velocity of flow at the outlet to the moving blade is equal to that of flow at the inlet to the moving blade.

✗ 3. The velocity of flow at the outlet to the moving blade is greater than that of flow at the inlet to the moving blade.

✗ 4. There is no effect of frictional resistance to the flow of the steam jet over the blade.

Question ID : **630680502687**
Option 1 ID : **6306801964331**
Option 2 ID : **6306801964330**
Option 3 ID : **6306801964332**
Option 4 ID : **6306801964333**
Status : **Answered**
Chosen Option : **1**

Q.8

Determine the stress induced in the steel bars of reinforced concrete structure, if the modular ratio for steel and concrete is 14.5 and the stress applied on the concrete is 2.5 MPa.

Ans
✗ 1. 42.75 MPa

✗ 2. 30.25 MPa

✗ 3. 24.50 MPa

✔ 4. 36.25 MPa

Question ID :	**630680327982**
Option 1 ID :	**6306801275899**
Option 2 ID :	**6306801275900**
Option 3 ID :	**6306801275898**
Option 4 ID :	**6306801275897**
Status :	**Answered**
Chosen Option :	**4**

Q.9 Under which of the following conditions does the Francis turbine operate?

Ans
✔ 1. Medium head and medium discharge

✗ 2. High head and high discharge

✗ 3. High head and low discharge

✗ 4. Low head and high discharge

Question ID :	**630680193066**
Option 1 ID :	**630680748802**
Option 2 ID :	**630680748804**
Option 3 ID :	**630680748801**
Option 4 ID :	**630680748803**
Status :	**Answered**
Chosen Option :	**1**

Q.10 The function of a halide torch is:

Ans
✗ 1. superheating the vapour refrigerant

✗ 2. defrosting of the cooling coil

✗ 3. facilitating better lubrication in the refrigerator

✔ 4. detecting leakage of the refrigerant

Question ID :	**630680506409**
Option 1 ID :	**6306801979150**
Option 2 ID :	**6306801979149**
Option 3 ID :	**6306801979151**
Option 4 ID :	**6306801979152**
Status :	**Answered**
Chosen Option :	**4**

Q.11 If N is the speed of the compressor in RPM, then what will be the isentropic power for a double acting compressor? Where W = work required by the compressor.

Ans ✗ 1. WN/60

✗ 2. WN/2

✓ 3. 2WN/60

✗ 4. WN

Question ID : **630680506433**
Option 1 ID : **6306801979246**
Option 2 ID : **6306801979248**
Option 3 ID : **6306801979247**
Option 4 ID : **6306801979245**
Status : **Answered**
Chosen Option : **3**

Q.12 In a hot working process, metals are deformed _____.

Ans ✗ 1. at their recrystallisation temperature

✓ 2. above their recrystallisation temperature

✗ 3. below their recrystallisation temperature

✗ 4. at any recrystallisation temperature

Question ID : **630680503239**
Option 1 ID : **6306801966543**
Option 2 ID : **6306801966541**
Option 3 ID : **6306801966542**
Option 4 ID : **6306801966544**
Status : **Answered**
Chosen Option : **2**

Q.13 For the laminar flow through circular pipes, shear stress distribution across a section is _____ .

Ans ✗ 1. parabolic

✗ 2. cubic

✗ 3. logarithmic

✓ 4. linear

Question ID : **630680193038**
Option 1 ID : **630680748690**
Option 2 ID : **630680748692**
Option 3 ID : **630680748691**
Option 4 ID : **630680748689**
Status : **Answered**
Chosen Option : **1**

Q.14 Which of the following statements is true about an SI engine in comparison to a CI engine?

Ans ✗ 1. The compression ratio is comparatively high.

✓ 2. The operating speed is very high.

✗ 3. The cost of running is comparatively low.

✗ 4. The air-fuel ratio is high.

Question ID : **630680502709**
Option 1 ID : **6306801964419**
Option 2 ID : **6306801964420**
Option 3 ID : **6306801964421**
Option 4 ID : **6306801964418**
Status : **Answered**
Chosen Option : **2**

Q.15 Which of the following statements is true about the fuel feed pump used for diesel engines?

Ans ✔ 1. It is a spring-loaded, plunger type reciprocating pump.

✘ 2. It is a centrifugal type pump.

✘ 3. When the plunger of the feed pump is lifted upwards, the inlet valve remains open. Therefore, it is not suitable to inject fuel at that time.

✘ 4. The plunger of the fuel feed pump is actuated by the governor.

Question ID : **630680502732**
Option 1 ID : **6306801964512**
Option 2 ID : **6306801964510**
Option 3 ID : **6306801964513**
Option 4 ID : **6306801964511**
Status : **Answered**
Chosen Option : **4**

Q.16 When the compressor and motor operate on the same shaft and are enclosed in a common casing, they are known as _____.

Ans ✘ 1. reciprocating compressors

✘ 2. centrifugal compressors

✔ 3. hermetic sealed compressors

✘ 4. axial compressors

Question ID : **630680506440**
Option 1 ID : **6306801979273**
Option 2 ID : **6306801979274**
Option 3 ID : **6306801979275**
Option 4 ID : **6306801979276**
Status : **Answered**
Chosen Option : **3**

Q.17 When the fluid pressure is measured above the absolute zero pressure, the measured pressure is known as _____ .

Ans ✘ 1. vacuum pressure

✔ 2. absolute pressure

✘ 3. atmospheric pressure

✘ 4. gauge pressure

Question ID : **630680193056**
Option 1 ID : **630680748764**
Option 2 ID : **630680748762**
Option 3 ID : **630680748761**
Option 4 ID : **630680748763**
Status : **Answered**
Chosen Option : **2**

Q.18 Which of the following factors is taken into consideration when determining the maximum suction height of a centrifugal pump?

Ans ✗ 1. Manometric efficiency

✗ 2. Priming

✗ 3. Mechanical efficiency

✓ 4. Cavitation

Question ID : **630680193035**
Option 1 ID : **630680748679**
Option 2 ID : **630680748677**
Option 3 ID : **630680748680**
Option 4 ID : **630680748678**
Status : **Answered**
Chosen Option : **1**

Q.19 Which of the following statements is true about quantity governing?

