SSC JE ME 2019 Held on 11th Dec 2020

Q.1 Find the difference between the sum of prime digits and the sum of composite digits in the number 397801.

Ans

✗ 1. 8

✗ 2. 5

✔ 3. 7

✗ 4. 6

Question ID : **6549785019**

Status : **Not Attempted and Marked For Review**

Chosen Option : **--**

Q.2 A, B, C, D, E and F are sitting around a circular table facing the centre. A is sitting second to the right of D, who is third to the left of B. If C is NOT sitting with D, then who is sitting between E and F?

Ans

✗ 1. A

✗ 2. B

✔ 3. D

✗ 4. C

Question ID : **6549785008**

Status : **Not Answered**

Chosen Option : **--**

Q.3 चार शब्द युग्म दिए गए हैं, जिनमें से तीन किसी तरह से संगत हैं और एक असंगत है। उस असंगत शब्द युग्म का चयन करें।

Ans

✗ 1. जूते - चमड़ा

✔ 2. डस्टर - चाक

✗ 3. कमीज़ - कपड़ा

✗ 4. गिलास - कांच

Question ID : **6549784992**

Status : **Answered**

Chosen Option : **2**

Q.4 L is the mother of K and the sister of N. K is the sister of O. If P is the husband of O and N is the husband of M, then how is O related to N?

Ans
  ✗ 1. Cousin

  ✓ 2. Niece

  ✗ 3. Daughter

  ✗ 4. Granddaughter

Question ID : **6549785006**
Status : **Not Answered**
Chosen Option : **--**

Q.5 Select the number that can replace the question mark (?) in the following series.

10, 13, 30, 29, 58, ?

Ans
  ✗ 1. 49

  ✗ 2. 62

  ✓ 3. 53

  ✗ 4. 56

Question ID : **6549785010**
Status : **Marked For Review**
Chosen Option : **3**

Q.6 In a certain language, FAMOUS is written as GBNPVT. Which word would be written as QPQVMBS in that language?

Ans
  ✗ 1. POLARUP

  ✓ 2. POPULAR

  ✗ 3. PUPAOLR

  ✗ 4. PUPOLAR

Question ID : **6549784997**
Status : **Answered**
Chosen Option : **2**

Q.7 Select the option which is related to the third letter-cluster in the same way as second letter-cluster is related to the first letter-cluster.

HIGH : JLKM : : OPEN : ?

Ans
  ✗ 1. QSQS

  ✓ 2. QSIS

  ✗ 3. QJSJ

  ✗ 4. QISI

Question ID : **6549784995**
Status : **Answered**
Chosen Option : **2**

Q.8 Select the option in which the numbers are related in the same way as are the numbers in the given set.

(13, 61, 17)

Ans

✗ 1. (39, 57, 92)

✗ 2. (87, 67, 1)

✓ 3. (101, 53, 31)

✗ 4. (98, 35, 63)

Question ID : **6549785016**
Status : **Answered**
Chosen Option : **3**

Q.9 तुषार की ओर इशारा करते हुए, सुधा ने कहा, "उसकी माँ मेरी माँ की इकलौती बेटी है"। सुधा का तुषार से क्या संबंध है?

Ans

✗ 1. दादी

✗ 2. बेटी

✗ 3. बहन

✓ 4. माँ

Question ID : **6549785005**
Status : **Answered**
Chosen Option : **4**

Q.10 Select the option in which the given figure is embedded. (Rotation is NOT allowed)

Ans

✗ 1.

✗ 2.

✗ 3.

✓ 4.

Question ID : **6549785023**
Status : **Answered**
Chosen Option : **4**

Q.11 उस विकल्प का चयन करें, जिसकी संख्याओं का आपस में वही संबंध है, जो दिए गए संख्या-युग्म की संख्याओं के बीच है।

345 : 115

Ans

✗ 1. 161 : 23

✗ 2. 68 : 17

✗ 3. 450 : 45

✓ 4. 225 : 75

Q.12 Select the option that is related to the third term in the same way as the second term is related to the first term.

Flowers : Bouquet : : Camel : ?

Ans

✗ 1. Swarm

✓ 2. Caravan

✗ 3. Herd

✗ 4. Crowd

Q.13 After walking 2 km, I turned right and walked 2 km, then turned left and covered a distance of 3 km. In the end I was moving towards the East. In which direction did I start my journey?

Ans

✗ 1. West

✗ 2. South

✗ 3. North

✓ 4. East

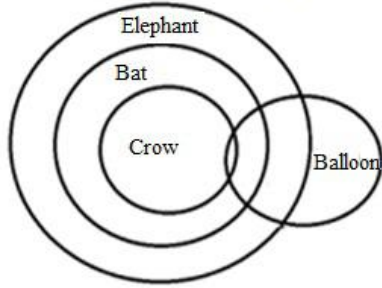**Q.14** आज जॉन का जन्मदिन है। एक वर्ष के बाद वह 8 वर्ष पहले की आयु से दोगुनी आयु का हो जाएगा। आज जॉन की आयु कितनी है?

Ans

✗ 1. 21 वर्ष

✓ 2. 17 वर्ष

✗ 3. 12 वर्ष

✗ 4. 0 वर्ष

Q.15 Which of the following options is correct based on the given Venn diagram?
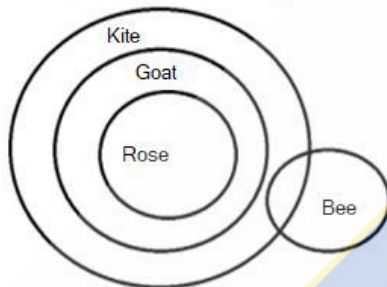

Ans
✗ 1. Not a single Crow is Balloon

✗ 2. Some Bats are not Elephants

✓ 3. All Crows are Bats

✗ 4. Each Balloon is a Crow

Question ID : **6549785028**
Status : **Answered**
Chosen Option : **3**

Q.16 Which of the following options is correct based on the given Venn diagram?

Ans
✓ 1. Some Kites are Roses

✗ 2. Roses are Bees

✗ 3. No Bee is a Kite

✗ 4. Some Bees are Goats

Question ID : **6549785027**
Status : **Answered**
Chosen Option : **1**

Q.17 Four girls are sitting in a circle and facing towards the centre. Kirti is sitting to the right of Suhani but she is NOT just to the left of Vatshala. Anushka is sitting between Kirti and Vatshala. Who is sitting to the right of Vatshala?
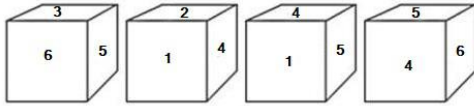
Ans
✗ 1. Vatshala

✓ 2. Suhani

✗ 3. Kirti

✗ 4. Anushka

Question ID : **6549785007**
Status : **Answered**
Chosen Option : **2**

Q.18 Four different positions of the same dice are shown. Find the number that will be on the face opposite to the one showing number '3'.

Ans   ✗ 1. 2

       ✗ 2. 1

       ✔ 3. 4

       ✗ 4. 6

Question ID : **6549785021**
Status : **Answered**
Chosen Option : **3**

Q.19 Select the letter that can replace the question mark (?) in the following series.

I, J, M, ?, Y

Ans   ✗ 1. X

       ✗ 2. O

       ✔ 3. R

       ✗ 4. P

Question ID : **6549784979**
Status : **Answered**
Chosen Option : **3**

Q.20 In a certain code language, HONEY is written as FQLGW. How will SUGAR be written in that language?

Ans   ✔ 1. QWECP

       ✗ 2. QEWPC

       ✗ 3. USECP

       ✗ 4. USIYT

Question ID : **6549784998**
Status : **Answered**
Chosen Option : **1**

Q.21 जॉनसन की वर्तमान आयु उसके पिता की आयु की 1/5 है। पाँच वर्ष पहले, जॉनसन के पिता की आयु जॉनसन की आयु के 8 गुने से 2 वर्ष अधिक थी। जॉनसन और उसके पिता की वर्तमान आयु (वर्षों में) क्रमशः कितनी है?

Ans   ✔ 1. 11, 55

       ✗ 2. 9, 45

       ✗ 3. 12, 60

       ✗ 4. 10, 50

Question ID : **6549785018**
Status : **Answered**
Chosen Option : **1**

Q.22 Select the option that is related to the third term in the same way as the second term is related to the first term.

Dates : Calendar : : Words : ?

Ans
✗ 1. Vocabulary

✗ 2. Vowels

✔ 3. Dictionary

✗ 4. Language

Question ID : **6549784989**
Status : **Answered**
Chosen Option : **3**

Q.23 Select the option which is related to the third letter-cluster in the same way as second letter-cluster is related to the first letter-cluster.

GH : IJ : : UV : ?

