Participant ID	
Participant Name	
Test Center Name	iON Digital Zone iDZ 1 Sector 62
Test Date	28/06/2022
Test Time	4:30 PM - 6:30 PM
Subject	Junior Engineer (Civil) or Section O cer (Civil)

Section : **Mental Ability**

Q.1 Manoj is ranked 129th from right end of the row in a stadium and 115th from left end in a same row. How many people are in that row?

Ans ✓ A. 243

✗ B. 245

✗ C. 214

✗ D. 244

Question ID : **1841223293**

Q.2 Which number would replace question mark (?) in the given series?
347, 364, 381, 398, ?

Ans ✗ A. 412

✓ B. 415

✗ C. 417

✗ D. 410

Question ID : **1841223309**

Q.3 Ravi walks 5 km in east direction then he turns left and walks 3 km. Again he turns left and walks 5 km. Finally he turns left again and walks 6 km in morning walk. In which direction is he facing now?

Ans ✗ A. East

✗ B. North

✗ C. West

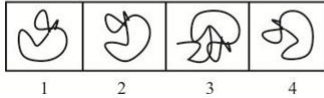✓ D. South

Question ID : **1841223297**

Q.4 Which number would replace question mark (?) in the given series?
729, 665, 601, 537. ?

Ans ✗ A. 499

✗ B. 437

✗ C. 447

✓ D. 473

Question ID : **1841223310**

Q.5 Four figures have been given out of which three are alike in some manner, while the fourth one is different. Choose the figure which is different from the rest.

Answer Fig.

Ans ✗ A. 1

✗ B. 4

✗ C. 2

✓ D. 3

Question ID : **1841223305**

Q.6 Select the option that is related to the third word in the same way as the second word is related to the first word.
Chlorine : Gas :: Lead : ?

Ans ✗ A. Lead

✗ B. Liquid

✓ C. Solid

✗ D. Gas

Question ID : **1841223300**

Q.7 Which of the following meaningful word can NOT be formed by using the letters of the word ACROTROPHONEUROSIS?

Ans ✗ A. Across

✗ B. Phone

✓ C. Trophy

✗ D. Actress

Question ID : **1841223296**

Q.8 Two statements numbered I and II are given. There may be cause and effect relationship between the two statements. These two statements may be the effect of the same cause or independent causes. These statements may be independent causes without having any relationship. Read both the statements and mark your answer accordingly.
I. DOE asked the teachers to arrange special classes for upcoming board exams of X and XII.
II. Students of X and XII are started attending special classes organized by schools.

Ans
✗ A. Statement II is the cause and statement I is its effect.

✗ B. Both the statements I and II are independent causes.

✔ C. Statement I is the cause and statement II is its effect.

✗ D. Both the statements I and II are effects of independent causes.

Question ID : **1841223303**

Q.9 Select the correct mirror image of the given figure when the mirror is placed to the right side.

Ans

✗ A.

✔ B.

✗ C.

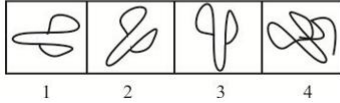
✗ D.

Question ID : **1841223307**

Q.10 Which letter cluster would replace question mark (?) in the given series?
BC, GX, LS, QN, ?

Ans
✗ A. IF

✗ B. VF

✗ C. IV

✔ D. VI

Question ID : **1841223295**

Q.11 Four figures have been given out of which three are alike in some manner, while the fourth one is different. Choose the figure which is different from the rest.
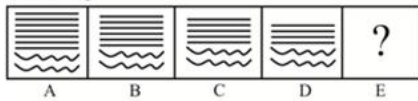
Answer Fig.

1   2   3   4

Ans ✘ A. 1

    ✔ B. 4
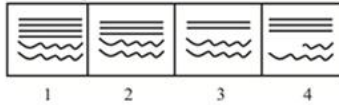
    ✘ C. 3

    ✘ D. 2

Question ID : **1841223306**

Q.12 Select the option that will correctly replace the question mark (?) and complete the series.

Problem Fig.

A   B   C   D   E

Answer Fig.

1   2   3   4

Ans ✘ A. 3

    ✔ B. 2

    ✘ C. 1

    ✘ D. 4

Question ID : **1841223304**

Q.13 M × N means 'M is father of N'
M π N means 'M is mother of N'
M μ N means 'M is son of N'
M β N means 'M is brother of N'
If
P μ Q π S × R β T
How is P related to T?

Ans ✘ A. Nephew

    ✔ B. Uncle

    ✘ C. Niece

    ✘ D. Brother-in-law

Question ID : **1841223299**

Q.14 Four words have been given out of which three are alike in some manner, while the fourth one is different. Choose the word which is different from the rest.

Ans ✔ A. Ugly

    ✘ B. Alluring

    ✘ C. Pretty

    ✘ D. Prepossessing

Question ID : **1841223302**

Q.15 Four numbers have been given out of which three are alike in some manner, while the fourth one is different. Choose the number which is different from the rest.

Ans ✗ A. 4728

  ✗ B. 4520

  ✓ C. 8974

  ✗ D. 6742

Question ID : **1841223311**

Q.16

Ans ✗ A.

  ✗ B.

  ✓ C.

  ✗ D.

Question ID : **1841223308**

Q.17 What will be the approximate value of the following expression?
34.6 + 45.4 − 54.3 × 1.3 +78.9 ÷1.6

Ans ✗ A. 67.72

  ✓ B. 65.5

  ✗ C. 69.72

  ✗ D. 56.72

Question ID : **1841223312**

Q.18 Two statements are followed by two conclusions. Consider the statements to be TRUE even if they seem to be at variance with commonly known facts and decide which of the given conclusion(s) logically follow(s) from the given statements.
Statements:
A. All tigers are camel.
B. All owls are camel.
Conclusions:
I. Some tigers are owl.
II. No tigers are owl.

Ans ✗ A. Only conclusion I follows

  ✗ B. Only conclusion II follows

  ✗ C. Both conclusion I and II follow

  ✓ D. Either conclusion I or conclusion II follow

Question ID : **1841223294**

Q.19 Dev and Shivam are brothers of Sonam and Rahila. Rahila's husband is son of Monika. How is Monika's husband's only grandson Monu related to Dev?

Ans ✗ A. Uncle

  ✗ B. Niece

  ✗ C. Aunty

  ✓ D. Nephew

Question ID : **1841223298**

Q.20 Four words have been given out of which three are alike in some manner, while the fourth one is different. Choose the word which is different from the rest.

Ans ✗ A. Lizard

✗ B. Turtle

✗ C. Snake

✓ D. Bat

Question ID : **1841223301**

Section : **General Awareness**

Q.1 Project Udaan, a language translator was launched in September 2021 by ____.

Ans ✗ A. IIT Guwahati

✓ B. IIT Bombay

✗ C. IIT Roorkee

✗ D. IIT Hyderabad

Question ID : **1841223314**

Q.2 Polyp and Medusa body forms are found in ____.

Ans ✗ A. Phylum Mollusca

✗ B. Phylum Echinodermata

✓ C. Phylum Coelenterata (Cnidaria)

✗ D. Phylum Ctenophora

Question ID : **1841223330**

Q.3 ____ is the main festival of Karnataka, which marks the Kannada New Year.

Ans ✗ A. Bonalu

✓ B. Ugadi

✗ C. Onam

✗ D. Pongal

Question ID : **1841223325**

Q.4 _____ is the classical music of Kashmir, which uses its own ragas (known as Muquam).

Ans ✓ A. Sufiana Kalam

✗ B. Kalam-e- Shah

✗ C. Muquam Kalam

✗ D. Kalam-e-Kashmir

Question ID : **1841223324**

Q.5 Which of these countries was defeated by Indian men's hockey team in 2021 to win their first-Olympic medal in 41 years?

Ans   ✗ A. Belgium

   ✓ B. Germany

   ✗ C. Australia

   ✗ D. South Korea

Question ID : **1841223317**

Q.6 Which article of Indian constitution make provisions to present before the Parliament a statement of estimated receipts and expenditures of the government in respect of every financial year which runs from 1 April to 31 March?

Ans   ✗ A. Article 178

   ✓ B. Article 112

   ✗ C. Article 165

   ✗ D. Article 151

Question ID : **1841223326**

Q.7 Birju Maharaj, a recipient of Padma Vibhushan was legend of India's _____.

Ans   ✗ A. Kuchipudi dance

   ✗ B. Mohiniattam dance

   ✓ C. Kathak dance

   ✗ D. Bharatnatyam dance

Question ID : **1841223323**

Q.8 Which of these programmes seeks to promote empowerment of women by preventing gender biased sex selective elimination, reversing declining child sex ratio, and ensuring well-being of the girl child and her education?

Ans   ✗ A. Samagra Shiksha

   ✗ B. Nai Manzil

   ✓ C. Beti Bachao, Beti Padhao

   ✗ D. Padhe Betiyan, Badhe Betiyan

Question ID : **1841223315**

Q.9 Which article of Indian Constitution states- "No child below the age of fourteen years shall be employed to work in any factory or mine or engaged in any other hazardous employment"?