Ans ✗ 1. Due to quantity governing, the engine efficiency is altered.

✗ 2. The compression ratio varies with charge supplied.

✓ 3. The mixture strength remains the same with variation in the speed of the engine.

✗ 4. This method is mostly preferred for diesel engines.

Question ID : **630680502681**
Option 1 ID : **6306801964309**
Option 2 ID : **6306801964308**
Option 3 ID : **6306801964306**
Option 4 ID : **6306801964307**
Status : **Answered**
Chosen Option : **4**

Q.20 Which of the following is the correct designation of the refrigerant CCl_3F?

Ans ✓ 1. R 11

✗ 2. R 21

✗ 3. R 12

✗ 4. R 22

Question ID : **630680506454**
Option 1 ID : **6306801979329**
Option 2 ID : **6306801979331**
Option 3 ID : **6306801979330**
Option 4 ID : **6306801979332**
Status : **Answered**
Chosen Option : **3**

Q.21 Which of the following statements is true about hit and miss governing?

Ans ✗ 1. It increases the efficiency of engine.

✗ 2. It is a suitable governing method for heavy IC engines.

✗ 3. In this method of governing, none of the cycles should be idle throughout the running of engine.

✓ 4. This method of governing requires higher weight of flywheel.

Question ID : **630680502674**
Option 1 ID : **6306801964279**
Option 2 ID : **6306801964278**
Option 3 ID : **6306801964281**
Option 4 ID : **6306801964280**
Status : **Answered**
Chosen Option : **2**

Q.22 A cantilever beam of length 2 m is subjected to a point load of 3 kN at a distance of 2 m and is subjected to a UDL of 3 kN/m for a total distance of 1.5 m from the fixed end. Calculate the shear force and bending moment at the fixed end.

Ans ✗ 1. −12.5 kN, −8.547 kN-m

✓ 2. −7.5 kN, −9.375 kN-m

✗ 3. −10 kN, 15.254 kN-m

✗ 4. −5.75 kN, −5.545 kN-m

Question ID :	**630680205958**
Option 1 ID :	**630680798638**
Option 2 ID :	**630680798635**
Option 3 ID :	**630680798636**
Option 4 ID :	**630680798637**
Status :	**Answered**
Chosen Option :	**2**

Q.23 The heat rejection in Stirling cycle takes place at:

Ans ✗ 1. constant pressure

✓ 2. constant temperature

✗ 3. constant enthalpy

✗ 4. constant volume

Question ID :	**630680412680**
Option 1 ID :	**6306801609544**
Option 2 ID :	**6306801609545**
Option 3 ID :	**6306801609546**
Option 4 ID :	**6306801609543**
Status :	**Answered**
Chosen Option :	**4**

Q.24 Which of the following is correct for Pelton wheel?
Where, α & β = guide blade angle at inlet and outlet, respectively
Θ & φ = vane angle at inlet and outlet, respectively

Ans ✗ 1. β =0° and φ = 0°

✗ 2. α =0° and β = 0°

✗ 3. α =0° and φ = 0°

✓ 4. α =0° and Θ = 0°

Question ID :	**630680508732**
Option 1 ID :	**6306801988229**
Option 2 ID :	**6306801988230**
Option 3 ID :	**6306801988228**
Option 4 ID :	**6306801988231**
Status :	**Answered**
Chosen Option :	**1**

Q.25 'No slip condition' at a fixed surface is applicable to the flow of which type of fluids?

Ans ✔ 1. All real fluids

✘ 2. Only ideal fluids

✘ 3. All non-Newtonian fluids

✘ 4. Only Newtonian fluids

Question ID : **630680508717**
Option 1 ID : **6306801988170**
Option 2 ID : **6306801988171**
Option 3 ID : **6306801988169**
Option 4 ID : **6306801988168**
Status : **Answered**
Chosen Option : **4**

Q.26 Which of the following claims about the irreversibility of a system is true?

Ans ✘ 1. Irreversible processes violate the zeroth law of thermodynamics.

✘ 2. Irreversible processes violate the first law of thermodynamics.

✔ 3. Irreversible processes increase the entropy of the system.

✘ 4. Irreversible processes are always spontaneous.

Question ID : **630680503226**
Option 1 ID : **6306801966490**
Option 2 ID : **6306801966489**
Option 3 ID : **6306801966491**
Option 4 ID : **6306801966492**
Status : **Answered**
Chosen Option : **4**

Q.27 Which of the following machines violates the Kelvin Planck's statement?

Ans ✘ 1. Reversible heat engine

✔ 2. PMM2

✘ 3. PMM1

✘ 4. Irreversible heat engine

Question ID : **630680503256**
Option 1 ID : **6306801966609**
Option 2 ID : **6306801966612**
Option 3 ID : **6306801966611**
Option 4 ID : **6306801966610**
Status : **Answered**
Chosen Option : **2**

Q.28 Which of the following refrigeration lubricants were the first synthetic oils to be used in the refrigeration industry?

Ans ✔ 1. Alkylbenzenes oil

✘ 2. Polyol ester oil

✘ 3. Mineral oil

✘ 4. Poly alkylene glycol oil

Question ID : **630680506418**
Option 1 ID : **6306801979186**
Option 2 ID : **6306801979187**
Option 3 ID : **6306801979185**
Option 4 ID : **6306801979188**
Status : **Answered**
Chosen Option : **4**

Q.29 What will not happen if the liquid has greater adhesion than cohesion?

Ans ✗ 1. The angle of contact will be less than 90° in a small diameter tube.

✗ 2. Liquid will tend to rise at the point of contact.

✓ 3. Liquid surface will be concave downwards in a small diameter tube.

✗ 4. Liquid will wet a solid surface.

Question ID : **630680198993**
Option 1 ID : **630680771702**
Option 2 ID : **630680771700**
Option 3 ID : **630680771701**
Option 4 ID : **630680771699**
Status : **Answered**
Chosen Option : **1**

Q.30 The casting process that employs a permanent metal or ceramic mould, is _____.