Ans
✗ 1. ST

✔ 2. WX

✗ 3. PQ

✗ 4. YZ

Question ID : **6549784994**
Status : **Answered**
Chosen Option : **2**

Q.24 If SUHANI is given the code number 192181149, then what code number can be given to TUSHAR?

Ans
✔ 1. 2021198118

✗ 2. 2119188120

✗ 3. 2120191881

✗ 4. 2012191818

Question ID : **6549785000**
Status : **Answered**
Chosen Option : **1**

Q.25 Select the letter-cluster that can replace the question mark (?) in the following series.

EJOT, DHLP, CFIL, BDFH, ?

Ans
✔ 1. ABCD

✗ 2. ADGJ

✗ 3. EFGH

✗ 4. MOQS

Question ID : **6549784985**
Status : **Answered**
Chosen Option : **1**

Q.26 दिए गए कथनों और निष्कर्षों को ध्यान से पढ़ें। यह मानते हुए कि कथनों में दी गई जानकारी सही है, भले ही वह आम तौर पर स्थापित तथ्यों से भिन्न दिखाई देती है, तय कीजिए कि कौन सा/से निष्कर्ष तर्कसंगत रूप से इन कथनों का अनुसरण करता/करते है/हैं।

कथन:
1. ग़रीबी, मनुष्य को परिश्रमी बनाती है।
2. परिश्रमी व्यक्ति ग़रीब नहीं होते हैं।

निष्कर्ष:
I. परिश्रमी होने के लिए व्यक्ति को ग़रीब होना चाहिए।
II. परिश्रम, ग़रीबी हटाने में सहायता करता है।

Ans

✔ 1. केवल निष्कर्ष II अनुसरण करता है

✘ 2. निष्कर्ष I और II दोनों ही अनुसरण करते हैं

✘ 3. केवल निष्कर्ष I अनुसरण करता है

✘ 4. निष्कर्ष I और II दोनों ही अनुसरण नहीं करते हैं

Q.27 Which option figure is NOT embedded in the given figure, if rotation is not allowed?

Ans

✘ 1.

✘ 2.

✔ 3.

✘ 4.

Q.28 Select the option in which the two numbers share the same relationship as that shared by the given number-pair.

(11, 143)

Ans

✗ 1. (18, 93)

✔ 2. (17, 323)

✗ 3. (24, 216)

✗ 4. (5, 39)

Q.29 Select the option in which the given figure is embedded. (Rotation is NOT allowed)

Ans

✔ 1.

✗ 2.

✗ 3.

✗ 4.

Q.30 Select the option which is related to the third letter-cluster in the same way as second letter-cluster is related to the first letter-cluster.

DOGS : MVLV : : CATS : ?

Ans

✔ 1. LHYV

✗ 2. VLYP

✗ 3. LYVH

✗ 4. YHVL

Q.31 Select the alphanumeric-cluster that can replace the question mark (?) in the following series.

4S15, 3W20, 16S3, 15Q2, ?

Ans ✔ 1. 14N0

✘ 2. 24T6

✘ 3. 12O4

✘ 4. 23U5

Question ID : **6549784987**
Status : **Answered**
Chosen Option : **1**

Q.32 Select the combination of letters that when sequentially placed in the blanks of the given letter series will complete the series.

d m _ s _ m _ s _ m a _

Ans ✘ 1. s d d a s

✘ 2. s d a d s

✘ 3. d d d d s

✔ 4. a d a d s

Question ID : **6549784981**
Status : **Answered**
Chosen Option : **4**

Q.33 Select the alphanumeric-cluster that can replace the question mark (?) in the following series.

HC5, FF8, DI11, BL14, ?

Ans ✔ 1. ZO17

✘ 2. ML12

✘ 3. OX15

✘ 4. YX17

Question ID : **6549784984**
Status : **Marked For Review**
Chosen Option : **3**
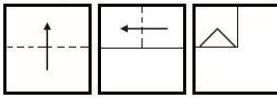
Q.34 Select the letter that can replace the question mark (?) in the following series.

G, H, L, U, ?

Ans ✘ 1. L

✔ 2. K

✘ 3. M

✘ 4. Z

Question ID : **6549784980**
Status : **Answered**
Chosen Option : **2**

Q.35 The sequence of folding a piece of paper and the manner in which the folded paper has been cut is shown in the following figures. How would this paper look when unfolded?
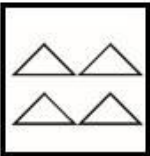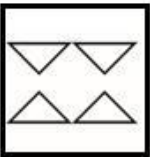

Ans

✗ 1.

✗ 2.

✗ 3.

✔ 4.
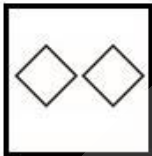
Question ID : 6549785026
Status : **Answered**
Chosen Option : **4**

Q.36 Select the combination of letters that when sequentially placed in the blanks of the given letter series will complete the series.

r s _ t _ r _ s t q _ s s _ q

Ans

✗ 1. q r q t s

✗ 2. r r s t q

✗ 3. t r t s r

✔ 4. s q s r t

Question ID : 6549784982
Status : **Answered**
Chosen Option : **4**

Q.37 Select the option which is related to the third term in the same way as second term is related to the first term.

When : Time : : Where : ?

Ans

✗ 1. Reason

✗ 2. Clock

✔ 3. Place

✗ 4. Length

Question ID : 6549784990
Status : **Answered**
Chosen Option : **3**

Q.38 If every vowel in the word 'JABALPUR' is changed to its next letter in the English alphabet and every consonant is changed to its previous letter, then what will be the fourth letter from the right?

Ans
  ✗ 1. B
  ✗ 2. O
  ✗ 3. A
  ✔ 4. K

Question ID : **6549784986**
Status : **Answered**
Chosen Option : **1**

Q.39 Select the option that is related to the third number in the same way as the second number is related to the first number.
19 : 85 : : 21 : ?

Ans
  ✗ 1. 85
  ✗ 2. 98
  ✔ 3. 95
  ✗ 4. 104

Question ID : **6549785013**
Status : **Answered**
Chosen Option : **3**

Q.40 चार शब्द-युग्म दिए गए हैं, जिनमें से तीन किसी तरह से संगत हैं और एक असंगत है। उस असंगत शब्द-युग्म का चयन करें।

Ans
  ✗ 1. ऊंचा – नीचा
  ✔ 2. यहां – कहां
  ✗ 3. ऊपर – नीचे
  ✗ 4. कम – अधिक

Question ID : **6549784991**
Status : **Answered**
Chosen Option : **2**

Q.41 Select the number that can replace the question mark (?) in the following series.
7, 65, 215, 513, 999, ?

Ans
  ✗ 1. 1456
  ✗ 2. 1702
  ✔ 3. 1729
  ✗ 4. 1251

Question ID : **6549785011**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.42 Select the combination of letters that when sequentially placed in the blanks of the given letter series will complete the series.

_ q p p _ p p _ p p q _

Ans

✗ 1. p q p q

✔ 2. p q q p

✗ 3. q q p p

✗ 4. q p p q

Q.43 Khushi is three years older than Pihoo but two years younger than Tushar. Tushar's age is five years more than thrice of Vatshala's age. If Vatshala is five years old, then what is the age of Pihoo?

Ans

✔ 1. 15 years

✗ 2. 20 years

✗ 3. 17 years

✗ 4. 18 years

Q.44 Select the option that is related to the third number in the same way as the second number is related to the first number.

18 : 306 : : 19 : ?

Ans

✗ 1. 341

✗ 2. 380

✗ 3. 334

✔ 4. 342

Q.45 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:
1. Some girls are educated.
2. Educated girls prefer small families.

Conclusions:
I. All small families are educated.
II. Some girls prefer small families.

Ans

✗ 1. Neither conclusion I nor II follows

✗ 2. Both conclusions I and II follow

✔ 3. Only conclusion II follows

✗ 4. Only conclusion I follows

Q.46 Select the option in which the two words are related in the same way as are the two words in the following word-pair.

Volume : Litre

Ans
- ✗ 1. Pressure : Kelvin
- ✗ 2. Second : Clock
- ✓ 3. Angle : Radian
- ✗ 4. Liquid : Pascal

Q.47 If three persons are standing in such a way that M is to the South of N and O is to the East of N, then in what direction is M with respect to O?

Ans
- ✗ 1. West
- ✓ 2. South-West
- ✗ 3. North-East
- ✗ 4. South

Q.48 Select the number that can replace the question mark (?) in the following series.

2, 5, 10, 17, 26, ?

Ans
- ✗ 1. 51
- ✓ 2. 37
- ✗ 3. 64
- ✗ 4. 49

Q.49 In a certain code, SCIENCE is written as 58. How will TECHNOLOGY be written in that code?