Ans   ✗ A. Article 26

   ✗ B. Article 21

   ✗ C. Article 20

   ✓ D. Article 24

Question ID : **1841223331**

Q.10 Who pioneered the movement in support of widow remarriage and girls' education in Andhra?

Ans ✗ A. Jotirao Govindrao Phule

     ✓ B. Kandukuri Veeresalingam

     ✗ C. Chembeti Sridharalu Naidu

     ✗ D. Shree Narayana Guru

Question ID : **1841223321**

Q.11 Where is Paradwip port which specializes in the export of iron ore, located?

Ans ✓ A. Odisha

     ✗ B. Karnataka

     ✗ C. Andhra Pradesh

     ✗ D. West Bengal

Question ID : **1841223329**

Q.12 In which year, the Gas Authority of India Limited was set up as a public sector undertaking to transport and market natural gas?

Ans ✗ A. 1975

     ✗ B. 1960

     ✗ C. 1990

     ✓ D. 1984

Question ID : **1841223328**

Q.13 The Consumer Protection Act, 2019 extends to the whole of India except _____.

Ans ✓ A. the State of Jammu and Kashmir

     ✗ B. Andaman Nicobar Islands

     ✗ C. The State of Sikkim

     ✗ D. Daman and Diu

Question ID : **1841223320**

Q.14 _____ is a skill development scheme for youth of 14 - 35 years age group and aiming at providing employment and employment opportunities, improving the employability of existing workers, school dropouts etc.

Ans ✓ A. Seekho Aur Kamao

     ✗ B. Nai Roshni

     ✗ C. Padho Pardesh

     ✗ D. Naya Savera

Question ID : **1841223316**

Q.15 Identify the correct match from the options given below:
A. Chaukhandi Stupa - Sarnath
B. Dharmarajika Stupa -Taxila
C. Boudhanath Stupa - Ranchi
D. Bharhut Stupa - Nalanda

Ans ✗ A. A, C

✔ B. A, B

✗ C. A, D

✗ D. A, B, C

Question ID : **1841223322**

Q.16 Goods and Services Tax Council was constituted as per _____.

Ans ✗ A. Article 300A

✔ B. Article 279A

✗ C. Article 338A

✗ D. Article 290A

Question ID : **1841223332**

Q.17 Which of the following award is given to Hyderabad-based International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)?

Ans ✗ A. Asia Food Prize 2021

✗ B. America Food Prize 2021

✗ C. Europe Food Prize 2021

✔ D. Africa Food Prize 2021

Question ID : **1841223313**

Q.18 Which of the following built famous Brihadishwara Temple?

Ans ✗ A. Rashtrakutas

✗ B. Cheras

✗ C. Pallavas

✔ D. Cholas

Question ID : **1841223319**

Q.19 Which of these launched the second window of Swavalamban Challenge Fund (SCF) with Green Bharat as prioritised theme in November 2021?

Ans ✗ A. Industrial Finance Corporation of India (IFCI)

✔ B. Small Industries Development Bank of India (Sidbi)

✗ C. National Housing Bank (NHB)

✗ D. India Infrastructure Finance Company Ltd (IIFCL)

Question ID : **1841223327**

Q.20 Identify the correct match of sportsperson with the sport/games.

Ans
- ✗ A. Shaili Singh - high jump
- ✓ B. Neeraj Chopra - javelin throw
- ✗ C. Mariyappan Thangavelu - discus throw
- ✗ D. Bajrang Punia - Long Jump

Question ID : **1841223318**

Section : **Arithmetic Ability**

Q.1

Ans
- ✓ A. 0.10
- ✗ B. -0.02
- ✗ C. 0.02
- ✗ D. -0.10

Question ID : **1841223333**

Q.2 A wheel turns 420 times around its axle to cover a distance of 2.2 km. The diameter of the wheel will be ____.

Ans
- ✓ A.
- ✗ B.
- ✗ C.
- ✗ D.

Question ID : **1841223349**

Q.3 Divide ₹ 81722 between Amol and Vimal such that Amol's share at the end of 6 years is equal to Vimal's share at the end of 8 years at 12% p.a compounded annually. Find Amol's share.

Ans
- ✓ A. ₹ 45472
- ✗ B. ₹ 40878
- ✗ C. ₹ 48636
- ✗ D. ₹ 39725

Question ID : **1841223342**

Q.4 Three pipes A, B and C can fill a tank in 8 hours. After working together for 2 hours pipe A is closed. B and C fill the remaining part in 12 hours. The number of hours taken by A alone to fill the tank is:

Ans
- ✗ A. 12 hours
- ✗ B. 10 hours
- ✓ C. 16 hours
- ✗ D. 8 hours

Question ID : **1841223344**

Q.5

Ans

  ✔️ A. 100

  ❌ B. 130

  ❌ C. 110

  ❌ D. 85

Question ID : **1841223352**

Q.6 The average age of Father, mother and daughter is 40 years. In 5 years mother will be twice her daughter's age then. In 10 years the father's age will be 5 more than twice his daughter's age then. Find the father's current age.

Ans

  ✔️ A. 55 years

  ❌ B. 50 years

  ❌ C. 48 years

  ❌ D. 52 years

Question ID : **1841223347**

Q.7 The average of 4 numbers is 69. The ratio of first and second number is 7:10. The third number is 1 more than twice the first number and fourth number is 15 more than thrice the first number. Find the third number.

Ans

  ✔️ A. 71

  ❌ B. 65

  ❌ C. 79

  ❌ D. 54

Question ID : **1841223346**

Q.8

Ans

  ✔️ A. 96 days

  ❌ B. 60 days

  ❌ C. 72 days

  ❌ D. 84 days

Question ID : **1841223343**

Q.9 Water flows through a cylindrical pipe whose internal diameter is 10.5 cm at 2 m per second. If the pipe is always half full, then what is the volume of water discharged in 10 minutes?

Ans

  ❌ A. 9708 litres

  ❌ B. 8935 litres

  ❌ C. 9320 litres

  ✔️ D. 10395 litres

Question ID : **1841223350**

Q.10 Three friends A, B and C contribute ₹ 471600. B contributing twice as much as A and C contributing thrice as much as B. What was thrice A's contribution?

Ans
- ✗ A. 1,06,600
- ✗ B. 1,36,800
- ✓ C. 1,57,200
- ✗ D. 52,400

Question ID : **1841223338**

Q.11 Which of the following numbers is exactly divisible by 44?
192156, 210422, 184360, 209414

Ans
- ✗ A. 209414
- ✗ B. 192156
- ✗ C. 210422
- ✓ D. 184360

Question ID : **1841223336**

Q.12 If two-thirds of first number is multiplied by three-sevenths of the second number we get 432 and the second number is 6 more than the first number. Find the greater of the two numbers.

Ans
- ✗ A. 36
- ✗ B. 40
- ✓ C. 42
- ✗ D. 34

Question ID : **1841223334**

Q.13 A train passes a pole in 10 seconds and a bridge 270 m long in 25 seconds at the same speed. Find the length of the train.

Ans
- ✓ A. 180 m
- ✗ B. 150 m
- ✗ C. 205 m
- ✗ D. 195 m

Question ID : **1841223345**

Q.14 An alloy contains 30% copper, 26% nickel and rest zinc. How much zinc is present in 14 kg of the alloy?

Ans
- ✓ A. 6.16 kg
- ✗ B. 6.24 kg
- ✗ C. 6.31 kg
- ✗ D. 6.05 kg

Question ID : **1841223337**

Q.15

Ans

  ✔️ A. 26%

  ❌ B. 31%

  ❌ C. 23%

  ❌ D. 18%

<div align="right">

Question ID : **1841223351**

</div>

Q.16 Anil purchased two shirts one at a certain price and another at 3/4th the cost of the first shirt. He sold the first shirt at a profit of 12% and the second at a loss of 8%. If the overall profit earned by him was ₹ 118.80, find the total cost for the shirts?

Ans

  ❌ A. ₹ 4320

  ❌ B. ₹ 4080

  ✔️ C. ₹ 3465

  ❌ D. ₹ 3890

<div align="right">

Question ID : **1841223340**

</div>

Q.17

Ans

  ❌ A. ₹ 19800

  ❌ B. ₹ 18000

  ✔️ C. ₹ 22000

  ❌ D. ₹ 21600

<div align="right">

Question ID : **1841223341**

</div>

Q.18

Ans

  ❌ A. 56 cm

  ❌ B. 52 cm

  ✔️ C. 66 cm

  ❌ D. 62 cm

<div align="right">

Question ID : **1841223348**

</div>

Q.19

Ans

  ❌ A. 6.34

  ❌ B. 6.19

  ✔️ C. 6.46

  ❌ D. 6.27

<div align="right">

Question ID : **1841223335**

</div>

Q.20

Ans
- ✅ A.
- ❌ B.
- ❌ C.
- ❌ D.

Question ID : **1841223339**

Section : **General English**

Q.1 Complete the following proverb.
a ____ can't change its ____.