Ans ✓ 1. die casting

✗ 2. centrifugal casting

✗ 3. sand casting

✗ 4. investment casting

Question ID : **630680503205**
Option 1 ID : **6306801966407**
Option 2 ID : **6306801966408**
Option 3 ID : **6306801966405**
Option 4 ID : **6306801966406**
Status : **Answered**
Chosen Option : **1**

Q.31 Which of the following is NOT a part of a bucket type steam trap?

Ans ✓ 1. Injector

✗ 2. Spiral vane

✗ 3. Guide tube

✗ 4. Float

Question ID : **630680502654**
Option 1 ID : **6306801964201**
Option 2 ID : **6306801964200**
Option 3 ID : **6306801964199**
Option 4 ID : **6306801964198**
Status : **Answered**
Chosen Option : **1**

Q.32 Which of the following evaporators are used for refrigeration units of 2 to 250 TR capacity?

Ans ✗ 1. Shell and coil evaporators

✓ 2. Dry expansion shell and tube evaporators

✗ 3. Flooded shell and tube evaporators

✗ 4. Plate evaporators

Question ID : **630680506419**
Option 1 ID : **6306801979190**
Option 2 ID : **6306801979192**
Option 3 ID : **6306801979189**
Option 4 ID : **6306801979191**
Status : **Answered**
Chosen Option : **1**

Q.33 Which of the following assertions related to drilling is true?

Ans ✗ 1. Drilling is a process that uses a hammer to make a hole in a workpiece.

✗ 2. Drilling is a process that uses a non-rotating tool to make a hole in a workpiece.

✗ 3. Drilling is a process that uses a saw to make a hole in a workpiece.

✔ 4. Drilling is a process that uses a rotating tool to make a hole in a workpiece.

Question ID : **630680503223**
Option 1 ID : **6306801966480**
Option 2 ID : **6306801966478**
Option 3 ID : **6306801966479**
Option 4 ID : **6306801966477**
Status : **Answered**
Chosen Option : **4**

Q.34 Variation of power input with speed at constant discharge in case of a centrifugal pump is _____.

Ans ✗ 1. linear

✗ 2. logarithmic

✔ 3. cubic

✗ 4. parabolic

Question ID : **630680198968**
Option 1 ID : **630680771599**
Option 2 ID : **630680771602**
Option 3 ID : **630680771601**
Option 4 ID : **630680771600**
Status : **Answered**
Chosen Option : **3**

Q.35 Which of the following statements best describes the second law of thermodynamics in relation to cyclic heat and work processes?

Ans ✔ 1. In a cyclic process, the net work output can be equal to, greater than or less than the net heat input, depending on the efficiency of the process.

✗ 2. In a cyclic process, the net heat transfer is always less than the net work done.

✗ 3. In a cyclic process, the net heat transfer is equal to the net work done.

✗ 4. In a cyclic process, the net heat transfer is always greater than the net work done.

Question ID : **630680503230**
Option 1 ID : **6306801966508**
Option 2 ID : **6306801966507**
Option 3 ID : **6306801966505**
Option 4 ID : **6306801966506**
Status : **Answered**
Chosen Option : **3**

Q.36 The process that involves passage of a higher-pressure fluid through a narrow constriction is called:

Ans ✔ 1. throttling process

✘ 2. hyperbolic process

✘ 3. free expansion process

✘ 4. polytropic process

Question ID : **630680348148**
Option 1 ID : **6306801354884**
Option 2 ID : **6306801354882**
Option 3 ID : **6306801354883**
Option 4 ID : **6306801354881**
Status : **Answered**
Chosen Option : **1**

Q.37 The brake power of an engine can be measured by using a rope brake dynamometer. It is given by the expression: (Where, 'D' is diameter of the brake drum; 'W' is the weight and 'S' is the spring scale reading, 'N' Speed in rpm)

Ans ✘ 1. $\pi DN (W + S)$

✘ 2. $DN (W + S)$

✘ 3. $DN (W - S)$

✔ 4. $\pi DN (W - S)$

Question ID : **630680386536**
Option 1 ID : **6306801506854**
Option 2 ID : **6306801506857**
Option 3 ID : **6306801506856**
Option 4 ID : **6306801506855**
Status : **Answered**
Chosen Option : **1**

Q.38 Which of the following is NOT a type of sawing?

Ans ✘ 1. Circular sawing

✘ 2. Hack sawing

✔ 3. Straight sawing

✘ 4. Band sawing

Question ID : **630680503248**
Option 1 ID : **6306801966580**
Option 2 ID : **6306801966577**
Option 3 ID : **6306801966579**
Option 4 ID : **6306801966578**
Status : **Answered**
Chosen Option : **2**

Q.39 In the battery ignition system for SI engines, with increase in the speed, the _____.

Ans ✔ 1. sparking voltage drops

✘ 2. sparking voltage first increases and then becomes constant

✘ 3. sparking voltage increases

✘ 4. sparking voltage remains the same

Question ID : **630680502730**
Option 1 ID : **6306801964503**
Option 2 ID : **6306801964505**
Option 3 ID : **6306801964502**
Option 4 ID : **6306801964504**
Status : **Answered**
Chosen Option : **2**

Q.40 For the H-S diagram of a vapour compression refrigeration cycle, the specific enthalpy of the refrigerant coming out from the compressor _____.

Ans ✗ 1. may increase or decrease

✗ 2. decreases

✓ 3. increases

✗ 4. remains constant

Question ID : **630680506443**
Option 1 ID : **6306801979288**
Option 2 ID : **6306801979286**
Option 3 ID : **6306801979285**
Option 4 ID : **6306801979287**
Status : **Answered**
Chosen Option : **3**

Q.41 Which of the following gas combination is commonly used in oxyfuel-gas welding?

Ans ✓ 1. Oxygen and acetylene

✗ 2. Oxygen and H_2

✗ 3. Oxygen and Nitrogen

✗ 4. Oxygen and CO_2

Question ID : **630680503272**
Option 1 ID : **6306801966673**
Option 2 ID : **6306801966675**
Option 3 ID : **6306801966676**
Option 4 ID : **6306801966674**
Status : **Answered**
Chosen Option : **1**

Q.42 Which of the following does NOT indicate that the refrigeration plant has to be charged with the refrigerant?