Ans
- ✗ 1. 126
- ✓ 2. 124
- ✗ 3. 132
- ✗ 4. 135

Q.50 Select the correct mirror image of the given figure, when the mirror is placed to the right of the figure.

Ans

✗ 1.

✔ 2.

✗ 3.

✗ 4.
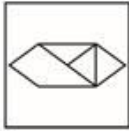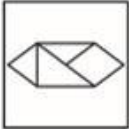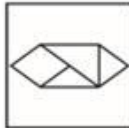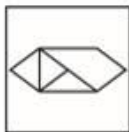
Question ID : **6549785025**
Status : **Answered**
Chosen Option : **2**

Section : **General Awareness**

Q.1 Which cricketer won the Polly Umrigar Award for best international cricketer for 2018-19?

Ans
✗ 1. Hardik Pandya

✗ 2. Rohit Sharma

✔ 3. Jasprit Bumrah

✗ 4. Virat Kohli

Question ID : **6549785070**
Status : **Answered**
Chosen Option : **1**

Q.2 The Global Climate Strike, which took place from 20 September 2019 to 27 September 2019, was organised by:

Ans
✗ 1. Sundays For Future

✔ 2. Fridays For Future

✗ 3. Tuesdays For Future

✗ 4. Thursdays For Future

Question ID : **6549785034**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.3 ICC Cricket World Cup 2019 was held in:

Ans ✔️ 1. England and Wales

❌ 2. India and Sri Lanka

❌ 3. India and Pakistan

❌ 4. Australia and New Zealand

Question ID : **6549785077**
Status : **Answered**
Chosen Option : **1**

Q.4 Which state had been declared as a 'disturbed' area under the Armed Forces Act, in June 2019?

Ans ✔️ 1. Nagaland

❌ 2. Tripura

❌ 3. Assam

❌ 4. Mizoram

Question ID : **6549785075**
Status : **Answered**
Chosen Option : **1**

Q.5 Which of the following is the most common isotope of Hydrogen?

Ans ❌ 1. Neutron

✔️ 2. Protium

❌ 3. Tritium

❌ 4. Deuterium

Question ID : **6549785041**
Status : **Answered**
Chosen Option : **2**

Q.6 भारत में उष्णकटिबंधीय पर्वतीय वन दक्षिण पश्चिमी घाट में पाए जाते हैं। इस प्रकार के वनों को और किस नाम से जाना जाता है?

Ans ❌ 1. सदाबहार

❌ 2. तराई वन

❌ 3. कंटक वन (थॉर्न)

✔️ 4. शोला वन

Question ID : **6549785061**
Status : **Answered**
Chosen Option : **1**

Q.7 The Reserve Bank of India was established on April 1, 1935 in accordance with the provisions of the:

Ans ❌ 1. Reserve Bank of India Act, 1935

✔️ 2. Reserve Bank of India Act, 1934

❌ 3. Reserve Bank of India Act, 1933

❌ 4. Reserve Bank of India Act, 1936

Question ID : **6549785037**
Status : **Answered**
Chosen Option : **2**

Q.8 The famous Wular Lake and Dal Lake are situated in:

Ans ✔ 1. Jammu and Kashmir

✘ 2. Delhi

✘ 3. Puducherry

✘ 4. Ladakh

Question ID : **6549785062**
Status : **Answered**
Chosen Option : **1**

Q.9 Identify the newest (as of January 2020) Union Territory of India from among the following.

Ans ✘ 1. Puducherry

✘ 2. Chandigarh

✔ 3. Ladakh

✘ 4. Daman and Diu

Question ID : **6549785033**
Status : **Answered**
Chosen Option : **3**

Q.10 The colour of the sky appears blue, because in the atmosphere, blue light is _____ more than the other colours.

Ans ✔ 1. scattered

✘ 2. reflected

✘ 3. diffused

✘ 4. absorbed

Question ID : **6549785054**
Status : **Answered**
Chosen Option : **1**

Q.11 Which of the following is the world's fastest ant species?

Ans ✘ 1. Army ant

✘ 2. Melophorus

✘ 3. Sahara desert ant

✔ 4. Saharan silver ant

Question ID : **6549785057**
Status : **Answered**
Chosen Option : **2**

Q.12 Who is known as India's 'Metro Man'?

Ans ✘ 1. Indira Gandhi

✘ 2. Amartya Sen

✘ 3. JRD Tata

✔ 4. E Sreedharan

Question ID : **6549785056**
Status : **Answered**
Chosen Option : **4**

Q.13 Which of the following regions is known as the 'roof of the world'?

Ans ✔ 1. Tibet

✘ 2. Ladakh

✘ 3. Bhutan

✘ 4. Nepal

Question ID : **6549785059**
Status : **Answered**
Chosen Option : **3**

Q.14 Who was the founder of the 'Bhoodan Yajna' (Land-Gift Movement)?

Ans ✘ 1. Jayaprakash Narayan

✘ 2. Baba Amte

✘ 3. Mahatma Gandhi

✔ 4. Vinoba Bhave

Question ID : **6549785067**
Status : **Answered**
Chosen Option : **2**

Q.15 As per the modern periodic table, which of the following is the element with atomic number 89?

Ans ✔ 1. Actinium

✘ 2. Radium

✘ 3. Dubnium

✘ 4. Promethium

Question ID : **6549785053**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.16 What is the name of the biggest fish in the ocean?

Ans ✔ 1. Whale Shark

✘ 2. Blue Whale

✘ 3. Bazooka Whale

✘ 4. Humpback Whale

Question ID : **6549785044**
Status : **Answered**
Chosen Option : **1**

Q.17 A drop of food colouring spreading out in a cup of water is an example of:

Ans ✘ 1. effusion

✔ 2. diffusion

✘ 3. vapour pressure

✘ 4. osmosis

Question ID : **6549785040**
Status : **Answered**
Chosen Option : **2**

Q.18 In which country is 'Nankana Sahib Gurdwara' located?

Ans
- ✔ 1. Pakistan
- ✘ 2. Nepal
- ✘ 3. Afghanistan
- ✘ 4. India

Question ID : **6549785032**
Status : **Answered**
Chosen Option : **1**

Q.19 Eratosthenes measured the Earth's circumference mathematically using the angle of the sun rays at two different places. Which of the following are these two places?

Ans
- ✘ 1. Alexandria and Troy
- ✘ 2. Memphis and Troy
- ✔ 3. Syene and Alexandria
- ✘ 4. Syene and Troy

Question ID : **6549785063**
Status : **Not Answered**
Chosen Option : **--**

Q.20 What is the full form of HTML?

Ans
- ✔ 1. Hyper Text Markup Language
- ✘ 2. Hyper Text Marginal Language
- ✘ 3. High Talent Marks Language
- ✘ 4. Hyper Talent Marks Language

Question ID : **6549785030**
Status : **Answered**
Chosen Option : **1**

Q.21 Which of the following is NOT an operating system?

Ans
- ✘ 1. Microsoft Windows
- ✔ 2. Google Chrome
- ✘ 3. MS-DOS
- ✘ 4. Linux

Question ID : **6549785029**
Status : **Answered**
Chosen Option : **2**

Q.22 What is the correct full form of NRC?

Ans
- ✘ 1. National Registration of Citizenship
- ✔ 2. National Register of Citizens
- ✘ 3. National Register of Census
- ✘ 4. National Record of Citizens

Question ID : **6549785031**
Status : **Answered**
Chosen Option : **2**

Q.23 Who among the following has served as the Chief Minister of Maharashtra for the shortest tenure ever?

Ans ✔ 1. Devendra Fadnavis

✘ 2. Uddhav Thackeray

✘ 3. Ajit Pawar

✘ 4. Aditya Thackeray

Question ID : **6549785072**
Status : **Answered**
Chosen Option : **1**

Q.24 Which of the following is the longest west flowing River of Peninsular India?

Ans ✘ 1. Krishna

✘ 2. Tapi

✔ 3. Narmada

✘ 4. Godavari

Question ID : **6549785060**
Status : **Answered**
Chosen Option : **4**

Q.25 निम्नलिखित में से किस शहर में सैन्य विद्रोह के बाद 1857 का विद्रोह आरंभ हुआ था?

Ans ✔ 1. मेरठ

✘ 2. दिल्ली

✘ 3. लखनऊ

✘ 4. झांसी

Question ID : **6549785066**
Status : **Answered**
Chosen Option : **3**

Q.26 'ASSOCHAM' is the 100 years old trade association of India. What does the acronym ASSOCHAM stand for?

Ans ✘ 1. Association of Chambers

✔ 2. The Associated chambers of commerce and industry of India

✘ 3. The Associated chambers of Trade and commerce

✘ 4. The Associated chambers of commerce

Question ID : **6549785039**
Status : **Answered**
Chosen Option : **2**

Q.27 Who among the following won the Nobel Prize for Physics in 1930?