Ans
- ❌ A. tiger; stripes
- ❌ B. cat; colour
- ✅ C. leopard; spots
- ❌ D. lion; teeth

Question ID : **1841223363**

Q.2 Select the most appropriate meaning of the given idiom.
make ends meet

Ans
- ❌ A. do manual labour for livelihood
- ❌ B. save money for future
- ❌ C. earn a lot of wealth
- ✅ D. earn just enough money to live on

Question ID : **1841223364**

Q.3 Select the most appropriate option to fill in the blank.
I ____ to help people whenever I can.

Ans
- ❌ A. had liked
- ✅ B. like
- ❌ C. am liking
- ❌ D. liked

Question ID : **1841223357**

Q.4 Select the most appropriate option to fill in the blank.
When we lived in Seychelles, we ____ our Sundays on the beach.

Ans
- ❌ A. have spent
- ❌ B. spend
- ❌ C. are spending
- ✅ D. spent

Question ID : **1841223356**

Q.5 **Select the most appropriate option to fill in the blank.**
Father got angry _____ Avika as she was busy playing with mobile.

Ans ❌ A. On

✅ B. With

❌ C. To

❌ D. From

Question ID : **1841223354**

Q.6 **Select the most appropriate option to fill in the blank.**
We _____ believe that lives of great men can make our lives sublime.

Ans ❌ A. Narrowly

✅ B. Strongly

❌ C. Widely

❌ D. Intelligently

Question ID : **1841223355**

Q.7 **Select the most appropriate option to fill in the blank.**
A group of Brahmins was walking _____ a forest when they met a hermit.

Ans ✅ A. Through

❌ B. Besides

❌ C. Under

❌ D. Over

Question ID : **1841223353**

Q.8 **Select the most appropriate antonym of the given word.**
ACCELERATE

Ans ❌ A. Quicken

❌ B. Hasten

❌ C. Expedite

✅ D. Hinder

Question ID : **1841223360**

Q.9 **Select the most appropriate idiom to fill in the blank.**
When he heard that he had got admission in IIT, he was _____

Ans ✅ A. on top of the world

❌ B. on the hot seat

❌ C. on the ropes

❌ D. on the ball

Question ID : **1841223365**

Q.10 Select the sentence part which has an error in spelling. If there is no error, select 'No error'.
His lifestyle entailed a number of dietery prohibitions which traditionally included vegetarianism.

Ans
✗ A. His lifestyle entailed a number of

✗ B. No error

✗ C. traditionally included vegetarianism.

✔ D. dietery prohibitions which

Question ID : **1841223366**

Q.11 Select the most appropriate option to fill in the blanks in the two sentences given below.
The tribes in Himachal Hills weave some very warm _____ woolen material.
In the _____ of time this pandemic will also become history.

Ans
✗ A. course; coarse

✔ B. coarse; course

✗ C. coarse; coarse

✗ D. course; course

Question ID : **1841223361**

Q.12 Select the sentence part which has an error in spelling. If there is no error, select 'No error'.
Democritus was a Greek philosopher primarily remambered today for his formulation of an atomic theory of the universe.

Ans
✗ A. No error

✗ B. Democritus was a Greek philosopher

✔ C. primarily remambered today for his formulation

✗ D. of an atomic theory of the universe.

Question ID : **1841223367**

Q.13 Select the most appropriate synonym of the given word.
INGENUOUS

Ans
✔ A. Honest

✗ B. Clever

✗ C. Worried

✗ D. Deceitful

Question ID : **1841223359**

Q.14 Select the most appropriate synonym of the given word.
IRKSOME

Ans
✗ A. Tireless

✗ B. Interesting

✗ C. Helpful

✔ D. Annoying

Question ID : **1841223358**

Q.15 Complete the following proverb.
a bird in hand is _____.

Ans ✗ A. to be set free

✗ B. more valuable than two on the tree

✓ C. worth two in the bush

✗ D. better than three

Comprehension:

Read the following passage and answer the questions given after it.
The earth's crust is made up of various types of rocks. Any natural mass of mineral matter that makes up the earth's crust is called a rock. Rocks can be of different colour, size and texture. There are three major types of rocks: igneous rocks, sedimentary rocks and metamorphic rocks.
When the molten magma cools, it becomes solid. Rocks thus formed are called igneous rocks. They are also called primary rocks. There are two types of igneous rocks: intrusive rocks and extrusive rocks.
Can you imagine lava coming out from the volcanoes? Lava is actually fiery red molten magma coming out from the interior of the earth on its surface. When this molten lava comes on the earth's surface, it rapidly cools down and becomes solid. Rocks formed in such a way on the crust are called extrusive igneous rocks. They have a very fine grained structure. For example, basalt. The Deccan plateau is made up of basalt rocks. Sometimes the molten magma cools down deep inside the earth's crust. Solid rocks so formed are called intrusive igneous rocks. Since they cool down slowly they form large grains. Granite is an example of such a rock. Grinding stones used to prepare paste/powder of spices and grains are made of granite.
Rocks roll down, crack, and hit each other and are broken down into small fragments. These smaller particles are called sediments. These sediments are transported and deposited by wind, water, etc. These loose sediments are compressed and hardened to form layers of rocks. These types of rocks are called sedimentary rocks. For example, sandstone is made from grains of sand. These rocks may also contain fossils of plants, animals and other microorganisms that once lived on them.
Igneous and sedimentary rocks can change into metamorphic rocks under great heat and pressure. For example, clay changes into slate and limestone into marble.

SubQuestion No : 16

Q.16

Ans ✗ A. a-2, b-1, c-3, d-4

✗ B. a-1, b-2, c-4, d-3

✓ C. a-4, b-1, c-2, d-3

✗ D. a-3, b-4, c-1, d-2

Comprehension:

Read the following passage and answer the questions given after it.

The earth's crust is made up of various types of rocks. Any natural mass of mineral matter that makes up the earth's crust is called a rock. Rocks can be of different colour, size and texture. There are three major types of rocks: igneous rocks, sedimentary rocks and metamorphic rocks.

When the molten magma cools, it becomes solid. Rocks thus formed are called igneous rocks. They are also called primary rocks. There are two types of igneous rocks: intrusive rocks and extrusive rocks.

Can you imagine lava coming out from the volcanoes? Lava is actually fiery red molten magma coming out from the interior of the earth on its surface. When this molten lava comes on the earth's surface, it rapidly cools down and becomes solid. Rocks formed in such a way on the crust are called extrusive igneous rocks. They have a very fine grained structure. For example, basalt. The Deccan plateau is made up of basalt rocks. Sometimes the molten magma cools down deep inside the earth's crust. Solid rocks so formed are called intrusive igneous rocks. Since they cool down slowly they form large grains. Granite is an example of such a rock. Grinding stones used to prepare paste/powder of spices and grains are made of granite.

Rocks roll down, crack, and hit each other and are broken down into small fragments. These smaller particles are called sediments. These sediments are transported and deposited by wind, water, etc. These loose sediments are compressed and hardened to form layers of rocks. These types of rocks are called sedimentary rocks. For example, sandstone is made from grains of sand. These rocks may also contain fossils of plants, animals and other microorganisms that once lived on them.

Igneous and sedimentary rocks can change into metamorphic rocks under great heat and pressure. For example, clay changes into slate and limestone into marble.

SubQuestion No : 17

Q.17 In which kind of rocks are the fossils of animals and plants found?

Ans   ✖ A. extrusive igneous rocks

     ✖ B. metamorphic rocks

     ✔ C. sedimentary rocks

     ✖ D. intrusive igneous rocks

Question ID : **1841223373**

Comprehension:

Read the following passage and answer the questions given after it.

The earth's crust is made up of various types of rocks. Any natural mass of mineral matter that makes up the earth's crust is called a rock. Rocks can be of different colour, size and texture. There are three major types of rocks: igneous rocks, sedimentary rocks and metamorphic rocks.

When the molten magma cools, it becomes solid. Rocks thus formed are called igneous rocks. They are also called primary rocks. There are two types of igneous rocks: intrusive rocks and extrusive rocks.

Can you imagine lava coming out from the volcanoes? Lava is actually fiery red molten magma coming out from the interior of the earth on its surface. When this molten lava comes on the earth's surface, it rapidly cools down and becomes solid. Rocks formed in such a way on the crust are called extrusive igneous rocks. They have a very fine grained structure. For example, basalt. The Deccan plateau is made up of basalt rocks. Sometimes the molten magma cools down deep inside the earth's crust. Solid rocks so formed are called intrusive igneous rocks. Since they cool down slowly they form large grains. Granite is an example of such a rock. Grinding stones used to prepare paste/powder of spices and grains are made of granite.

Rocks roll down, crack, and hit each other and are broken down into small fragments. These smaller particles are called sediments. These sediments are transported and deposited by wind, water, etc. These loose sediments are compressed and hardened to form layers of rocks. These types of rocks are called sedimentary rocks. For example, sandstone is made from grains of sand. These rocks may also contain fossils of plants, animals and other microorganisms that once lived on them.

Igneous and sedimentary rocks can change into metamorphic rocks under great heat and pressure. For example, clay changes into slate and limestone into marble.