Ans ✗ 1. Reduction in the efficiency of the plant

✗ 2. Short cycling of compressor

✓ 3. High suction pressure

✗ 4. Difficult to maintain temperature of rooms and holds

Question ID : **630680506410**
Option 1 ID : **6306801979156**
Option 2 ID : **6306801979153**
Option 3 ID : **6306801979154**
Option 4 ID : **6306801979155**
Status : **Answered**
Chosen Option : **4**

Q.43 A drill bit of diameter 25 mm has cutting speed of 15.7 m/min. What is the speed of rotation of drill?

Ans ✓ 1. 200 RPM

✗ 2. 314 RPM

✗ 3. 400 RPM

✗ 4. 500 RPM

Question ID : **630680503251**
Option 1 ID : **6306801966590**
Option 2 ID : **6306801966592**
Option 3 ID : **6306801966589**
Option 4 ID : **6306801966591**
Status : **Answered**
Chosen Option : **1**

Q.44 In the porter governor, the main constituent of controlling force is:

Ans ✗ 1. mass of flyball

✗ 2. friction force

✓ 3. mass of sleeve

✗ 4. spring force

Question ID : **630680509132**
Option 1 ID : **6306801989825**
Option 2 ID : **6306801989824**
Option 3 ID : **6306801989826**
Option 4 ID : **6306801989823**
Status : **Answered**
Chosen Option : **3**

Q.45 The distance of centre of pressure from free surface of liquid is independent of:

Ans ✓ 1. the density of liquid

✗ 2. the distance of C.G. from free surface of liquid

✗ 3. the surface area

✗ 4. the moment of inertia

Question ID : **630680508637**
Option 1 ID : **6306801987850**
Option 2 ID : **6306801987851**
Option 3 ID : **6306801987849**
Option 4 ID : **6306801987848**
Status : **Answered**
Chosen Option : **1**

Q.46 Which of the following prevents the high-pressure vapour refrigerant from flowing back to the evaporator in rotating blade type rotary compressor?

Ans ✗ 1. Throttling valve

✓ 2. Check valve

✗ 3. Pressure valve

✗ 4. Safety valve

Question ID : **630680506437**
Option 1 ID : **6306801979262**
Option 2 ID : **6306801979263**
Option 3 ID : **6306801979264**
Option 4 ID : **6306801979261**
Status : **Answered**
Chosen Option : **2**

Q.47 In the process of brazing, the filler metal is drawn into the joint by means of _____.

Ans ✗ 1. Low viscosity

✗ 2. High diffusion

✓ 3. Capillary action

✗ 4. Surface tension

Question ID : **630680205053**
Option 1 ID : **630680795077**
Option 2 ID : **630680795078**
Option 3 ID : **630680795076**
Option 4 ID : **630680795075**
Status : **Answered**
Chosen Option : **3**

Q.48 Carbon steel contains a carbon percentage of about 0.21%. The possible type of carbon steel is _____ .

Ans ✗ 1. alloy steel

✗ 2. stainless steel

✔ 3. mild steel

✗ 4. medium carbon steel

Question ID : **630680191553**
Option 1 ID : **630680742833**
Option 2 ID : **630680742836**
Option 3 ID : **630680742835**
Option 4 ID : **630680742834**
Status : **Answered**
Chosen Option : **3**

Q.49 Total gradient line (or total energy line) is parallel to hydraulic gradient line with a vertical distance of _____. (The symbols have their usual meanings.)

Ans ✗ 1.

✔ 2.

✗ 3.

✗ 4.

Question ID : **630680198989**
Option 1 ID : **630680771684**
Option 2 ID : **630680771685**
Option 3 ID : **630680771686**
Option 4 ID : **630680771683**
Status : **Answered**
Chosen Option : **1**

Q.50 Which of the following is NOT the application for steam in industry?

Ans ✗ 1. Heating

✗ 2. Propulsion

✔ 3. De-atomisation

✗ 4. Humidification

Question ID : **630680348139**
Option 1 ID : **6306801354845**
Option 2 ID : **6306801354846**
Option 3 ID : **6306801354848**
Option 4 ID : **6306801354847**
Status : **Answered**
Chosen Option : **3**

Q.51 A cooling system is essentially required in internal combustion engines to
_____.

Ans   ✗ 1. keep the engine very hot or very cool

✗ 2. remove heat at a faster rate when the engine is cool

✓ 3. remove heat at a faster rate when engine is hot

✗ 4. remove about 70% of heat generated in the combustion chamber

Question ID : **630680382380**
Option 1 ID : **6306801490436**
Option 2 ID : **6306801490437**
Option 3 ID : **6306801490435**
Option 4 ID : **6306801490438**
Status : **Answered**
Chosen Option : **3**

Q.52 Which of the following is NOT a frequent pattern-making process in manufacturing?

Ans   ✓ 1. Welding pattern

✗ 2. Investment pattern

✗ 3. Match plate pattern

✗ 4. Sweep pattern

Question ID : **630680503200**
Option 1 ID : **6306801966388**
Option 2 ID : **6306801966387**
Option 3 ID : **6306801966386**
Option 4 ID : **6306801966385**
Status : **Answered**
Chosen Option : **1**

Q.53 The location of centre of gravity for a sphere of radius (R) from the geometrical centre
is at a distance of:

Ans   ✗ 1. R

✗ 2. 0.25R

✓ 3. 0

✗ 4. 0.5R

Question ID : **630680509611**
Option 1 ID : **6306801991665**
Option 2 ID : **6306801991667**
Option 3 ID : **6306801991668**
Option 4 ID : **6306801991666**
Status : **Answered**
Chosen Option : **3**

Q.54 Which of the following is NOT a lathe turning operation?

Ans   ✓ 1. Sawing

✗ 2. Facing

✗ 3. Grooving

✗ 4. Threading

Question ID : **630680503220**
Option 1 ID : **6306801966467**
Option 2 ID : **6306801966465**
Option 3 ID : **6306801966468**
Option 4 ID : **6306801966466**
Status : **Answered**
Chosen Option : **1**

Q.55 A closed system undergoes a cycle consisting of two processes. Process 1-2 is an isothermal expansion whereas Process 2-1 is an isentropic compression. According to the first law of thermodynamics, which of the following statements is true for this cycle?