Ans ✘ 1. Meghnad Saha

✘ 2. SN Bose

✔ 3. CV Raman

✘ 4. Birbal Sahni

Question ID : **6549785052**
Status : **Answered**
Chosen Option : **3**

Q.28 Which of the following Indian cities is the world's fastest-growing city as per a recent estimate put out by the 'Economist' magazine based on 2015-20 projection?

Ans
- ✔️ 1. Malappuram
- ❌ 2. Kollam
- ❌ 3. Surat
- ❌ 4. Kozhikode

Question ID : **6549785035**
Status : **Marked For Review**
Chosen Option : **4**

Q.29 Which of the following is NOT a noble gas?

Ans
- ❌ 1. Argon
- ❌ 2. Helium
- ✔️ 3. Hydrogen
- ❌ 4. Xenon

Question ID : **6549785048**
Status : **Answered**
Chosen Option : **3**

Q.30 ISRO had chosen GSLV Mk III to launch the Chandrayaan-2 spacecraft. What does the abbreviation GSLV stand for?

Ans
- ✔️ 1. Geosynchronous Satellite Launch Vehicle
- ❌ 2. Geostationary Satellite Launch Vehicle
- ❌ 3. Geosynchronous Satellite Landing Vehicle
- ❌ 4. Geostationary Satellite Landing Vehicle

Question ID : **6549785042**
Status : **Answered**
Chosen Option : **2**

Q.31 Alveoli are an important part of the:

Ans
- ❌ 1. digestive system
- ✔️ 2. respiratory system
- ❌ 3. circulatory system
- ❌ 4. nervous system

Question ID : **6549785055**
Status : **Not Answered**
Chosen Option : **--**

Q.32 The cornea is a part of the _____ in the human body.

Ans
- ❌ 1. ears
- ❌ 2. nose
- ✔️ 3. eyes
- ❌ 4. mouth

Question ID : **6549785043**
Status : **Answered**
Chosen Option : **3**

Q.33 When is 'World Heart Day' celebrated every year?

Ans
✅ 1. September 29
❌ 2. September 19
❌ 3. August 29
❌ 4. August 19

Question ID : **6549785051**
Status : **Not Answered**
Chosen Option : **--**

Q.34 दिसंबर 2019 में निम्नलिखित में से किस वेब पोर्टल का आरंभ दूरसंचार विभाग (DoT) द्वारा दिल्ली में चोरी/ खोए हुए मोबाइल फ़ोनों को बंद करवाने और उनका पता लगाने की सुविधा हेतु किया गया था?

Ans
❌ 1. रजिस्टर फ़ॉर इक्विपमेंट आईडेंटिटी (Register for Equipment Identity)
✅ 2. सेंट्रल इक्विपमेंट आईडेंटिटी रजिस्टर (Central Equipment Identity Register)
❌ 3. सेंट्रल गवर्नमेंट रजिस्टर फ़ॉर इक्विपमेंट आईडेंटिटी (Central Government Register for Equipment Identity)
❌ 4. सेंट्रल रजिस्टर फ़ॉर इक्विपमेंट आईडेंटिटी (Central Register for Equipment Identity)

Question ID : **6549785036**
Status : **Not Answered**
Chosen Option : **--**

Q.35 पादाभ (स्यूडोपोडिया) से क्या अभिप्राय है?

Ans
❌ 1. अन्य कोशिकाओं को समाप्त करने में प्रयुक्त अंग
✅ 2. कोशिका द्रव्य से भरा बाँह सदृश प्रवर्ध
❌ 3. पाचन के लिए सहायक अंग
❌ 4. प्रोटोप्लाज़्म से भरा सिर सदृश प्रवर्ध

Question ID : **6549785049**
Status : **Answered**
Chosen Option : **4**

Q.36 Which of the following teams lifted the 7th National Ice Hockey Championship Women's trophy in January 2020?

Ans
❌ 1. Chandigarh
❌ 2. Maharashtra
✅ 3. Ladakh
❌ 4. Tamil Nadu

Question ID : **6549785078**
Status : **Answered**
Chosen Option : **2**

Q.37 यू.एस. (US) कांग्रेस में, निम्नलिखित में से वह कौन पहली हिंदू सांसद है, जो प्राथमिक (primaries) और 2020 के राष्ट्रपति पद के नामांकन के लिए लोकतांत्रिक पार्टी की प्रत्याशी हैं?

Ans
❌ 1. कमला हैरिस
❌ 2. निक्की हेली
❌ 3. प्रमिला जयपाल
✅ 4. तुलसी गेबार्ड

Question ID : **6549785076**
Status : **Answered**
Chosen Option : **4**

Q.38 Who among the following moved 'objective resolution' in the constituent assembly?

Ans
- ✗ 1. Sardar Patel
- ✗ 2. BR Ambedkar
- ✗ 3. BN Rau
- ✓ 4. Jawaharlal Nehru

Question ID : **6549785073**
Status : **Answered**
Chosen Option : **2**

Q.39 Which of the following union territories serves as the joint capital of two states?

Ans
- ✗ 1. Ladakh
- ✗ 2. Puducherry
- ✓ 3. Chandigarh
- ✗ 4. Lakshadweep

Question ID : **6549785058**
Status : **Answered**
Chosen Option : **3**

Q.40 Which of the following is an **autobiographical work by Dr. BR Ambedkar that is used as a text book in the Columbia University (US)?**

Ans
- ✓ 1. Waiting for a Visa
- ✗ 2. Who were the Shudras?
- ✗ 3. Riddles in Hinduism
- ✗ 4. Annihilation of Caste

Question ID : **6549785068**
Status : **Answered**
Chosen Option : **2**

Q.41 Which of the following passes is located at the tri-junction border of India, China and Myanmar?

Ans
- ✗ 1. Khardung
- ✗ 2. Bum
- ✓ 3. Diphu
- ✗ 4. Tulung

Question ID : **6549785064**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.42 "Do not wait for leaders; do it alone, person to person". Who **said this famous line?**

Ans
- ✓ 1. Mother Teresa
- ✗ 2. Ramkrishna Paramhansa
- ✗ 3. Swami Vivekanand
- ✗ 4. Dayanand Sarswati

Question ID : **6549785069**
Status : **Marked For Review**
Chosen Option : **1**

Q.43 Which of the following caves is NOT included in the list of the UNESCO World Heritage Sites?

Ans   ✗ 1. Elephanta Caves

     ✗ 2. Ajanta Caves

     ✔ 3. Karla Caves

     ✗ 4. Ellora Caves

Question ID : **6549785065**
Status : **Answered**
Chosen Option : **3**

Q.44 Norwegian saltpeter is a synonym for which of the following chemicals?

Ans   ✗ 1. Calcium phosphate

     ✔ 2. Calcium nitrate

     ✗ 3. Calcium chloride

     ✗ 4. Calcium carbonate

Question ID : **6549785047**
Status : **Answered**
Chosen Option : **1**

Q.45 आप एक मार्सूपियल (marsupial) की पहचान कैसे कर सकते हैं?

Ans   ✗ 1. वे दलदल में रहते हैं।

     ✗ 2. वे पानी में रहते हैं।

     ✔ 3. वे अपने बच्चों को एक थैली में विकसित करते हैं।

     ✗ 4. उनके पूँछ नहीं होती है।

Question ID : **6549785050**
Status : **Answered**
Chosen Option : **1**

Q.46 What is the main constituent of the Sun?

Ans   ✗ 1. Helium

     ✗ 2. Oxygen

     ✔ 3. Hydrogen

     ✗ 4. Methane

Question ID : **6549785045**
Status : **Answered**
Chosen Option : **3**

Q.47 Who among the following became the first woman Republic Day Parade Adjutant in January 2020?

Ans   ✗ 1. Mitali Madhumita

     ✔ 2. Tania Shergill

     ✗ 3. Seema Rao

     ✗ 4. Gunjan Saxena

Question ID : **6549785071**
Status : **Not Answered**
Chosen Option : **--**

Q.48 Who has been appointed as a Deputy Governor of RBI in January 2020?

Ans ✗ 1. S S Mundra

✗ 2. Urjit R Patel

✗ 3. Viral V Acharya

✓ 4. Michael Patra

Question ID : **6549785038**
Status : **Not Answered**
Chosen Option : **--**

Q.49 Who has been appointed as a Senior Security Adviser in the Union Home Ministry in December 2019?

Ans ✗ 1. K Shiva Kumar

✓ 2. K Vijay Kumar

✗ 3. Ajit Doval

✗ 4. S Jaishankar

Question ID : **6549785074**
Status : **Not Answered**
Chosen Option : **--**

Q.50 What is the liquid component of blood?