SubQuestion No : 18

Q.18 The theme of the passage revolves around ____.

Ans   ✗ A. volcanoes

   ✔ B. the types of rocks

   ✗ C. crust of the earth

   ✗ D. changing of rocks

Question ID : **1841223369**

Comprehension:

Read the following passage and answer the questions given after it.

The earth's crust is made up of various types of rocks. Any natural mass of mineral matter that makes up the earth's crust is called a rock. Rocks can be of different colour, size and texture. There are three major types of rocks: igneous rocks, sedimentary rocks and metamorphic rocks.

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Can you imagine lava coming out from the volcanoes? Lava is actually fiery red molten magma coming out from the interior of the earth on its surface. When this molten lava comes on the earth's surface, it rapidly cools down and becomes solid. Rocks formed in such a way on the crust are called extrusive igneous rocks. They have a very fine grained structure. For example, basalt. The Deccan plateau is made up of basalt rocks. Sometimes the molten magma cools down deep inside the earth's crust. Solid rocks so formed are called intrusive igneous rocks. Since they cool down slowly they form large grains. Granite is an example of such a rock. Grinding stones used to prepare paste/powder of spices and grains are made of granite.

Rocks roll down, crack, and hit each other and are broken down into small fragments. These smaller particles are called sediments. These sediments are transported and deposited by wind, water, etc. These loose sediments are compressed and hardened to form layers of rocks. These types of rocks are called sedimentary rocks. For example, sandstone is made from grains of sand. These rocks may also contain fossils of plants, animals and other microorganisms that once lived on them.

Igneous and sedimentary rocks can change into metamorphic rocks under great heat and pressure. For example, clay changes into slate and limestone into marble.

SubQuestion No : 19

Q.19 What kind of rock is the basalt rock?

Ans ✔️ A. extrusive igneous rock

❌ B. sedimentary rock

❌ C. intrusive igneous rock

❌ D. metamorphic rock

Comprehension:

Read the following passage and answer the questions given after it.

The earth's crust is made up of various types of rocks. Any natural mass of mineral matter that makes up the earth's crust is called a rock. Rocks can be of different colour, size and texture. There are three major types of rocks: igneous rocks, sedimentary rocks and metamorphic rocks.

When the molten magma cools, it becomes solid. Rocks thus formed are called igneous rocks. They are also called primary rocks. There are two types of igneous rocks: intrusive rocks and extrusive rocks.

Can you imagine lava coming out from the volcanoes? Lava is actually fiery red molten magma coming out from the interior of the earth on its surface. When this molten lava comes on the earth's surface, it rapidly cools down and becomes solid. Rocks formed in such a way on the crust are called extrusive igneous rocks. They have a very fine grained structure. For example, basalt. The Deccan plateau is made up of basalt rocks. Sometimes the molten magma cools down deep inside the earth's crust. Solid rocks so formed are called intrusive igneous rocks. Since they cool down slowly they form large grains. Granite is an example of such a rock. Grinding stones used to prepare paste/powder of spices and grains are made of granite.

Rocks roll down, crack, and hit each other and are broken down into small fragments. These smaller particles are called sediments. These sediments are transported and deposited by wind, water, etc. These loose sediments are compressed and hardened to form layers of rocks. These types of rocks are called sedimentary rocks. For example, sandstone is made from grains of sand. These rocks may also contain fossils of plants, animals and other microorganisms that once lived on them.

Igneous and sedimentary rocks can change into metamorphic rocks under great heat and pressure. For example, clay changes into slate and limestone into marble.

SubQuestion No : 20

Q.20 Extrusive Igneous rocks are formed _____.

Ans ✔️ A. from cooled down magma on the earth's surface

❌ B. from sediments deposited by wind and water

❌ C. from the change over of some rocks

❌ D. from the solidified magma inside the earth

Question ID : **1841223370**

Section : **General Hindi**

Q.1 अपादान कारक युक्त वाक्य है-

Ans ❌ A. माँ ने बच्चे को बुलाया।

❌ B. शिकारी ने खरगोश मारा।

❌ C. वह कुल्हाड़ी से वृक्ष काटता है।

✔️ D. छत से उतरी हुई लता।

Question ID : **1841223375**

Q.2 इनमें 'होश की दावा करना' मुहावरे का अर्थ है-

Ans ❌ A. घमंड चूर हो जाना

❌ B. होश उड़ जाना

✔️ C. सोच-समझकर कहना

❌ D. आश्चर्य में होना

Question ID : **1841223383**

Q.3 किस विकल्प में सर्वनाम तथा विशेषण का शुद्ध रूप प्रयुक्त नहीं हुआ है?

Ans ❌ A. भारत के और देशों के साथ संबंध अच्छे हैं।

✅ B. उसने हमको कहा।

❌ C. सभी चीजें यहाँ छोड़ दो।

❌ D. तुमसे कोई काम नहीं हो सकता।

Question ID : **1841223387**

Q.4 अधोलिखित में 'ख्याली पुलाव पकाना' किस मुहावरे का अर्थ है?

Ans ❌ A. हवा फिरना

❌ B. हवाई किला ढा देना

✅ C. हवाई किला बनाना

❌ D. हवाइयाँ उड़ाना

Question ID : **1841223382**

Q.5 'अतएव' शब्द का उचित संधि-विच्छेद है-

Ans ✅ A. अत: + एव

❌ B. अत + एव

❌ C. अ + तएव

❌ D. अ: + एव

Question ID : **1841223378**

Q.6 तुम यह काम _____ करो। उचित क्रिया विशेषण का चयन कर रिक्त स्थान की पूर्ति कीजिए।

Ans ❌ A. नहीं

❌ B. केवल

✅ C. मत

❌ D. न

Question ID : **1841223376**

Q.7 'खीझना' का विलोम युग्म कौनसा है?

Ans ✅ A. रीझना

❌ B. मिलना

❌ C. बूझना

❌ D. चिढ़ाना

Question ID : **1841223381**

Q.8 किस विकल्प में लोकोक्ति और उसका अर्थ सुमेलित नहीं है?

Ans ❌ A. साँच को आँच कहाँ – जो सच्चा है उसे क्या डर

✅ B. तेल देखो तेल की धार देखो – दूरवर्ती वस्तुएं अच्छी मालूम होती है

❌ C. चोर के पैर नहीं होते – अपराधी में साहस नहीं होता है

❌ D. धूल फाँकन – दर-दर की ठोकरें खाना

Question ID : **1841223384**

Q.9 किस विकल्प में शब्द का संधि विच्छेद अनुचित है?

Ans
  ❌ A. सम् + कल्प = संकल्प

  ❌ B. प्र + मान = प्रमाण

  ✅ C. अहो + रूप = अहोरूप

  ❌ D. वि + सम = विषम

Question ID : **1841223379**

Q.10 इनमें कौनसा अनिश्चित संख्यावाचक विशेषण नहीं है?

Ans
  ✅ A. पूरा आनंद

  ❌ B. बहुतेरे उपाय

  ❌ C. सब पेड़

  ❌ D. पूरे टुकड़े

Question ID : **1841223377**

Q.11 इनमें 'संस्तुति' का पर्यायवाची शब्द कौनसा है?

Ans
  ❌ A. प्रतिष्ठान

  ❌ B. प्रार्थना

  ❌ C. घोषणा

  ✅ D. सिफ़ारिश

Question ID : **1841223380**

Q.12 इनमें अधिकरण कारक की विभक्ति कौनसी है?

Ans
  ❌ A. से

  ✅ B. पर

  ❌ C. अरे

  ❌ D. री

Question ID : **1841223374**

Q.13 संदिग्ध वर्तमान काल वाला वाक्य कौनसा है?

Ans
  ✅ A. तेरे लिए गौतमी अकुलाती होंगी।

  ❌ B. अब तो वह मरता है।

  ❌ C. सिपाही रात को पहरा देता है।

  ❌ D. गाड़ी दोपहर को आती है।

Question ID : **1841223386**

Q.14 इनमें कौनसा पूर्ण भूतकाल वाला वाक्य नहीं है?