Ans ✗ 1. Work done during Process 1-2 is zero.

✓ 2. Heat transfer during Process 2-1 is zero.

✗ 3. Work done during Process 2-1 is zero.

✗ 4. Heat transfer during Process 1-2 is zero.

Question ID : **630680503235**
Option 1 ID : **6306801966525**
Option 2 ID : **6306801966528**
Option 3 ID : **6306801966526**
Option 4 ID : **6306801966527**
Status : **Answered**
Chosen Option : **2**

Q.56 The Kaplan turbine is an example of _____ .

Ans ✗ 1. tangential flow turbine

✗ 2. radial flow turbine

✗ 3. mixed-flow turbine

✓ 4. axial flow turbine

Question ID : **630680193067**
Option 1 ID : **630680748805**
Option 2 ID : **630680748808**
Option 3 ID : **630680748806**
Option 4 ID : **630680748807**
Status : **Answered**
Chosen Option : **2**

Q.57 In which of the following areas is supercharging NOT so important?

Ans ✗ 1. Engines working at high altitudes

✗ 2. Racing cars

✗ 3. Marine and automotive engines where weight and space are important

✓ 4. Domestic bikes

Question ID : **630680502665**
Option 1 ID : **6306801964243**
Option 2 ID : **6306801964244**
Option 3 ID : **6306801964242**
Option 4 ID : **6306801964245**
Status : **Answered**
Chosen Option : **3**

Q.58 What will be the value of the axial thrust on a wheel when there is no blade friction?

Ans ✓ 1. Zero

✗ 2. Minimum

✗ 3. Maximum

✗ 4. Equal to the tangential force on the blade

Question ID : **630680502690**
Option 1 ID : **6306801964344**
Option 2 ID : **6306801964343**
Option 3 ID : **6306801964342**
Option 4 ID : **6306801964345**
Status : **Answered**
Chosen Option : **1**

Q.59 Which of the following statements is correct about the location of centre of pressure?

Ans ✗ 1. Centre of pressure may lie at any location irrespective of the centre of gravity of the vertically immersed surface.

✗ 2. Centre of pressure coincides with the centre of gravity of the vertically immersed surface.

✔ 3. Centre of pressure lies below the centre of gravity of the vertically immersed surface.

✗ 4. Centre of pressure lies above the centre of gravity of the vertically immersed surface.

Question ID : **630680199002**
Option 1 ID : **630680771738**
Option 2 ID : **630680771737**
Option 3 ID : **630680771735**
Option 4 ID : **630680771736**
Status : **Answered**
Chosen Option : **3**

Q.60 In a Hartnell governor, if a spring of greater stiffness is used, then the governor will be:

Ans ✗ 1. insensitive

✔ 2. less sensitive

✗ 3. Isochronous

✗ 4. more sensitive

Question ID : **630680335145**
Option 1 ID : **6306801303800**
Option 2 ID : **6306801303798**
Option 3 ID : **6306801303799**
Option 4 ID : **6306801303797**
Status : **Answered**
Chosen Option : **2**

Q.61 When pressure is measured above the atmospheric pressure, it is termed as:

Ans ✗ 1. absolute pressure

✔ 2. gauge pressure

✗ 3. vacuum pressure

✗ 4. stagnation pressure

Question ID : **630680508636**
Option 1 ID : **6306801987844**
Option 2 ID : **6306801987846**
Option 3 ID : **6306801987845**
Option 4 ID : **6306801987847**
Status : **Answered**
Chosen Option : **2**

Q.62 The Kelvin-Planck statement of the Second Law states that _____.

Ans ✗ 1. work can be converted completely into heat

✔ 2. it is impossible to convert all the heat absorbed from a single reservoir into work

✗ 3. heat cannot flow spontaneously from a colder body to a hotter body

✗ 4. it is possible to convert all the heat absorbed from a single reservoir into work

Question ID : **630680503229**
Option 1 ID : **6306801966504**
Option 2 ID : **6306801966501**
Option 3 ID : **6306801966503**
Option 4 ID : **6306801966502**
Status : **Answered**
Chosen Option : **2**

Q.63 If there is flow of real fluid at fixed boundary, then no-slip condition:

Ans ✖ 1. does not occur

✖ 2. may or may not occur

✖ 3. depends on the type of flow

✔ 4. occurs

Question ID : **630680508622**
Option 1 ID : **6306801987788**
Option 2 ID : **6306801987790**
Option 3 ID : **6306801987791**
Option 4 ID : **6306801987789**
Status : **Answered**
Chosen Option : **2**

Q.64 If the power output of a hydraulic turbine is 100 kW and overall efficiency is 50%, then what will be the power supplied at the inlet of the turbine?

Ans ✔ 1. 200 kW

✖ 2. 250 kW

✖ 3. 150 kW

✖ 4. 50 kW

Question ID : **630680508632**
Option 1 ID : **6306801987830**
Option 2 ID : **6306801987831**
Option 3 ID : **6306801987829**
Option 4 ID : **6306801987828**
Status : **Answered**
Chosen Option : **1**

Q.65 The overall efficiency of the turbine is given by:

Ans ✖ 1. overall efficiency = mechanical efficiency /hydraulic efficiency

✖ 2. overall efficiency = hydraulic efficiency / mechanical efficiency

✔ 3. overall efficiency = hydraulic efficiency × mechanical efficiency

✖ 4. overall efficiency = mechanical efficiency^2 / hydraulic efficiency^2

Question ID : **630680508612**
Option 1 ID : **6306801987749**
Option 2 ID : **6306801987748**
Option 3 ID : **6306801987751**
Option 4 ID : **6306801987750**
Status : **Answered**
Chosen Option : **3**

Q.66 The fluid that becomes less viscous as it is sheared harder is called _____.