Ans ✓ 1. Plasma

✗ 2. White Blood Cells

✗ 3. Red Blood Cells

✗ 4. Platelets

Question ID : **6549785046**
Status : **Answered**
Chosen Option : **1**

Section : **General Engineering Mechanical**

Q.1 The number of possible inversions for a mechanism with 10 numbers of links will be:

Ans ✗ 1. 5

✗ 2. 0

✗ 3. 2

✓ 4. 10

Question ID : **6549785081**
Status : **Answered**
Chosen Option : **4**

Q.2 The most appropriate example of _____ boiler is Cornish boiler.

Ans ✓ 1. fire tube

✗ 2. water tube

✗ 3. flue gas

✗ 4. multi-tubular

Question ID : **6549785117**
Status : **Answered**
Chosen Option : **1**

Q.3 Air-cooled engine's efficiency is _____ than/as water-cooled engine for the same power rating.

Ans
- ✗ 1. Same
- ✓ 2. more
- ✗ 3. less
- ✗ 4. More or less depends upon operation

Question ID : **6549785108**
Status : **Marked For Review**
Chosen Option : **3**

Q.4 Pick the correct order of various turbines with respect to specific speed.

Ans
- ✗ 1. Pelton > Kaplan > Francis
- ✗ 2. Francis > Pelton > Kaplan
- ✓ 3. Kaplan > Francis > Pelton
- ✗ 4. Kaplan > Pelton > Francis

Question ID : **6549785165**
Status : **Answered**
Chosen Option : **3**

Q.5 Cementite has chemical formula:

Ans
- ✗ 1. Fe_4C
- ✗ 2. Fe_2C_2
- ✓ 3. Fe_3C
- ✗ 4. Fe_2C

Question ID : **6549785176**
Status : **Answered**
Chosen Option : **3**

Q.6 If x represents the dryness fraction of steam, the specific volume of wet steam is given by:

Ans
- ✗ 1. $X^2 v_f$
- ✗ 2. $X v_f$
- ✗ 3. $X^2 v_g$
- ✓ 4. $x v_g$

Question ID : **6549785090**
Status : **Answered**
Chosen Option : **2**

Q.7 To achieve maximum efficiency in practice, centrifugal pump has blades that are:

Ans ✗ 1. straight

✓ 2. bent backward

✗ 3. Sine curve

✗ 4. bent forward

Question ID : **6549785172**
Status : **Answered**
Chosen Option : **2**

Q.8 'The rate of change of momentum is equal to the applied force and it takes place in the direction of the force' is a statement of:

Ans ✗ 1. Continuity equation

✗ 2. Pascal`s equation

✓ 3. Impulse - Momentum of equation

✗ 4. Darcy`s equation

Question ID : **6549785159**
Status : **Answered**
Chosen Option : **3**

Q.9 Direction of a natural process is dictated by the _____ law of thermodynamics.

Ans ✗ 1. zeroth

✗ 2. third

✗ 3. first

✓ 4. second

Question ID : **6549785096**
Status : **Answered**
Chosen Option : **4**

Q.10 Slip in case of a centrifugal pump:

Ans ✗ 1. increases the flow rate

✗ 2. reduces flow rate

✗ 3. increases the energy transfer

✓ 4. reduces the energy transfer

Question ID : **6549785173**
Status : **Marked For Review**
Chosen Option : **1**

Q.11 Rankine cycle has:

Ans
- ✗ 1. two isochoric and two isobaric processes
- ✗ 2. two isothermal and two isobaric processes
- ✓ 3. two isentropic and two isobaric processes
- ✗ 4. two adiabatic and two isobaric processes

Question ID : **6549785111**
Status : **Answered**
Chosen Option : **3**

Q.12 A Diesel engine has cut-off ratio 2 and compression ratio 20. Assuming γ = 1.4 for air, its air standard efficiency will be (Use $(2)^{1.4}$ = 2.639):

Ans
- ✗ 1. 39.6%
- ✗ 2. 72.3%
- ✗ 3. 54.5%
- ✓ 4. 64.7%

Question ID : **6549785101**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.13 Morse test is used to find:

Ans
- ✗ 1. thermal efficiency
- ✗ 2. volumetric efficiency
- ✗ 3. compression ratio
- ✓ 4. indicated Power

Question ID : **6549785103**
Status : **Answered**
Chosen Option : **4**

Q.14 Draught is produced in locomotive boiler by:

Ans
- ✓ 1. steam jet
- ✗ 2. critical fan
- ✗ 3. chimney
- ✗ 4. locomotion

Question ID : **6549785121**
Status : **Marked For Review**
Chosen Option : **2**

Q.15 A turbine rotates at 600 rpm. If moment of momentum of working fluid is reduced by 15.915 kNm, then power developed in MW is:

Ans ✔ 1. 1
✘ 2. 2
✘ 3. 1.5
✘ 4. 2.5

Question ID : 6549785169
Status : **Answered**
Chosen Option : **1**

Q.16 In a refrigeration plant, removal of air to maintain pressure is termed as:

Ans ✘ 1. surging
✘ 2. charging
✔ 3. purging
✘ 4. merging

Question ID : 6549785136
Status : **Marked For Review**
Chosen Option : **3**

Q.17 Strain has dimension as:

Ans ✘ 1. $M^1L^0T^0$
✘ 2. $M^0L^0T^1$
✘ 3. $M^0L^1T^0$
✔ 4. $M^0L^0T^0$

Question ID : 6549785084
Status : **Answered**
Chosen Option : **4**

Q.18 Ratio of Power available at the rotor shaft to Power supplied by water to the runner is _____ efficiency.

Ans ✔ 1. overall
✘ 2. volumetric
✘ 3. hydraulic
✘ 4. mechanical

Question ID : 6549785166
Status : **Marked For Review**
Chosen Option : **3**

Q.19 In Bell-Coleman cycle, the refrigeration effect happens at constant:

Ans
- ✗ 1. enthalpy
- ✗ 2. volume
- ✗ 3. entropy
- ✔ 4. pressure

Q.20 The condition for the length of convergent part (L) and the length of divergent part (L_1) in a venturimeter is:
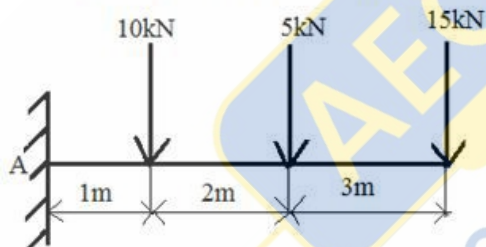
Ans
- ✗ 1.

length of convergent part is equal to length of divergent part

- ✗ 2.

length of convergent part is greater than length of divergent part

- ✗ 3.

there is no such restrictions for the length of convergent and divergent parts

- ✔ 4.

length of convergent part is less than length of divergent part

Q.21 The reaction and bending moments at point A of the cantilever beam are:

Ans
- ✔ 1. $R_A = 30kN$ and $M_A = -115kNm$
- ✗ 2. $R_A = 30kN$ and $M_A = 0kNm$
- ✗ 3. $R_A = 30kN$ and $M_A = -125kNm$
- ✗ 4. $R_A = 0kN$ and $M_A = -115kNm$

Q.22 A cylindrical metal bar of 12 mm diameter is loaded by an axial force of 20 kN results in change in diameter by 0.003 mm. Poisson's ratio is given by: (Assume modulus of rigidity = 80 GPa)

Ans
- ✔ 1. 0.2923
- ✘ 2. 0.056
- ✘ 3. 0.025
- ✘ 4. 0.56

Question ID : **6549785086**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.23 In an isentropic process, the pressure P of a gas varies with temperature T as $P = k\,T^{5/2}$ where k is a constant. The ratio $\gamma\ (= Cp/Cv)$ of the gas is:

Ans
- ✔ 1. $\dfrac{5}{3}$
- ✘ 2. $\dfrac{9}{5}$
- ✘ 3. $\dfrac{7}{5}$
- ✘ 4. $\dfrac{3}{2}$

Question ID : **6549785091**
Status : **Answered**
Chosen Option : **1**

Q.24 Which of the following processes is NOT comprised by Diesel cycle?

Ans
- ✔ 1. Addition of heat at constant volume
- ✘ 2. Adiabatic expansion and compression
- ✘ 3. Rejection of heat at constant volume
- ✘ 4. Addition of heat at constant pressure

Question ID : **6549785099**
Status : **Answered**
Chosen Option : **1**

Q.25 Critical temperature of water in degrees is:

Ans
- ✘ 1. 273
- ✔ 2. 374.15
- ✘ 3. 273.15
- ✘ 4. 100

Question ID : **6549785088**
Status : **Answered**
Chosen Option : **2**

Q.26 In a free vortex, the flow is:

Ans
- ✗ 1. rotational
- ✔ 2. irrotational
- ✗ 3. rotational or irrotational
- ✗ 4. neither rotational nor irrotational

Question ID : **6549785158**
Status : **Answered**
Chosen Option : **2**

Q.27 Using a dynamometer, _____ power of an IC engine is determined.