Ans
  ✅ A. हो सकता है कि उसने यह बात सुनी हो।

  ❌ B. आज सबेरे मैं आपके यहाँ गया था।

  ❌ C. देश में अकाल पड़ा था।

  ❌ D. सिकंदर ने हिन्दुस्तान पर चढ़ाई की थी।

Question ID : **1841223385**

Q.15 यह सभा के _____ का चुनाव है। उचित शब्द का चयन कर वाक्य पूर्ण कीजिए।

Ans   ❌ A. पदाधीकारियों

      ❌ B. पधाधीकारीयों

      ✅ C. पदाधिकारियों

      ❌ D. पधाधिकारीयों

Comprehension:

विद्या, कला, कविता, साहित्य, धन और राजस्व से भी आचरण की सभ्यता अधिक ज्योतिष्मती है। आचरण की सभ्यता को प्राप्त करके एक कंगाल आदमी राजाओं के दिलों पर भी अपना प्रभुत्व जमा सकता है। इस सभ्यता के दर्शन से कला, साहित्य, और संगीत को अद्भुत सिद्धि प्राप्त होती है। राग अधिक मृदु हो जाता है; विद्या का तीसरा शिव-नेत्र खुल जाता है, चित्र-कला का मौन राग अलापने लग जाता है; वक्ता चुप हो जाता है; लेखक की लेखनी थम जाती है; मूर्ति बनाने वाले के सामने नये कपोल, नये नयन और नयी छवि का दृश्य उपस्थित हो जाता है।

आचरण की सभ्यतामय भाषा सदा मौन रहती है। इस भाषा का निघण्टु शुद्ध श्वेत पत्रों वाला है। इसमें नाममात्र के लिए भी शब्द नहीं। यह सभ्याचरण नाद करता हुआ भी मौन है, व्याख्यान देता हुआ भी व्याख्यान के पीछे छिपा है, राग गाता हुआ भी राग के सुर के भीतर पड़ा है। मृदु वचनों की मिठास में आचरण की सभ्यता मौन रूप से खुली हुई है। नम्रता, दया, प्रेम और उदारता सब के सब सभ्याचरण की भाषा के मौन व्याख्यान हैं। मनुष्य के जीवन पर मौन व्याख्यान का प्रभाव चिरस्थायी होता है और उसकी आत्मा का एक अंग हो जाता है।

SubQuestion No : 16

Q.16 गद्यांश के लिए अधिक उपयुक्त शीर्षक कौनसा है?

Ans   ✅ A. आचरण की सभ्यता

      ❌ B. आचरण की शुद्धता

      ❌ C. आचरण की महिमा

      ❌ D. आचरण और समाज

Comprehension:

विद्या, कला, कविता, साहित्य, धन और राजस्व से भी आचरण की सभ्यता अधिक ज्योतिष्मती है। आचरण की सभ्यता को प्राप्त करके एक कंगाल आदमी राजाओं के दिलों पर भी अपना प्रभुत्व जमा सकता है। इस सभ्यता के दर्शन से कला, साहित्य, और संगीत को अद्भुत सिद्धि प्राप्त होती है। राग अधिक मृदु हो जाता है; विद्या का तीसरा शिव-नेत्र खुल जाता है, चित्र-कला का मौन राग अलापने लग जाता है; वक्ता चुप हो जाता है; लेखक की लेखनी थम जाती है; मूर्ति बनाने वाले के सामने नये कपोल, नये नयन और नयी छवि का दृश्य उपस्थित हो जाता है।

आचरण की सभ्यतामय भाषा सदा मौन रहती है। इस भाषा का निघण्टु शुद्ध श्वेत पत्रों वाला है। इसमें नाममात्र के लिए भी शब्द नहीं। यह सभ्याचरण नाद करता हुआ भी मौन है, व्याख्यान देता हुआ भी व्याख्यान के पीछे छिपा है, राग गाता हुआ भी राग के सुर के भीतर पड़ा है। मृदु वचनों की मिठास में आचरण की सभ्यता मौन रूप से खुली हुई है। नम्रता, दया, प्रेम और उदारता सब के सब सभ्याचरण की भाषा के मौन व्याख्यान हैं। मनुष्य के जीवन पर मौन व्याख्यान का प्रभाव चिरस्थायी होता है और उसकी आत्मा का एक अंग हो जाता है।

SubQuestion No : 17

Q.17 गद्यांश के अनुसार मनुष्य जीवन पर कौनसा प्रभाव चिरस्थायी होता है?

Ans   ✅ A. मौन व्याख्यान का

      ❌ B. साहित्य का

      ❌ C. कला का

      ❌ D. संस्कृति का

Comprehension:

विद्या, कला, कविता, साहित्य, धन और राजस्व से भी आचरण की सभ्यता अधिक ज्योतिष्मती है। आचरण की सभ्यता को प्राप्त करके एक कंगाल आदमी राजाओं के दिलों पर भी अपना प्रभुत्व जमा सकता है। इस सभ्यता के दर्शन से कला, साहित्य, और संगीत को अद्भुत सिद्धि प्राप्त होती है। राग अधिक मृदु हो जाता है; विद्या का तीसरा शिव-नेत्र खुल जाता है, चित्र-कला का मौन राग अलापने लग जाता है; वक्ता चुप हो जाता है; लेखक की लेखनी थम जाती है; मूर्ति बनाने वाले के सामने नये कपोल, नये नयन और नयी छवि का दृश्य उपस्थित होता है।

आचरण की सभ्यतामय भाषा सदा मौन रहती है। इस भाषा का निघण्टु शुद्ध श्वेत पत्रों वाला है। इसमें नाममात्र के लिए भी शब्द नहीं। यह सभ्याचरण नाद करता हुआ भी मौन है, व्याख्यान देता हुआ भी व्याख्यान के पीछे छिपा है, राग गाता हुआ भी राग के सुर के भीतर पड़ा है। मृदु वचनों की मिठास में आचरण की सभ्यता मौन रूप से खुली हुई है। नम्रता, दया, प्रेम और उदारता सब के सब सभ्याचरण की भाषा के मौन व्याख्यान हैं। मनुष्य के जीवन पर मौन व्याख्यान का प्रभाव चिरस्थायी होता है और उसकी आत्मा का एक अंग हो जाता है।

SubQuestion No : 18

Q.18 गद्यांश के अनुसार कौनसी भाषा सदा मौन रहती है?

Ans
✅ A. आचरण की सभ्यतामय

❌ B. लेखक की लेखनी वाली

❌ C. मूर्ति बनाने वाले की

❌ D. गीतकार की

Question ID : **1841223391**

Comprehension:

विद्या, कला, कविता, साहित्य, धन और राजस्व से भी आचरण की सभ्यता अधिक ज्योतिष्मती है। आचरण की सभ्यता को प्राप्त करके एक कंगाल आदमी राजाओं के दिलों पर भी अपना प्रभुत्व जमा सकता है। इस सभ्यता के दर्शन से कला, साहित्य, और संगीत को अद्भुत सिद्धि प्राप्त होती है। राग अधिक मृदु हो जाता है; विद्या का तीसरा शिव-नेत्र खुल जाता है, चित्र-कला का मौन राग अलापने लग जाता है; वक्ता चुप हो जाता है; लेखक की लेखनी थम जाती है; मूर्ति बनाने वाले के सामने नये कपोल, नये नयन और नयी छवि का दृश्य उपस्थित हो जाता है।

आचरण की सभ्यतामय भाषा सदा मौन रहती है। इस भाषा का निघण्टु शुद्ध श्वेत पत्रों वाला है। इसमें नाममात्र के लिए भी शब्द नहीं। यह सभ्याचरण नाद करता हुआ भी मौन है, व्याख्यान देता हुआ भी व्याख्यान के पीछे छिपा है, राग गाता हुआ भी राग के सुर के भीतर पड़ा है। मृदु वचनों की मिठास में आचरण की सभ्यता मौन रूप से खुली हुई है। नम्रता, दया, प्रेम और उदारता सब के सब सभ्याचरण की भाषा के मौन व्याख्यान हैं। मनुष्य के जीवन पर मौन व्याख्यान का प्रभाव चिरस्थायी होता है और उसकी आत्मा का एक अंग हो जाता है।

SubQuestion No : 19

Q.19 एक कंगाल आदमी राजाओं के दिलों पर कैसे प्रभुत्व जमा सकता है?

Ans
❌ A. साहित्य और धन द्वारा

❌ B. मौन व्याख्यान द्वारा

❌ C. विद्या और कला द्वारा

✅ D. आचरण की सभ्यता प्राप्त कर

Question ID : **1841223390**

Comprehension:

विद्या, कला, कविता, साहित्य, धन और राजस्व से भी आचरण की सभ्यता अधिक ज्योतिष्मती है। आचरण की सभ्यता को प्राप्त करके एक कंगाल आदमी राजाओं के दिलों पर भी अपना प्रभुत्व जमा सकता है। इस सभ्यता के दर्शन से कला, साहित्य, और संगीत को अद्भुत सिद्धि प्राप्त होती है। राग अधिक मृदु हो जाता है; विद्या का तीसरा शिव-नेत्र खुल जाता है, चित्र-कला का मौन राग अलापने लग जाता है; वक्ता चुप हो जाता है; लेखक की लेखनी थम जाती है; मूर्ति बनाने वाले के सामने नये कपोल, नये नयन और नयी छवि का दृश्य उपस्थित हो जाता है।

आचरण की सभ्यतामय भाषा सदा मौन रहती है। इस भाषा का निघण्टु शुद्ध श्वेत पत्रों वाला है। इसमें नाममात्र के लिए भी शब्द नहीं। यह सभ्याचरण नाद करता हुआ भी मौन है, व्याख्यान देता हुआ भी व्याख्यान के पीछे छिपा है, राग गाता हुआ भी राग के सुर के भीतर पड़ा है। मृदु वचनों की मिठास में आचरण की सभ्यता मौन रूप से खुली हुई है। नम्रता, दया, प्रेम और उदारता सब के सब सभ्याचरण की भाषा के मौन व्याख्यान हैं। मनुष्य के जीवन पर मौन व्याख्यान का प्रभाव चिरस्थायी होता है और उसकी आत्मा का एक अंग हो जाता है।

SubQuestion No : 20

Q.20 सभ्याचरण की भाषा के मौन व्याख्यान कौन-कौनसे हैं?