Ans ✖ 1. dilatant fluid

✖ 2. thixotropic fluid

✖ 3. Newtonian fluid

✔ 4. pseudo-plastic fluid

Question ID : **630680508720**
Option 1 ID : **6306801988181**
Option 2 ID : **6306801988180**
Option 3 ID : **6306801988183**
Option 4 ID : **6306801988182**
Status : **Answered**
Chosen Option : **1**

Q.67 **Which of the following statements is INCORRECT about the air pre-heater in a steam boiler?**

Ans ✘ 1. In the tubular type of air pre-heater, hot flue gases flow in the direction opposite to that of air travel.

✘ 2. In the regenerative type of air pre-heater, heat from flue gases is transferred to air through an intermediate heat storage medium.

✘ 3. Use of the air pre-heater leads to less atmospheric pollution.

✔ 4. In the tubular type of air pre-heater, hot flue gases flow through the outside of the tubes of the air pre-heater.

Question ID : **630680502656**
Option 1 ID : **6306801964209**
Option 2 ID : **6306801964207**
Option 3 ID : **6306801964208**
Option 4 ID : **6306801964206**
Status : **Answered**
Chosen Option : **4**

Q.68 **A cyclic heat engine takes 40 kJ of heat from a 100°C temperature reservoir. If it gives 40 kJ of work, then which of the following statements is correct?**

Ans ✔ 1. The engine violates the Kelvin Planck's statement

✘ 2. The engine violates the Clausius statement.

✘ 3. The engine violates the 1st law of thermodynamics.

✘ 4. The engine violates 1st law of thermodynamics as well as Kelvin Planck's statement.

Question ID : **630680503257**
Option 1 ID : **6306801966614**
Option 2 ID : **6306801966615**
Option 3 ID : **6306801966613**
Option 4 ID : **6306801966616**
Status : **Answered**
Chosen Option : **1**

Q.69 **Which of the following is NOT an example of Newtonian fluid?**

Ans ✘ 1. Water

✔ 2. Printer's ink

✘ 3. Kerosene

✘ 4. Air

Question ID : **630680199007**
Option 1 ID : **630680771755**
Option 2 ID : **630680771758**
Option 3 ID : **630680771757**
Option 4 ID : **630680771756**
Status : **Answered**
Chosen Option : **2**

Q.70 In case of a four-stroke diesel engine, the valve timing diagram is expressed in terms of _____.

Ans ✗ 1. the time taken for opening and closing of the valve with respect to only TDC

✗ 2. the time taken for opening and closing of the valve with respect to TDC and BDC

✓ 3. the degree of the crank angle at the time of opening and closing of the valve

✗ 4. the linear movement of the piston with respect to TDC and BDC

Question ID : **630680502711**
Option 1 ID : **6306801964427**
Option 2 ID : **6306801964426**
Option 3 ID : **6306801964428**
Option 4 ID : **6306801964429**
Status : **Answered**
Chosen Option : **3**

Q.71 Which of the following statements is INCORRECT about no slip boundary condition?

Ans ✗ 1. In case of the no slip boundary condition at a fixed solid boundary, the fluid will have zero velocity.

✗ 2. During no slip condition the fluid velocity at all fluid–solid boundaries is equal to that of the solid boundary.

✗ 3. The no slip condition can be defined for viscous flows.

✓ 4. In case of the no slip boundary condition at a fixed solid boundary, the fluid will have some velocity relative to the boundary.

Question ID : **630680199006**
Option 1 ID : **630680771753**
Option 2 ID : **630680771751**
Option 3 ID : **630680771754**
Option 4 ID : **630680771752**
Status : **Answered**
Chosen Option : **4**

Q.72 A sample of an ideal gas is compressed isothermally from volume of 4 l to 2 l. If the initial pressure is 2 atm, what is the final pressure?

Ans ✗ 1. 1 atm

✓ 2. 4 atm

✗ 3. 8 atm

✗ 4. 2 atm

Question ID : **630680503215**
Option 1 ID : **6306801966445**
Option 2 ID : **6306801966447**
Option 3 ID : **6306801966448**
Option 4 ID : **6306801966446**
Status : **Answered**
Chosen Option : **2**

Q.73 The surging phenomenon in a centrifugal compressor occurs when the refrigeration load decreases to below:

Ans ✓ 1. 35% of the rated capacity

✗ 2. 65% of the rated capacity

✗ 3. 55% of the rated capacity

✗ 4. 45% of the rated capacity

Question ID : **630680506395**
Option 1 ID : **6306801979093**
Option 2 ID : **6306801979096**
Option 3 ID : **6306801979095**
Option 4 ID : **6306801979094**
Status : **Answered**
Chosen Option : **4**

Q.74 In actual air-conditioning applications, the heat rejection factor depends upon the:

Ans ✗ 1. rate of flow

✗ 2. evaporator temperature

✓ 3. evaporator and condenser temperatures

✗ 4. condenser temperature

Question ID : **630680506427**
Option 1 ID : **6306801979223**
Option 2 ID : **6306801979222**
Option 3 ID : **6306801979224**
Option 4 ID : **6306801979221**
Status : **Answered**
Chosen Option : **3**

Q.75 For measurement of dryness fraction of steam, use of a separating calorimeter is suitable _____.

Ans ✗ 1. when dryness fraction is greater than 1

✗ 2. for any condition of steam

✗ 3. when dryness fraction is greater than 0.95

✓ 4. when dryness fraction is less than 0.95

Question ID : **630680502761**
Option 1 ID : **6306801964629**
Option 2 ID : **6306801964628**
Option 3 ID : **6306801964626**
Option 4 ID : **6306801964627**
Status : **Answered**
Chosen Option : **4**

Q.76 The mass transfer process in an open system is commonly modelled using the _____ equation.

Ans ✗ 1. third law of thermodynamics

✗ 2. second law of thermodynamics

✓ 3. mass balance

✗ 4. zeroth law of thermodynamics

Question ID : **630680503178**
Option 1 ID : **6306801966299**
Option 2 ID : **6306801966298**
Option 3 ID : **6306801966300**
Option 4 ID : **6306801966297**
Status : **Answered**
Chosen Option : **3**

Q.77 Which of the following statements are correct regarding the characteristics of Entropy?

1)It increases when heat is supplied irrespective of the fact whether temperature changes or not.