Ans
- ✗ 1. friction
- ✔ 2. brake
- ✗ 3. indicated
- ✗ 4. fuel

Question ID : **6549785104**
Status : **Answered**
Chosen Option : **2**

Q.28 Air is compressed in a single stage reciprocating compressor at the rate of 1 kg/s from 1 bar at 22°C to 8 bar. If $\gamma = 1.4$ and R = 287 J/kg.K for air, also take $(8)^{0.286} = 1.812$ and $\ln(8) = 2.079$, Difference in work required if compression was isentropic and isothermal :

Ans
- ✗ 1. 240.45 kW
- ✗ 2. 218.32 kW
- ✗ 3. 176.06 kW
- ✔ 4. 64.39 kW

Question ID : **6549785129**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.29 If a thermometer is used to measure temperature in a moving steam in a nozzle, it measures _____ temperature.

Ans
- ✗ 1. dynamic
- ✗ 2. static
- ✔ 3. stagnation
- ✗ 4. wet-bulb

Question ID : **6549785139**
Status : **Marked For Review**
Chosen Option : **4**

Q.30 The numerical designation of air as refrigerant is:

Ans
1. 717 ✗
2. 718 ✗
3. 729 ✓
4. 744 ✗

Question ID : **6549785134**
Status : **Answered**
Chosen Option : **3**

Q.31 In a nozzle, steam is flowing. If the back pressure is equal to the critical pressure, the mass flow rate of steam is:

Ans
1. mean ✗
2. maximum ✓
3. minimum ✗
4. zero ✗

Question ID : **6549785140**
Status : **Marked For Review**
Chosen Option : **2**

Q.32 The process by which air inside a centrifugal pump is removed and filled with liquid to be pumped is called:

Ans
1. priming ✓
2. sweeping ✗
3. pumping ✗
4. purging ✗

Question ID : **6549785171**
Status : **Answered**
Chosen Option : **1**

Q.33 A Francis turbine has an overall efficiency of 83%. If it develops power of 500 kW under a net head of 3000 cm, the discharge through turbine in m^3/s is:

Ans
1. 2.50 ✗
2. 20.50 ✗
3. 25.0 ✗
4. 2.05 ✓

Question ID : **6549785170**
Status : **Answered**
Chosen Option : **4**

Q.34 all reaction turbine will have maximum efficiency if swirl velocity at the outlet will be equal to:

Ans
1. zero ✓
2. runner inlet velocity ✗
3. runner outlet velocity ✗
4. inlet swirl velocity ✗

Question ID : **6549785164**
Status : **Marked For Review**
Chosen Option : **2**

Q.35 If density of mercury is 13.58 g/cc, pressure of 4 kPa is equivalent to:

Ans

✗ 1. 100 mm Hg

✗ 2. 15.02 mm Hg

✗ 3. 60.08 mm Hg

✓ 4. 30.04 mm Hg

Question ID : **6549785145**
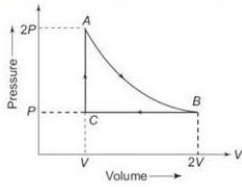Status : **Answered**
Chosen Option : **4**

Q.36 A heat engine works on dual cycle. It contains:

Ans

✗ 1. two adiabatic, two isothermal and one isobaric processes

✓ 2. two isentropic, two isochoric and one isobaric processes

✗ 3. two isentropic, two isothermal and one isobaric processes

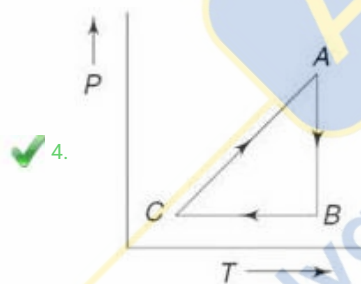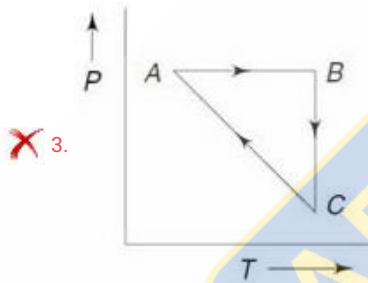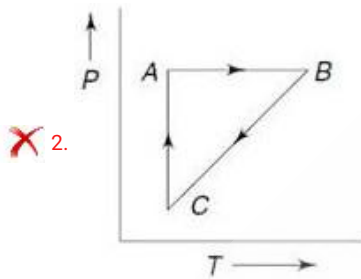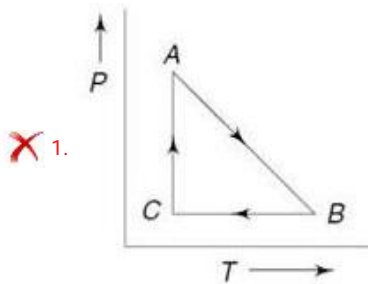✗ 4. two adiabatic, two isochoric and one isobaric processes

Question ID : **6549785100**
Status : **Answered**
Chosen Option : **2**

Q.37 Figure shows the P-V diagram for a fixed mass of an ideal gas undergoing cyclic process ABCA. AB represents isothermal process. Which of the graphs shown in Figure represents the *P-T* diagram of the cyclic process?

Ans

✗ 1.

✗ 2.

✗ 3.

✔ 4.

Question ID : **6549785094**
Status : **Answered**
Chosen Option : **4**

Q.38 Brake thermal efficiency of a 15 kW IC engine is 30%. If the fuel used has CV 40 MJ/kg, then fuel consumption rate in kg/h is:

Ans
✔ 1. 4.5
✗ 2. 1
✗ 3. 3
✗ 4. 2.5

Question ID : **6549785106**
Status : **Answered**
Chosen Option : **1**

Q.39 The pressure ratio known as critical pressure ratio for maximum discharge through the nozzle is given by:

Ans

✗ 1. $\dfrac{p_2}{p_1} = \left(\dfrac{n+1}{2}\right)^{n/n-1}$

✗ 2. $\dfrac{p_2}{p_1} = \left(\dfrac{2}{n+1}\right)^{n-1/n}$

✔ 3. $\dfrac{p_2}{p_1} = \left(\dfrac{2}{n+1}\right)^{n/n-1}$

✗ 4. $\dfrac{p_2}{p_1} = \left(\dfrac{n+1}{2}\right)^{n-1/n}$

Q.40 The water is flowing through a pipe having areas 0.05m² and 0.01m² at sections 1 and 2 respectively. The rate of flow through the pipe is 50 litres per second in section 1. The velocity at sections 1 and 2 are:

Ans

✗ 1. $V_1 = 0.1\text{m/s}$ and $V_2 = 5\text{m/s}$

✗ 2. $V_1 = 1\text{m/s}$ and $V_2 = 0.5\text{m/s}$

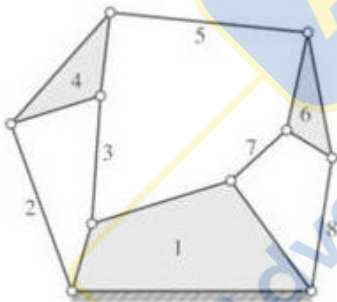✗ 3. $V_1 = 0.1\text{m/s}$ and $V_2 = 0.5\text{m/s}$

✔ 4. $V_1 = 1\text{m/s}$ and $V_2 = 5\text{m/s}$

Q.41 Mobility of the shown mechanism is:

Ans

✗ 1. 0

✗ 2. 2

✗ 3. 3

✔ 4. 1

Q.42 Steam jet draught is used in _____ boiler(s).

Ans
- ✗ 1. Cochran
- ✓ 2. locomotive
- ✗ 3. Lancashire and Cochran
- ✗ 4. Lancashire

Question ID : **6549785122**
Status : **Marked For Review**
Chosen Option : **3**

Q.43 Bourdon gauge is used to measure _____ pressure.