Ans ✗ A. चित्रकला, संगीत और लेखन

✓ B. विनम्रता, दया और प्रेम

✗ C. अहंकार, क्रोध और करुणा

✗ D. घृणा, शांति और दया

Question ID : **1841223392**

Section : **Discipline1**

Q.1 At a pressure of 1000 V applied between each live conductor and earth for a period of one minute the insulation resistance of High Voltage installations shall be at least _____ or as specified by the Bureau of Indian Standards.

Ans ✗ A. 2 Mega ohm

✗ B. 3 Mega ohm

✗ C. 4 Mega ohm

✓ D. 1 Mega ohm

Question ID : **1841223409**

Q.2 Which of the following is not a method for locating the centroid of an area?

Ans ✗ A. Graphical Method

✓ B. Solemnity Method

✗ C. Method of Integration

✗ D. Analytical Method

Question ID : **1841223403**

Q.3 In this sytem the force acting on a body are in the same palne, but their lines of action do not meet at the same point. This is known as:

Ans ✗ A. Non-Coplaner concurrent Force System

✓ B. Coplaner Non-concurrent Force System

✗ C. Non-Coplaner Non-concurrent Force System

✗ D. Coplaner concurrent Force System

Question ID : **1841223401**

Q.4 The sum upto infinite of a geometric series, when |r| < 1, is (where 'a' is first term and 'r' is common ratio)

Ans ✗ A. (1-r)/a

✗ B. (1-a)/r

✗ C. r/(1-a)

✓ D. a/(1-r)

Question ID : **1841223399**

Q.5 The melting temperature of a solid is usually considered to be _____ the freezing point of the corresponding liquid.

Ans ✓ A. Same as

✗ B. Zero

✗ C. Higher than

✗ D. Lower than

Question ID : **1841223396**

Q.6 Which of the following is aessential part of the boiler?

Ans ✓ A. Heat exchanger

✗ B. Safety valve

✗ C. Economizer

✗ D. Pressure guage

Question ID : **1841223413**

Q.7 Determine the coefficient of the friction if a horizontal force of 50 Newtons just causes the body (100 Newton weight) to slide over the rough horizontal plane.

Ans ✗ A. 2.0

✗ B. 5.0

✓ C. 0.5

✗ D. 20

Question ID : **1841223406**

Q.8 'The moment of the resultant of two concurrent forces about any point in their plane is equal to the algebraic sum of the moment of these forces about the same point'. This is known as _____.

Ans ✓ A. Varignon's Theorem

✗ B. Law of triangle of forces

✗ C. Funicular Force Theorem

✗ D. Newton Theorem

Question ID : **1841223402**

Q.9 "In a linear circuit with several sources, the current and voltage for any element in the circuit is the sum of the currents and voltages produced by each source acting independently", this theorem is known as:

Ans ✔️ A. Superposition theorem

❌ B. Thevenin Theorem

❌ C. Substitution

❌ D. Maximum Power Transfer

Question ID : **1841223410**

Q.10 What will be the Modulus of the complex number (5-5i)/(3-4i)?

Ans ❌ A. $\sqrt{7}$

✔️ B. $\sqrt{2}$

❌ C. $\sqrt{3}$

❌ D. $\sqrt{5}$

Question ID : **1841223400**

Q.11 Parallel axis theorem given by the following expression, where (I = moment of inertia, Ic = moment of inertia about the center, M = mass h = distance between the two axes).

Ans ❌ A. $I = (I_c)^2 + Mh$

✔️ B. $I = I_c + Mh^2$

❌ C. $I = I_c + Mh$

❌ D. $I = (I_c)^2 + Mh^2$

Question ID : **1841223405**

Q.12 A Queen Post roof is Suitable for span which of the following span?

Ans ✔️ A. 8-12 m

❌ B. 2-5 m

❌ C. 5-9 m

❌ D. 3-7 m

Question ID : **1841223414**

Q.13 Capillary Tube Refrigerationhave _____ internal diameters and _____ length and they are coiled to several turns so that it would occupy less space.

Ans ❌ A. very small, very small

✔️ B. very small, very long

❌ C. very big, very big

❌ D. very big, very small

Question ID : **1841223412**

Q.14 What is the effect of the tempature on the solubility of oxygen in water?

Ans ✗ A. Solubility rises with increase in temperature

✔ B. Solubility declines with increase in temperature

✗ C. Solubility does not depend on temperature

✗ D. Solubility declines with decrease in temperature

Question ID : **1841223397**

Q.15 The size of the earthing wire is depenent of the which of the factor?

Ans ✗ A. Atmospheric surroundings

✔ B. Ampere capacity of the service wires

✗ C. Voltage of the service wire

✗ D. Humidity of the soil

Question ID : **1841223408**

Q.16 For the 'gears' which of the following is false?

Ans ✗ A. It is transmiting large power

✗ B. It is having Constant velocity ratio

✔ C. It is having bulky construction

✗ D. It is having Positive drive

Question ID : **1841223411**

Q.17 Which of the following is the unit of inertia of mass?

Ans ✗ A. kg/m

✔ B. $kg\text{-}m^2$

✗ C. m^3

✗ D. kg/m^2

Question ID : **1841223404**

Q.18 Which of the following is not used as Coagulants for drinking water treatment?

Ans ✔ A. Chlorinated ferrous sulphate

✗ B. Ferric chloride

✗ C. Ferrous sulphate

✗ D. Sodium aluminate

Question ID : **1841223398**

Q.19 The energy essential to transfer a 50-coulomb charge through a potential difference of 2 V is:

Ans ✗ A. 25 J

✗ B. 50 J

✔ C. 100 J

✗ D. 10 J

Question ID : **1841223407**

Q.20 If a object is charged by induction, then the object _____.

Ans ✗ A. drops entire of the charge on it

✓ B. does not drop any charge

✗ C. changes neutral

✗ D. drops portion of the charge on it

Question ID : **1841223395**

Section : **Discipline2**

Q.1 Which of the following is a operating system?

Ans ✗ A. Firefox

✓ B. Fedora

✗ C. Mozzila

✗ D. MATLAB

Question ID : **1841223434**

Q.2 Which of the following is required in each C program?

Ans ✗ A. Input data

✗ B. Output data

✗ C. Phonological

✓ D. At least one function

Question ID : **1841223433**

Q.3 The theory which gives equal weightage to horizontal and vertical creep is known as _____ theory.

Ans ✗ A. Fender's

✓ B. Bligh's

✗ C. Kennedy's

✗ D. Lacey's

Question ID : **1841223423**

Q.4 For the Francis Turbines flow ratio, ratio varies from _____.

Ans ✗ A. 0.10 to 0.12

✓ B. 0.15 to 0.30

✗ C. 0.30 to 0.45

✗ D. 0.05 to 0.03

Question ID : **1841223431**

Q.5 Dimesionless parameter not applicable to flowing fluids, is _____.

Ans ✗ A. Friction factor

✓ B. Kinetic viscosity

✗ C. Pressure coefficient

✗ D. Reynold's number

Question ID : **1841223427**

Q.6 This is the undersurface of the arch:

Ans ✓ A. Soffit

✗ B. Arcade

✗ C. Crown

✗ D. Springers

Question ID : **1841223417**

Q.7 The velocity of fluid particle at the center of the pipe section is _____.

Ans ✗ A. Equal

✗ B. Zero

✓ C. Maximum

✗ D. Minimum

Question ID : **1841223429**

Q.8 Darcy's Frictional _____ varies from 0.0005 fro new pipe to 0.01 for old pipes.

Ans ✓ A. Coefficient

✗ B. Effect

✗ C. Unit

✗ D. Value

Question ID : **1841223428**

Q.9 Common criteria for the size of Door used in India is:

Ans ✗ A. Height = 0.4 to 0.6 x width

✓ B. Width = 0.4 to 0.6 x Height

✗ C. Height = 0.8 to 1.0 x width

✗ D. Width = 0.8 to 1.0 x Height

Question ID : **1841223418**

Q.10 The patches of the plaster when scaled off either due to lack of adhesion or filaure of bond with the under coat is called as _____.

Ans ✓ A. Flaking

✗ B. Grinning

✗ C. Peeling

✗ D. Hacking

Question ID : **1841223421**

Q.11 This is the edge of the sheets slates or tiles which projects beyond the gable end of the sloped roof. This is known as _____.

Ans ✗ A. Cleats

 ✗ B. Eaves

 ✔ C. Verge

 ✗ D. Wall plate

Question ID : **1841223420**

Q.12 Which of the following is not a example of shallow foundation?

Ans ✗ A. Grillage footing

 ✗ B. Wall footing

 ✗ C. Isolated footing

 ✔ D. Open Caissoons

Question ID : **1841223415**

Q.13 Which of the following is not a classification of Brick bond?