2)It decreases when heat is removed whether temperature changes or not.

3)It remains unchanged in all adiabatic frictionless processes.

4)It increases if temperature of heat is lowered without work being done as in a throttling process.

Ans ✔ 1. 1, 2, 3 and 4

✘ 2. Only 1, 2 and 3

✘ 3. Only 1, 3 and 4

✘ 4. Only 2, 3 and 4

Question ID : **630680395246**
Option 1 ID : **6306801541195**
Option 2 ID : **6306801541192**
Option 3 ID : **6306801541194**
Option 4 ID : **6306801541193**
Status : **Answered**
Chosen Option : **2**

Q.78 The zeroth law of thermodynamics is based on the concept of _____.

Ans ✘ 1. enthalpy

✔ 2. temperature

✘ 3. heat capacity

✘ 4. entropy

Question ID : **630680503210**
Option 1 ID : **6306801966428**
Option 2 ID : **6306801966427**
Option 3 ID : **6306801966425**
Option 4 ID : **6306801966426**
Status : **Answered**
Chosen Option : **2**

Q.79 In a boiler test, the water supplied to a boiler per hour is 2250 kg. The mass of water in the boiler at the end of the one hour is found to be less than that at commencement by 250 kg. The coal burnt per hour is 250 kg. What will be the actual evaporation per kg of the fuel burnt of the boiler?

Ans ✘ 1. 8 kg

✔ 2. 10 kg

✘ 3. 2500 kg

✘ 4. 250 kg

Question ID : **630680502645**
Option 1 ID : **6306801964162**
Option 2 ID : **6306801964163**
Option 3 ID : **6306801964165**
Option 4 ID : **6306801964164**
Status : **Answered**
Chosen Option : **2**

Q.80 If a point is to be at the free surface of a liquid open to the atmosphere, where the pressure is the atmospheric pressure P_{atm}, then the gauge pressure at a depth 'h' from the free surface becomes:

Ans

✔ 1.

✘ 2.

✘ 3.

✘ 4.

Question ID : **630680508737**
Option 1 ID : **6306801988248**
Option 2 ID : **6306801988250**
Option 3 ID : **6306801988251**
Option 4 ID : **6306801988249**
Status : **Answered**
Chosen Option : **1**

Q.81 Name the welding defect in which we observe a long and continuous visual separation line between the base metal and the heat affected zone.

Ans ✔ 1. Lamellar tearing

✘ 2. Hot cracking

✘ 3. Incomplete fusion

✘ 4. Undercut

Question ID : **630680211307**
Option 1 ID : **630680819375**
Option 2 ID : **630680819376**
Option 3 ID : **630680819377**
Option 4 ID : **630680819378**
Status : **Answered**
Chosen Option : **1**

Q.82 What will be the power lost in friction assuming uniform pressure theory, when a vertical shaft of 100 mm diameter rotating at 150 r.p.m. rests on a flat end foot step bearing? The coefficient of friction is equal to 0.05 and the shaft carries a vertical load of 15 KN.

Ans ✔ 1. 392.7 W

✘ 2. 392.7 KW

✘ 3. 39.27 KW

✘ 4. 39.27 W

Question ID : **630680227834**
Option 1 ID : **630680884013**
Option 2 ID : **630680884011**
Option 3 ID : **630680884012**
Option 4 ID : **630680884014**
Status : **Answered**
Chosen Option : **1**

Q.83 The conventional depth of a cut considered in the parting operation using a lathe is
_____.

Ans ✔ 1. 3 mm to 10 mm

✘ 2. 20 mm to 25 mm

✘ 3. 12 mm to 16 mm

✘ 4. 1 mm to 2 mm

Question ID : **630680205078**
Option 1 ID : **630680795175**
Option 2 ID : **630680795178**
Option 3 ID : **630680795177**
Option 4 ID : **630680795176**
Status : **Answered**
Chosen Option : **4**

Q.84 The heat transfer during constant pressure heating of a gas in a cylinder containing a
sliding piston is equal to _____.

Ans ✘ 1. zero

✔ 2. the change in enthalpy

✘ 3. the work done by the piston

✘ 4. the change in internal energy

Question ID : **630680503275**
Option 1 ID : **6306801966688**
Option 2 ID : **6306801966686**
Option 3 ID : **6306801966687**
Option 4 ID : **6306801966685**
Status : **Answered**
Chosen Option : **2**

Q.85 Which part of the arc welding element/equipment is consumable?

Ans ✔ 1. Electrode

✘ 2. AC/DC transformer

✘ 3. Electrical cables

✘ 4. Electrode holder

Question ID : **630680205050**
Option 1 ID : **630680795066**
Option 2 ID : **630680795064**
Option 3 ID : **630680795063**
Option 4 ID : **630680795065**
Status : **Answered**
Chosen Option : **1**

Q.86 Which of the following options is correct about four-stroke engines when compared with two-stroke engines?

Ans   ✗ 1. The thermodynamic cycle is completed in two strokes of the piston or in one revolution of the crankshaft.

✔ 2. Thermal efficiency is higher.

✗ 3. Light weight and simplicity due to absence of the valve actuating mechanism, with the initial cost of the engine being low

✗ 4. Lower volumetric efficiency due to lesser time taken for mixture intake

Question ID : **630680181695**
Option 1 ID : **630680704022**
Option 2 ID : **630680704024**
Option 3 ID : **630680704025**
Option 4 ID : **630680704023**
Status : **Answered**
Chosen Option : **2**

Q.87 Which of the following is used to increase the temperature of steam above its saturation temperature?

Ans   ✔ 1. Superheater

✗ 2. Air pre-heater

✗ 3. Steam dryer

✗ 4. Economiser

Question ID : **630680502707**
Option 1 ID : **6306801964412**
Option 2 ID : **6306801964411**
Option 3 ID : **6306801964413**
Option 4 ID : **6306801964410**
Status : **Answered**
Chosen Option : **1**

Q.88 The manometric head of a centrifugal pump is independent of which of the following factors?