Ans
- ✗ 1. local atmospheric
- ✗ 2. standard atmospheric
- ✓ 3. gauge
- ✗ 4. absolute

Question ID : **6549785150**
Status : **Answered**
Chosen Option : **3**

Q.44 In a floating body, the buoyancy force acts through the centre of gravity of the displaced volume of the fluid is termed as:

Ans
- ✗ 1. centre of gravity
- ✗ 2. centre of activity
- ✓ 3. centre of buoyancy
- ✗ 4. metacenter

Question ID : **6549785147**
Status : **Answered**
Chosen Option : **3**

Q.45 The rate of steam generation in water tube boiler in comparison to fire tube boiler is:

Ans
- ✗ 1. less
- ✗ 2. more or less the same
- ✓ 3. more
- ✗ 4. equal

Question ID : **6549785116**
Status : **Marked For Review**
Chosen Option : **1**

Q.46 A diatomic gas is enclosed in a piston cylinder arrangement at a pressure of 3 bar and 300 K. The cylinder has the volume of 1.5 m^3. The process undergoes isothermal expansion to 3 m^3. If the gas has a gas constant as 1.486 kJ/kg, using, ln2 = 0.693, entropy change during the above process in kJ/kg is:

Ans   ✔ 1. 1.03

   ✘ 2. 1.20

   ✘ 3. 1.65

   ✘ 4. 1.15

Question ID : 6549785097
Status : **Answered**
Chosen Option : **1**

Q.47 The coefficient of velocity, C$_v$ for an orifice is 0.98. Head loss at the orifice for discharge under a head of 200 cm is:

Ans   ✘ 1. 0.8 cm

   ✔ 2. 8 cm

   ✘ 3. 80 cm

   ✘ 4. 2 cm

Question ID : 6549785163
Status : **Marked For Review**
Chosen Option : **2**

Q.48 Air is compressed is entropically in a compressor from 1 bar to 5 bar. Assuming γ = 1.4 for air and clearance volume is 5% of swept volume, the volumetric efficiency of the compressor is (Take (5)$^{0.714}$ = 3.157):

Ans   ✔ 1. 89.21%

   ✘ 2. 99.21%

   ✘ 3. 92.67%

   ✘ 4. 93.01%

Question ID : 6549785128
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.49 Discharge over cipolletti weir of length 200 cm for a head over weir of 100 cm in m^3/s is:

Ans   ✘ 1. 0.366

   ✘ 2. 36.6

   ✘ 3. 0.00366

   ✔ 4. 3.66

Question ID : 6549785162
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.50 Steam trap in a boiler is primarily used for/to:

Ans   ✗ 1. separate the steam

    ✔ 2. discharging the condensate

    ✗ 3. lift the steam

    ✗ 4. reheat the steam

Question ID : **6549785123**
Status : **Answered**
Chosen Option : **1**

Q.51 Operating pressure for once through boiler is:

Ans   ✗ 1. subcritical

    ✗ 2. subcritical and critical

    ✔ 3. super-critical

    ✗ 4. critical

Question ID : **6549785120**
Status : **Marked For Review**
Chosen Option : **3**

Q.52 Toggle mechanism is NOT used in:

Ans   ✔ 1. gear cutting

    ✗ 2. switches

    ✗ 3. stone crushing

    ✗ 4. embossing

Question ID : **6549785079**
Status : **Answered**
Chosen Option : **1**

Q.53 If an IC engine consumes fuel at the rate of 1 g/s and if the air-fuel ratio for it is 20, the mass flow rate of exhaust gas in g/s is:

Ans   ✗ 1. 19

    ✔ 2. 21

    ✗ 3. 1

    ✗ 4. 20

Question ID : **6549785105**
Status : **Answered**
Chosen Option : **2**

Q.54 At _____ point in a flow field, the components of the velocity vector are identically zero.

Ans ✗ 1. uniform

✔ 2. stagnation

✗ 3. unsteady

✗ 4. steady

Q.55 Maximum efficiency of heat engine is produced by _____ cycle:

Ans ✗ 1. Diesel

✗ 2. Otto

✔ 3. Carnot

✗ 4. dual

Q.56 Figure shows the *P-V* diagram of an ideal gas. The work done by the gas in the process *ABCDA* is:
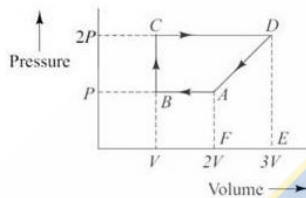
Ans ✗ 1. 0.5PV

✗ 2. 2PV

✔ 3. 1.5PV

✗ 4. 4PV

Q.57 When solidification starts, iron will appear in _____ form.

Ans ✗ 1. alpha

✗ 2. beta

✔ 3. delta

✗ 4. gamma

Q.58 For fluid the shear stress is directly proportional to:

Ans
- ✔ 1. strain rate
- ✘ 2. size
- ✘ 3. strain
- ✘ 4. shape

Question ID : **6549785143**
Status : **Answered**
Chosen Option : **1**

Q.59 TTT curves are _____ curves.

Ans
- ✔ 1. isothermal
- ✘ 2. adiabatic
- ✘ 3. isentropic
- ✘ 4. isochoric

Question ID : **6549785175**
Status : **Marked For Review**
Chosen Option : **1**

Q.60 Throttling calorimeter measures dryness fraction up to:

Ans
- ✘ 1. 0.68
- ✔ 2. 0.98
- ✘ 3. 0.56
- ✘ 4. 0.76

Question ID : **6549785089**
Status : **Marked For Review**
Chosen Option : **1**

Q.61 On T-S diagram, constant pressure line slope is expressed as:

Ans
- ✘ 1. $Cp/\gamma T$
- ✔ 2. T/c_p
- ✘ 3. T/S
- ✘ 4. S/T

Question ID : **6549785098**
Status : **Answered**
Chosen Option : **2**

Q.62 If stress measuring device shows reading as 1 MPa. It is equivalent to:

Ans
- ✗ 1. 10 N/mm^2
- ✗ 2. 1 MN/mm^2
- ✗ 3. 1 kN/mm^2
- ✓ 4. 1 N/mm^2

Question ID : **6549785083**
Status : **Answered**
Chosen Option : **4**

Q.63 Air is compressed is entropically in a single stage single acting compressor from an initial condition of 1 bar and 30°C to 5 bar. If $\gamma = 1.4$ and R = 287 J/kg.K for air, work of compression for unit mass flow rate of air is (Use $(5)^{0.286} = 1.584$):

Ans
- ✗ 1. 198.3 kW
- ✗ 2. 17.769 kW
- ✓ 3. 177.69 kW
- ✗ 4. 205.8 kW

Question ID : **6549785127**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.64 In a multi-cylinder heavy duty engine, mainly _____ lubrication system is used.

Ans
- ✓ 1. pressure feed
- ✗ 2. splash and wet sump
- ✗ 3. splash
- ✗ 4. scoop feed

Question ID : **6549785107**
Status : **Marked For Review**
Chosen Option : **1**

Q.65 Refrigerant-22 has chemical formula:

Ans
- ✗ 1. $CClF_3$
- ✓ 2. $CHClF_2$
- ✗ 3. CCl_2F_3
- ✗ 4. CCl_3F

Question ID : **6549785135**
Status : **Answered**
Chosen Option : **2**

Q.66 Which of the following does NOT require flue gas for operation?

Ans
- ✔ 1. Injector
- ✘ 2. Superheater
- ✘ 3. Economiser
- ✘ 4. Preheater

Question ID : **6549785118**
Status : **Answered**
Chosen Option : **2**

Q.67 In an IC engine, the type of lubrication system used for bearing is mainly:

Ans
- ✘ 1. boundary
- ✘ 2. mixed-film
- ✔ 3. hydrodynamic
- ✘ 4. static

Question ID : **6549785109**
Status : **Answered**
Chosen Option : **3**

Q.68 If mechanical efficiency of a Pelton Turbine is 80% and its hydraulic efficiency is 85%, its overall efficiency will be:

Ans
- ✘ 1. 50%
- ✘ 2. 75%
- ✔ 3. 68%
- ✘ 4. 72%

Question ID : **6549785167**
Status : **Answered**
Chosen Option : **3**

Q.69 γ−iron has structure :

Ans
- ✘ 1. BCC
- ✘ 2. HCP
- ✘ 3. SC
- ✔ 4. FCC

Question ID : **6549785174**
Status : **Answered**
Chosen Option : **4**

Q.70 Reversed Brayton cycle is identical with:

Ans
- ✘ 1. Rankine
- ✘ 2. Dual
- ✘ 3. Reversed Carnot
- ✔ 4. Bell-Coleman

Question ID : **6549785130**
Status : **Answered**
Chosen Option : **4**

Q.71 Which of the following is NOT an accessory of a boiler?