Ans ✗ A. Single Flemish bond

 ✔ B. Flint Bond

 ✗ C. Raking Bond

 ✗ D. Dutch Bond

Question ID : **1841223416**

Q.14 Condition for the maximum discharge for a given value of specific energy is given by _____ where 'E' is specific energy 'h' is critical depth.

Ans ✗ A. $E = 5h/2$

 ✔ B. $E = 3h/2$

 ✗ C. $E = 2h/3$

 ✗ D. $E = 7h/2$

Question ID : **1841223430**

Q.15 In the relation $\Delta = 8.64 A/D$, D is the duty in hectare/cumecs, A is the number of days of the base period and Δ is _____.

Ans ✗ A. Area of the irrigation

 ✔ B. Depth of water in meters

 ✗ C. Depth of water in cms

 ✗ D. Duty in meters

Question ID : **1841223426**

Q.16 In this irrigation system, irrigation water is supplied according to the crop water requirement at regular intervals, throughout the life cycle of the crop. The water for such irrigation may be obtained from rivers or from wells.

Ans ✗ A. Flow irrigation system

✗ B. Lift irrigation system

✓ C. Perennial irrigation system

✗ D. Flooding type irrigation system

Question ID : **1841223424**

Q.17 Which of the following is the hardware part of the computer system?

Ans ✗ A. SQL

✗ B. Excel

✗ C. Buffer

✓ D. Caches Memory

Question ID : **1841223432**

Q.18 The ratio of mean supply of canal to its full capacity is known as _____ factor.

Ans ✗ A. Efficiency

✗ B. Supply

✓ C. Capacity

✗ D. Discharge

Question ID : **1841223422**

Q.19 Which of the thinner is commonly used in distempers?

Ans ✗ A. Turpentine

✗ B. White spirit

✗ C. Naphtha

✓ D. Water

Question ID : **1841223419**

Q.20 A closed conduit for supplying water under pressure is known as _____.

Ans ✗ A. Hydraulic

✓ B. Penstock

✗ C. Power

✗ D. Feeder

Question ID : **1841223425**

Section : **Discipline3**

Q.1 A load W falls upon a bar from a height, h extending it through δ. The energy stored in the bar is _____.

Ans ✗ A. $W\delta$

  ✗ B. $W\delta/2$

  ✓ C. $W(h+\delta)$

  ✗ D. Wh

Question ID : **1841223450**

Q.2 Relation between Specific Creep 'C' and time under load 't' is given by ('a' and 'b' are constant).

Ans ✗ A. c = t/(at+b)

  ✗ B. c = tb/(a+bt)

  ✓ C. c = t/(a+bt)

  ✗ D. c = ta/(a+bt)

Question ID : **1841223440**

Q.3 As per IS 269:1989 for 33 grade cement weight of the magnesia not more than _____ in composition.

Ans ✗ A. 10%

  ✓ B. 0.06

  ✗ C. 8%

  ✗ D. 12%

Question ID : **1841223435**

Q.4 Which of the following is not the example of gravity conduits?

Ans ✓ A. Pipelines

  ✗ B. Flumes

  ✗ C. Open channel

  ✗ D. Tunnels

Question ID : **1841223453**

Q.5 What is the reason to reinforced concrete by steel rods?

Ans ✗ A. Concrete is very strong in compression

  ✓ B. Concrete is very weak in tension

  ✗ C. Steel is stiffer than concrete

  ✗ D. Concrete is a costly material

Question ID : **1841223448**

Q.6 C$_3$A content is found more effective for following type of cement _____.

Ans ✔ A. Sulphate resisting cement

✘ B. Air Entraining cement

✘ C. Low heat cement

✘ D. Rapid hardening cement

Question ID : **1841223436**

Q.7 Modulus of elasticity and Poisson's ratio of a material are 2.1 units and 0.3 respectively. The modulus of rigidity for the same material is _____.

Ans ✔ A. 0.81 units

✘ B. 1.5 units

✘ C. 2.73 units

✘ D. 1.6 units

Question ID : **1841223447**

Q.8 A cantilever beam AB of length 'l' is supported at 'B' and carries a UDL 'w' per unit length . Which is incorrect?

Ans ✘ A. structure is redundant by one degree.

✘ B. Number of equations of equilibrium is 3

✘ C. Total no. of unknowns, '4'

✔ D. The reaction at the support B is WL/4.

Question ID : **1841223449**

Q.9 Which of the following test apparatus is used to find the Soundness of Cement?

Ans ✘ A. Pycnometer

✔ B. Le-Chatelier mold

✘ C. Vicat Apparatus

✘ D. Le Chaterlier"s flask

Question ID : **1841223438**

Q.10 Mass concrete in which large stones each of 500N or more are embedded is known as _____.

Ans ✘ A. Terrazo Concrete

✔ B. Cyclopean Concrete

✘ C. Pozzolanic Concrete

✘ D. Boron Concrete

Question ID : **1841223443**

Q.11 Longitudinal and transverse joints in concrete are provided to prevent _____ cracking of concrete.

Ans ✗ A. Sudden

✗ B. Intensive

✗ C. Gradual

✓ D. Prograssive

Question ID : **1841223442**

Q.12 The wire winding or strapping of a thin cylinder will increase pressure carrying capacity. The longitudinal stress _____.

Ans ✗ A. will decrease

✓ B. will increase

✗ C. will remain unaffected

✗ D. may increase or decrease

Question ID : **1841223445**

Q.13 Point of contraflexure will not occur in case of ___.

Ans ✗ A. a propped cantilever loaded by u. d. l.

✗ B. simply supported beam loaded by u. d. l. and propped in centre

✓ C. a simply supported beam loaded by u. d. l.

✗ D. a fixed beam loaded by u. d. l.

Question ID : **1841223451**

Q.14 Per capita demand calculated by the following formula _____.

Ans ✗ A. Per capita demand = yearly water consumption (in liters)/(365)

✗ B. Per capita demand = Monthly water consumption (in liters)/30

✗ C. Per capita demand = Monthly water consumption (in liters)/(population × 30)

✓ D. Per capita demand = yearly water consumption (in liters)/(population × 365)

Question ID : **1841223452**

Q.15 Which of the following is admixture that slows the chemical process of hydration?

Ans ✗ A. Carboxylated Acrylic Ester

✓ B. Calcium sulphate

✗ C. Acrylic polymer

✗ D. Acrylic Acid

Question ID : **1841223439**

Q.16 Fat concrete is one which contains large proportion of _____.

Ans ✗ A. Cement

✗ B. Aggregate

✗ C. Sand

✔ D. Mortar

Question ID : **1841223441**

Q.17 Minimum weight of 12.5 mm coarse aggregate sample (not for all in Aggregates sample) for sieve analysis as per IS 2386 (Part-1)-1963 for will be _____.

Ans ✗ A. 1 kg

✔ B. 12 kg

✗ C. 6 kg

✗ D. 3 kg

Question ID : **1841223437**

Q.18 A circular bar of 10 mm diameter subjected to a torque of 1964 Nmm is further subjected to an axial pull of 520.70 N. By what percentage the maximum shearing stress will increase?

Ans ✗ A. 10%

✗ B. 40%

✔ C. 20%

✗ D. 30%

Question ID : **1841223446**

Q.19 According to Indian standards the value of sludge index for normal sludge ranges between _____.

Ans ✗ A. 10-150

✔ B. 150-350

✗ C. 0-10

✗ D. 500-1000

Question ID : **1841223454**

Q.20 For the same given length, cross-section and material which column can carry highest load.

Ans ✔ A. Fixed at both ends

✗ B. Free at one end, fixed at other

✗ C. Fixed at one end, hinged at other

✗ D. Hinged at both ends

Question ID : **1841223444**

Section : **Discipline4**

Q.1 The kinematic indeterminacy of the pin-jointed space frame is _____.

Ans
  ✗ A. $D_k = 6j - r$

  ✗ B. $D_k = 2j - r$

  ✗ C. $D_k = j - r$

  ✓ D. $D_k = 3j - r$

Question ID : **1841223472**

Q.2 An empty container weights W1 container with soil sample weights W2, container and oven dried sand weighs W3. The Moisture Content of soil is _____.

Ans
  ✓ A. (W2-W3)/(W3-W1) * 100

  ✗ B. (W2-W3)/(W2-W1) * 100

  ✗ C. (W1-W2)/(W2-W3) * 100

  ✗ D. (W2-W3)/(W1-W2) * 100

Question ID : **1841223470**

Q.3 The effect of rib shortening in two-hinged arch is to reduce the value of horizontal thrust by ____.

Ans
  ✗ A. about 2 %

  ✗ B. about 4 %

  ✗ C. about 1 %

  ✓ D. about 3 %

Question ID : **1841223473**

Q.4 Wired glass is prepared by embedding wire netting in glass plate during _____.

Ans
  ✗ A. preparation

  ✓ B. rolling

  ✗ C. manufacture

  ✗ D. heating

Question ID : **1841223466**

Q.5 Kankar is used for producing _____ lime.

Ans
  ✗ A. Building

  ✓ B. Hydraulic

  ✗ C. Pure

  ✗ D. Fat

Question ID : **1841223463**

Q.6 Membrane theory technique is used for testing ____.