Ans   ✗ 1. Frictional head loss in suction pipe

✗ 2. Loss of head in impeller and casing

✔ 3. Frictional losses in bearings

✗ 4. Frictional head loss in delivery pipe

Question ID : **630680198966**
Option 1 ID : **630680771592**
Option 2 ID : **630680771591**
Option 3 ID : **630680771593**
Option 4 ID : **630680771594**
Status : **Answered**
Chosen Option : **3**

Q.89 Enthalpy of a system in an open flow is given by h = u + pv, where pv is the _____.

Ans ✗ 1. moving boundary work

✓ 2. flow work

✗ 3. external work

✗ 4. momentum energy

Question ID : **630680503243**
Option 1 ID : **6306801966557**
Option 2 ID : **6306801966558**
Option 3 ID : **6306801966560**
Option 4 ID : **6306801966559**
Status : **Answered**
Chosen Option : **2**

Q.90 The distance of the centre of pressure from the free surface of the liquid is independent of the:

Ans ✓ 1. density of liquid

✗ 2. moment of inertia about the centre of gravity

✗ 3. depth of the centre of gravity from the free surface

✗ 4. area exposed to the liquid

Question ID : **630680508740**
Option 1 ID : **6306801988262**
Option 2 ID : **6306801988263**
Option 3 ID : **6306801988261**
Option 4 ID : **6306801988260**
Status : **Answered**
Chosen Option : **1**

Q.91 The mist lubrication system is generally used for _____.

Ans ✓ 1. two stroke cycle engine

✗ 2. gas engine

✗ 3. air refrigeration cycle engine

✗ 4. four stroke cycle engine

Question ID : **630680502667**
Option 1 ID : **6306801964251**
Option 2 ID : **6306801964253**
Option 3 ID : **6306801964252**
Option 4 ID : **6306801964250**
Status : **Answered**
Chosen Option : **3**

Q.92

Ans ✗ 1. The equation is the steady flow energy equation for steam nozzles.

✗ 2. There is no mechanical work done by the steam nozzle.

✓ 3. The equation considers frictional losses in the steam nozzle.

✗ 4. The flow is adiabatic in steam nozzles.

Question ID : **630680502641**
Option 1 ID : **6306801964146**
Option 2 ID : **6306801964148**
Option 3 ID : **6306801964149**
Option 4 ID : **6306801964147**
Status : **Answered**
Chosen Option : **3**

Q.93 **The casting process that employs a wax pattern coated with a ceramic shell to make the mould, is _____.**

Ans ✗ 1. sand casting

✗ 2. centrifugal casting

✗ 3. die casting

✓ 4. investment casting

Question ID : **630680503204**
Option 1 ID : **6306801966401**
Option 2 ID : **6306801966404**
Option 3 ID : **6306801966403**
Option 4 ID : **6306801966402**
Status : **Answered**
Chosen Option : **4**

Q.94 **A complex geometry is placed in the X-Y plane. If the geometry is found to be symmetrical about the Y-axis, then which of the following is correct to calculate the centre of gravity?**

Ans ✗ 1. X co-ordinate is a non-zero value

✗ 2. Z co-ordinate is a non-zero value

✗ 3. Y co-ordinate is zero

✓ 4. X co-ordinate is zero

Question ID : **630680509603**
Option 1 ID : **6306801991634**
Option 2 ID : **6306801991636**
Option 3 ID : **6306801991633**
Option 4 ID : **6306801991635**
Status : **Answered**
Chosen Option : **4**

Q.95 The maximum frictional force that comes in play when a body just begins to slide over the surface of another body is called:

Ans ✗ 1. kinetic friction

✗ 2. static friction

✗ 3. dynamic friction

✓ 4. limiting friction

Question ID : **630680394585**
Option 1 ID : **6306801538626**
Option 2 ID : **6306801538628**
Option 3 ID : **6306801538627**
Option 4 ID : **6306801538629**
Status : **Answered**
Chosen Option : **2**

Q.96 In a milling machine, bulky workpieces of irregular shapes are clamped directly on the milling machine table by using _____.

Ans ✗ 1. swivel vise

✗ 2. angle plates

✓ 3. T-bolts and clamps

✗ 4. V-blocks

Question ID : **630680205087**
Option 1 ID : **630680795214**
Option 2 ID : **630680795211**
Option 3 ID : **630680795212**
Option 4 ID : **630680795213**
Status : **Answered**
Chosen Option : **3**

Q.97 What is the main benefit of double volute casing over single volute casing of a centrifugal pump?

Ans ✓ 1. Radial load balancing

✗ 2. High discharge

✗ 3. Less power requirement

✗ 4. High efficiency

Question ID : **630680198970**
Option 1 ID : **630680771607**
Option 2 ID : **630680771609**
Option 3 ID : **630680771608**
Option 4 ID : **630680771610**
Status : **Answered**
Chosen Option : **1**

Q.98 Isochronism in a governor is desirable when _____.

Ans ✗ 1. the engine operates at low speeds

✗ 2. the engine operates at high speeds

✗ 3. the engine is just getting started

✓ 4. one speed is desired under one load

Question ID : **630680502673**
Option 1 ID : **6306801964274**
Option 2 ID : **6306801964275**
Option 3 ID : **6306801964276**
Option 4 ID : **6306801964277**
Status : **Answered**
Chosen Option : **3**

Q.99 The volumetric efficiency of a single-stage reciprocating air compressor is the ratio of the:

Ans ✗ 1. swept volume to the clearance volume

✔ 2. free air delivered to the displacement of the compressor

✗ 3. swept volume to the effective swept volume

✗ 4. displacement of the compressor to the free air delivered

Question ID : **630680181651**
Option 1 ID : **630680703848**
Option 2 ID : **630680703846**
Option 3 ID : **630680703849**
Option 4 ID : **630680703847**
Status : **Answered**
Chosen Option : **2**

Q.100 When a system is undergoing constant volume process, then heat transfer is equal to:

Ans ✗ 1. change in entropy

✗ 2. change in enthalpy

✗ 3. work transfer

✔ 4. change in internal energy

Question ID : **630680403968**
Option 1 ID : **6306801575361**
Option 2 ID : **6306801575359**
Option 3 ID : **6306801575360**
Option 4 ID : **6306801575358**
Status : **Answered**
Chosen Option : **4**