Ans
- ✗ 1. Economiser
- ✗ 2. Water pump for feeding
- ✓ 3. Condenser
- ✗ 4. Air preheater

Question ID : **6549785119**
Status : **Answered**
Chosen Option : **3**

Q.72 An air refrigeration system works on Bell-Coleman cycle. It draws air at the rate of 1 kg/s from the cold chamber at 1 bar and 5°C. Air is compressed to 7 bar and then is cooled to 25°C before sending it to expansion cylinder. Given $\gamma = 1.4$ $c_p = 1.005$ kJ/kg.K and $7^{0.286} = 1.745$. Refrigeration effect for this system in tonne per hour, is:

Ans
- ✗ 1. 15.8
- ✓ 2. 30.6
- ✗ 3. 3.06
- ✗ 4. 1.58

Question ID : **6549785138**
Status : **Not Answered**
Chosen Option : **--**

Q.73 Ideal refrigeration system is used to cool the system at 5°C. Heat rejection happens at 100°C. If ambient temperature is 30°C, COP of the system is:

Ans
- ✗ 1. 4.05
- ✗ 2. 3.54
- ✗ 3. 1.56
- ✓ 4. 2.93

Question ID : **6549785132**
Status : **Marked For Review**
Chosen Option : **2**

Q.74 In a bucket of water, Piezometric head:

Ans
- ✗ 1. increases in horizontal direction
- ✓ 2. increases linearly in vertical direction
- ✗ 3. decreases in horizontal direction
- ✗ 4. remains constant at every point

Question ID : **6549785149**
Status : **Marked For Review**
Chosen Option : **4**

Q.75 If the velocity of flow at a particular point or at a section does NOT change with respect to time, then the flow is known as:

Ans
✔ 1. steady flow

✘ 2. unsteady flow

✘ 3. laminar flow

✘ 4. turbulent flow

Question ID : **6549785154**
Status : **Answered**
Chosen Option : **1**

Q.76 Using Willan's line, _____ power of an engine is calculated.

Ans
✘ 1. brake

✘ 2. indicated

✔ 3. frictional

✘ 4. theoretical indicated

Question ID : **6549785102**
Status : **Answered**
Chosen Option : **4**

Q.77 Dimension of absolute pressure is:

Ans
✘ 1. $M^1L^1T^{-2}$

✔ 2. $M^1L^{-1}T^{-2}$

✘ 3. $M^1L^{-1}T^{--2}$

✘ 4. $M^1L^{-1}T^{-1}$

Question ID : **6549785146**
Status : **Answered**
Chosen Option : **2**

Q.78 A rubber ball is thrown vertically upward with a velocity u from the top of a building. It strikes the ground with a velocity 3u. The time taken by the ball to reach the ground is given by:

Ans
✔ 1. 4u/g

✘ 2. 3u/g

✘ 3. 2u/g

✘ 4. u/g

Question ID : **6549785085**
Status : **Marked For Review**
Chosen Option : **1**

Q.79 The flow field is expressed as u = a cosα and v = a sinα for constant a and α. The equation of streamline passing through origin in this flow field is calculated by:

Ans

✗ 1. $y = \dfrac{x}{tanα}$

✓ 2. $y = x \, tanα$

✗ 3. $Y = x^2$

✗ 4. $Y = x^2 tanα$

> Question ID : **6549785157**
> Status : **Answered**
> Chosen Option : **2**

Q.80 Sub-cooling in a vapour compression refrigeration system _____ enthalpy of liquid refrigerant below saturation level.

Ans

✗ 1. enhances

✗ 2. keeps same

✓ 3. reduces

✗ 4. may reduce or enhance

> Question ID : **6549785137**
> Status : **Answered**
> Chosen Option : **3**

Q.81 Water is flowing in a pipe of 200 cm diameter under a pressure head of 10000 cm. The thickness of the pipe wall is 0.75 cm. The tensile stress in the pipe wall in MPa is:

Ans

✗ 1. 13.05

✗ 2. 100

✓ 3. 130.5

✗ 4. 1305

> Question ID : **6549785152**
> Status : **Not Attempted and Marked For Review**
> Chosen Option : **--**

Q.82 Relation between shear stress and velocity gradient for Newtonian fluid is:

Ans

✗ 1. exponential

✓ 2. linear

✗ 3. logarithmic

✗ 4. non-linear

> Question ID : **6549785142**
> Status : **Answered**
> Chosen Option : **2**

Q.83 During suction of air in CI engine, the pressure in cylinder will be _____ atmospheric.

Ans
✔ 1. less than
✘ 2. more than
✘ 3. More or less as
✘ 4. equal to

Question ID : **6549785126**
Status : **Answered**
Chosen Option : **1**

Q.84 Pick the correct example of fire-tube boiler.

Ans
✘ 1. Wilcox
✘ 2. La-Mont
✘ 3. Benson
✔ 4. Cochran

Question ID : **6549785113**
Status : **Answered**
Chosen Option : **4**

Q.85 The absolute pressure at a depth of 500 cm below the surface of a fluid of relative density 0.85 is equal to:

Ans
✘ 1. 1.410 MPa
✘ 2. 141.0 MPa
✘ 3. 14.10 MPa
✔ 4. 0.141 MPa

Question ID : **6549785151**
Status : **Answered**
Chosen Option : **4**

Q.86 A closed container is termed as boiler if its volume exceeds _____ litres.

Ans
✘ 1. 10
✘ 2. 50
✘ 3. 100
✔ 4. 22.75

Question ID : **6549785114**
Status : **Marked For Review**
Chosen Option : **2**

Q.87 Dimension of specific volume is:

Ans
✔ 1. $L^3M^{-1}T^0$
✘ 2. $L^3M^1T^1$
✘ 3. $L^3M^1T^2$
✘ 4. $L^1M^3T^0$

Question ID : **6549785144**
Status : **Answered**
Chosen Option : **1**

Q.88 Rankine cycle efficiency is _____ than/as Carnot cycle efficiency if both work under the same operating temperatures.

Ans
- ✗ 1. Can be less or more
- ✗ 2. Same
- ✓ 3. less
- ✗ 4. more

Question ID : **6549785110**
Status : **Answered**
Chosen Option : **3**

Q.89 In Kaplan Turbine, the flow velocity:

Ans
- ✗ 1. directly proportional to the radius
- ✗ 2. maximum at midpoint of the radius
- ✗ 3. inversely proportional to the radius
- ✓ 4. is constant along the radius

Question ID : **6549785168**
Status : **Marked For Review**
Chosen Option : **4**

Q.90 Lead screw of a lathe machine is an example of a _____ pair.

Ans
- ✗ 1. sliding
- ✗ 2. turning
- ✓ 3. screw
- ✗ 4. rolling

Question ID : **6549785080**
Status : **Answered**
Chosen Option : **1**

Q.91 The compressor can deliver maximum theoretical volume of air known as:

Ans
- ✗ 1. swept volume + clearance volume
- ✗ 2. total volume
- ✓ 3. swept volume
- ✗ 4. free volume

Question ID : **6549785125**
Status : **Answered**
Chosen Option : **2**

Q.92 If regeneration is used in Rankine cycle system, under ideal condition efficiency _____ Carnot cycle.

Ans
✔ 1. will be equal to

✘ 2. will be less than

✘ 3. will be more than

✘ 4. may be more than

Q.93 If fluid properties in a flow are constant with space at any instant of time, the flow is termed as:

Ans
✔ 1. uniform

✘ 2. non-uniform

✘ 3. steady

✘ 4. unsteady

Q.94 A velocity potential function exits when the flow is:

Ans
✘ 1. rotational

✘ 2. tangential

✘ 3. parallel

✔ 4. irrotational

Q.95 In an isentropic process, the pressure of a monoatomic ideal gas increases by 0.5%. The volume will decrease (in %) by (Take $(0.995)^{0.625} = 0.997$):

Ans
✘ 1. 0.4

✔ 2. 0.3

✘ 3. 0.2

✘ 4. 0.1

Q.96 If metacentric height of a floating object is positive, the object will be in:

Ans
✔ 1. stable equilibrium

✘ 2. stable or unstable equilibrium

✘ 3. unstable equilibrium

✘ 4. neutral equilibrium

> Question ID : **6549785148**
> Status : **Answered**
> Chosen Option : **1**

Q.97 A Carnot refrigerator is used to maintain temperature at -30°C that requires 1.28 kW per ton of refrigeration. The heat rejected in kW per tonne refrigeration is:

Ans
✘ 1. 3.5

✘ 2. 2.78

✔ 3. 4.78

✘ 4. 5.45

> Question ID : **6549785133**
> Status : **Answered**
> Chosen Option : **3**

Q.98 _____ boiler is an example of once-through boilers.

Ans
✔ 1. Benson

✘ 2. La-Mont

✘ 3. Benson and La-Mont

✘ 4. Loeffler

> Question ID : **6549785115**
> Status : **Answered**
> Chosen Option : **1**

Q.99 Carbon percentage present in iron more than 4.3% is termed as:

Ans
✘ 1. Hypoeutectoid steel

✘ 2. Hypereutectoid steel

✔ 3. hypereutectic CI

✘ 4. hypoeutectic CI

> Question ID : **6549785178**
> Status : **Answered**
> Chosen Option : **3**

Q.100 Fusible plug is used in a boiler to/for:

Ans ✔ 1. extinguish the fire

   ✘ 2. preheat steam

   ✘ 3. discharge excess water

   ✘ 4. superheating the steam