Ans ✗ A. Poliomelytis

✗ B. Copper

✗ C. Dissolved gases

✔ D. B Coli

Question ID : **1841223456**

Q.7 As per IS 3025 Part 23 (1986), before the determination of Alkalnity waste water sample should be free from which of the following?

Ans ✔ A. Turbidity

✗ B. chlorine

✗ C. Odour

✗ D. phenolphthalein

Question ID : **1841223459**

Q.8 Carborundum is a _____ abrasive stone.

Ans ✔ A. polishing

✗ B. robust

✗ C. mild

✗ D. surfacing

Question ID : **1841223464**

Q.9 Lime concrete in foundation should be laid in horizontal layer, not exceeding _____ mm thick when consolidated.

Ans ✗ A. 250

✗ B. 100

✗ C. 300

✔ D. 150

Question ID : **1841223469**

Q.10 The national Board of fire under writer formula will be, when population is less than or equal to 200000 (Q = amount of water required, P = population in thousand).

Ans ✗ A. $Q = 4637\sqrt{P}(1.2)$

✗ B. $Q = 5663\sqrt{P}$

✗ C. $Q = 3182\sqrt{P}$

✔ D. $Q = 4637\sqrt{P}(1-0.01\sqrt{P})$

Question ID : **1841223458**

Q.11 What will be the dilution of sewage which may be disposed of without treatment into a water body?

Ans ✗ A. Less than 150

✗ B. More than 150

✗ C. More than 300

✓ D. More than 500

Question ID : **1841223455**

Q.12 Uniformity coefficient is the ratio of the sieve size through which _____% (by weight) of the material passes to the sieve size that allows 10% of the material to pass.

Ans ✗ A. 80

✗ B. 25

✓ C. 60

✗ D. 40

Question ID : **1841223468**

Q.13 What will be self-cleansing velocity for 30 to 60 cm diameter sewer is?

Ans ✗ A. 65 cm/sec

✗ B. 55 cm/sec

✗ C. 45 cm/sec

✓ D. 75 cm/sec

Question ID : **1841223461**

Q.14 Immediately above the pump _____ valve is placed to reduce back surge of water hammer.

Ans ✓ A. Reflux

✗ B. Sluice

✗ C. Air

✗ D. Float

Question ID : **1841223460**

Q.15 Soil of weight W has moisture content w. The dry density of soil is _____ where V is the volume of proctor mould.

Ans ✗ A. $VW/(1 + w)$

✗ B. $V(1 + w)/W$

✓ C. $W/V(1 + w)$

✗ D. $V/W(1 + w)$

Question ID : **1841223471**

Q.16 Which method is not used for finding the deflections of joints in pin-connected trusses?

Ans ✔️ A. Angle Weight Method

❌ B. Joint Displacement Method

❌ C. Williot-Mohr's Method

❌ D. Kani's Method

Question ID : **1841223474**

Q.17 Between Biological Oxygen Demand and Chemical Oxygen Demand the greater of the two is _____.

Ans ✔️ A. Chemical Oxygen Demand

❌ B. Both are equal

❌ C. Depends on the sewage characteristics

❌ D. Biological Oxygen Demand

Question ID : **1841223457**

Q.18 French polish is a ____ varnish.

Ans ❌ A. Oil

✔️ B. Spirit

❌ C. Refined

❌ D. Kero

Question ID : **1841223465**

Q.19 As per IS 2386 (1963) what should be minimum weight of sample havinf maximum size of 50 mm in substantial portion.

Ans ❌ A. 25 kg

❌ B. 50 Kg

✔️ C. 100 Kg

❌ D. 6 Kg

Question ID : **1841223462**

Q.20 Coarse grained soil contains material half of which is lager than _____ micron.

Ans ❌ A. 600

✔️ B. 75

❌ C. 150

❌ D. 300

Question ID : **1841223467**

Section : **Discipline5**

Q.1 What should be the minimum width of the passenger railway plateform for BG track?

Ans ✗ A. 4.66 m

✓ B. 3.66 m

✗ C. 2.66 m

✗ D. 5.66 m

Question ID : **1841223488**

Q.2 Annual installment of the sinking fund will be given by the following formula _____ (n = number of year, i = intrest rate, s = amount of sinking fund)

Ans ✗ A. I= $Si/((1-i)^n-1)$

✗ B. I= $S/((1+i)^n-1)$

✗ C. I= $i/(S(1+i)^n-1)$

✓ D. I = $Si/((1+i)^n-1)$

Question ID : **1841223494**

Q.3 What amount will be recivedat the end of 30 year if Rs. 1 invested with compoundintrest rate of 10%?

Ans ✗ A. 0.9^10

✗ B. 31^10

✓ C. 1.1^30

✗ D. 0.1^30

Question ID : **1841223493**

Q.4 A technique by which a new employee is rehabilitated into changed surrounding and introduced to the practices. This process is known as _____.

Ans ✓ A. Induction

✗ B. Devlopment

✗ C. Placement

✗ D. Training

Question ID : **1841223478**

Q.5 Which of the following is not a type of organization?

Ans ✗ A. Line and staff organization

✗ B. Line organization

✓ C. Directive organization

✗ D. Functional organization

Question ID : **1841223477**

Q.6 For reversal of stresses the most suitable bolt is _____.

Ans ✔ A. Friction grip Bolt

✘ B. Black Bolt

✘ C. Turned Bolt

✘ D. Ordinary Bolt

Question ID : **1841223491**

Q.7 What is full form of CAD?

Ans ✘ A. Computer Aided Detailing

✔ B. Computer Aided Design

✘ C. Computer Added Drawing

✘ D. Computer Added Design

Question ID : **1841223482**

Q.8 Equation of three moments is used for the analysis of the ____.

Ans ✔ A. Both continuous and fixed beams

✘ B. Fixed beam

✘ C. Continuous beam

✘ D. Simply supported beam

Question ID : **1841223476**

Q.9 Coal tar has some _____ oil which evaporate by exposure.

Ans ✘ A. Fluidy

✔ B. Volatile

✘ C. Soft

✘ D. Lean

Question ID : **1841223486**

Q.10 The wearing surface prepared by laying bitumen concrete is known as _____.

Ans ✘ A. Sheet Asphalt

✔ B. Wearing coat

✘ C. Flooring

✘ D. Renewal coat

Question ID : **1841223485**

Q.11 Signals for main and branch lines are fixed on the same vertical post. Such signals are known as ____.

Ans ✘ A. Repeating Signal

✔ B. Routing Signal

✘ C. Co-acting Signal

✘ D. Calling Signal

Question ID : **1841223489**

Q.12 Paper space is often used to create complex multiple view drawings, it is known as _____.

Ans ✗ A. Limits

✗ B. Space

✔ C. Layout

✗ D. Title block

Question ID : **1841223483**

Q.13 The effective length of the fillet weld is _____.

Ans ✗ A. Total length -√ 2 x weld size

✔ B. Total length -2 x weld size

✗ C. 0.7 x total length

✗ D. Total length -2 x throat size

Question ID : **1841223492**

Q.14 What is the formula to calculate the 'expected time' (a = optimistic time, m = most likely time, b = pessimistc time)

Ans ✔ A. $T_e = (a + 4 m + b)/6$

✗ B. $T_e = (a + 4 m + b)/8$

✗ C. $T_e = (a + 4 m + 5b)/6$

✗ D. $T_e = (2a + 4 m + b)/6$

Question ID : **1841223479**

Q.15 The _____ command defines line characteristics consisting of dashes, dots, and spaces.

Ans ✗ A. POLYLINE

✗ B. DONUT

✔ C. LINETYPE

✗ D. LINE

Question ID : **1841223484**

Q.16 Which of the following is not a important quality standard used as tools to control Inventory?

Ans ✔ A. The outstanding register

✗ B. The maximum store

✗ C. The standard order

✗ D. The re-ordering point

Question ID : **1841223480**

Q.17 Tangent length of a simple circular curve of radius 'R' and deflection angle Ø is _____.

Ans
✔ A. R tanØ/2

✘ B. R sinØ

✘ C. R cotØ/2

✘ D. R sinØ/2

Question ID : **1841223487**

Q.18 Which of the following is the limitations of utilitarianism?

Ans
✘ A. It is a form of consequentialism

✘ B. It's approach to moral reasoning used in business

✔ C. It's un-predictability of the consequences of our actions

✘ D. Its most ethical choice is the one that will produce the greatest good for the greatest number

Question ID : **1841223481**

Q.19 A propped cantilever beam of span 5 m carries 30 kN laod at a distance 2 m from fixed. Determine the value of reaction component at the propped support.

Ans
✘ A. 23.76 kN

✘ B. 20.80 kN

✔ C. 6.24 kN

✘ D. 9.20 kN

Question ID : **1841223475**

Q.20 In structural steel, Upper yield point in the stress-strain curve can be avoided by _____.

Ans
✔ A. Hot Working

✘ B. Cold Working

✘ C. Quenching

✘ D. Galvanising

Question ID : **1841223490**