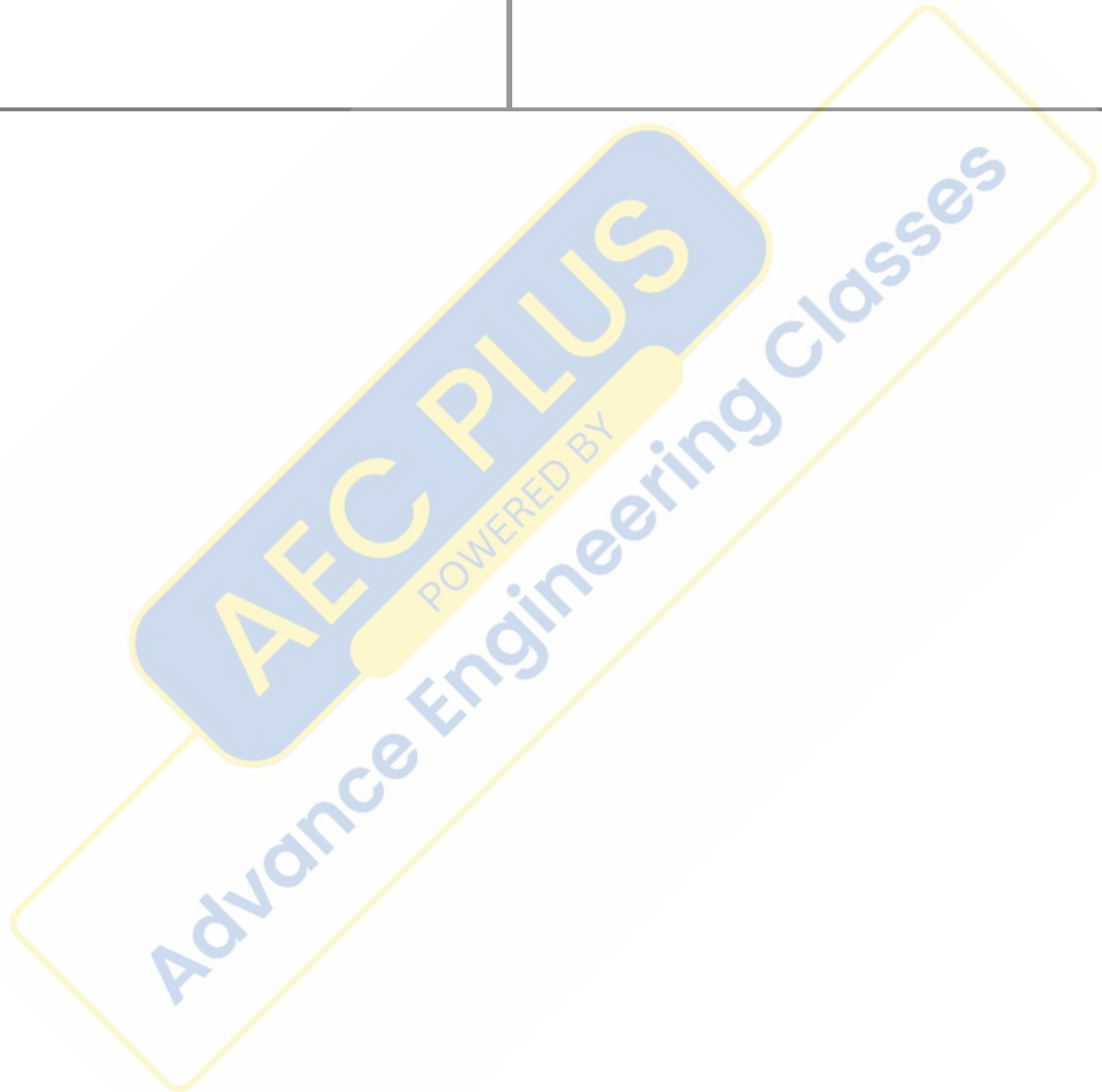


# DSSSB JE & Section Officer

Previous Year Paper  
(Civil) 28 June 2022 Shift 3





GOVT. OF NCT OF DELHI  
Delhi Subordinate Services Selection Board  
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Participant ID	
Participant Name	
Test Center Name	
Test Date	28/06/2022
Test Time	4:30 PM - 6:30 PM
Subject	Junior Engineer (Civil) or Section Officer (Civil)

## Section : Mental Ability

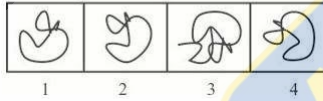
**Q.1** Four words have been given out of which three are alike in some manner, while the fourth one is different. Choose the word which is different from the rest.

- Ans  A. Snake  
 B. Bat  
 C. Lizard  
 D. Turtle

Question ID : 1841223301

**Q.2** 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.

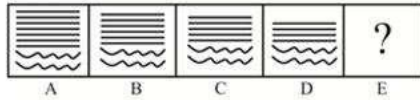


- Ans  A. 4  
 B. 3  
 C. 1  
 D. 2

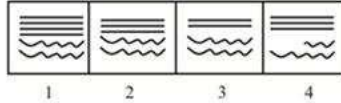
Question ID : 1841223305

**Q.3** Select the option that will correctly replace the question mark (?) and complete the series.

Problem Fig.



Answer Fig.



- Ans
- A. 4
  - B. 1
  - C. 2
  - D. 3

Question ID : 1841223304

**Q.4** Which number would replace question mark (?) in the given series?  
347, 364, 381, 398, ?

- Ans
- A. 417
  - B. 415
  - C. 410
  - D. 412

Question ID : 1841223309

**Q.5** Manoj is ranked 129<sup>th</sup> from right end of the row in a stadium and 115<sup>th</sup> from left end in a same row. How many people are in that row?

- Ans
- A. 244
  - B. 214
  - C. 245
  - D. 243

Question ID : 1841223293

**Q.6** 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. 8974
  - B. 4520
  - C. 6742
  - D. 4728

Question ID : 1841223311

**Q.7** 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. Niece  
 B. Nephew  
 C. Aunty  
 D. Uncle

Question ID : 1841223298

**Q.8** 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.

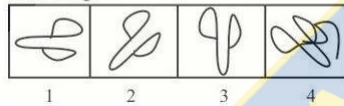
II. No tigers are owl.

- Ans  A. Either conclusion I or conclusion II follow  
 B. Only conclusion II follows  
 C. Only conclusion I follows  
 D. Both conclusion I and II follow

Question ID : 1841223294

**Q.9** 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. 4  
 B. 2  
 C. 3  
 D. 1

Question ID : 1841223306

**Q.10** 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. South  
 C. North  
 D. West

Question ID : 1841223297

**Q.11** 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. Pretty  
 C. Alluring  
 D. Prepossessing

Question ID : 1841223302

**Q.12** Select the correct mirror image of the given figure when the mirror is placed to the right side.

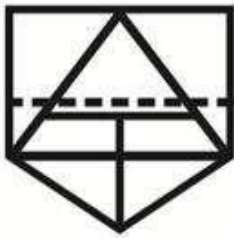


Ans

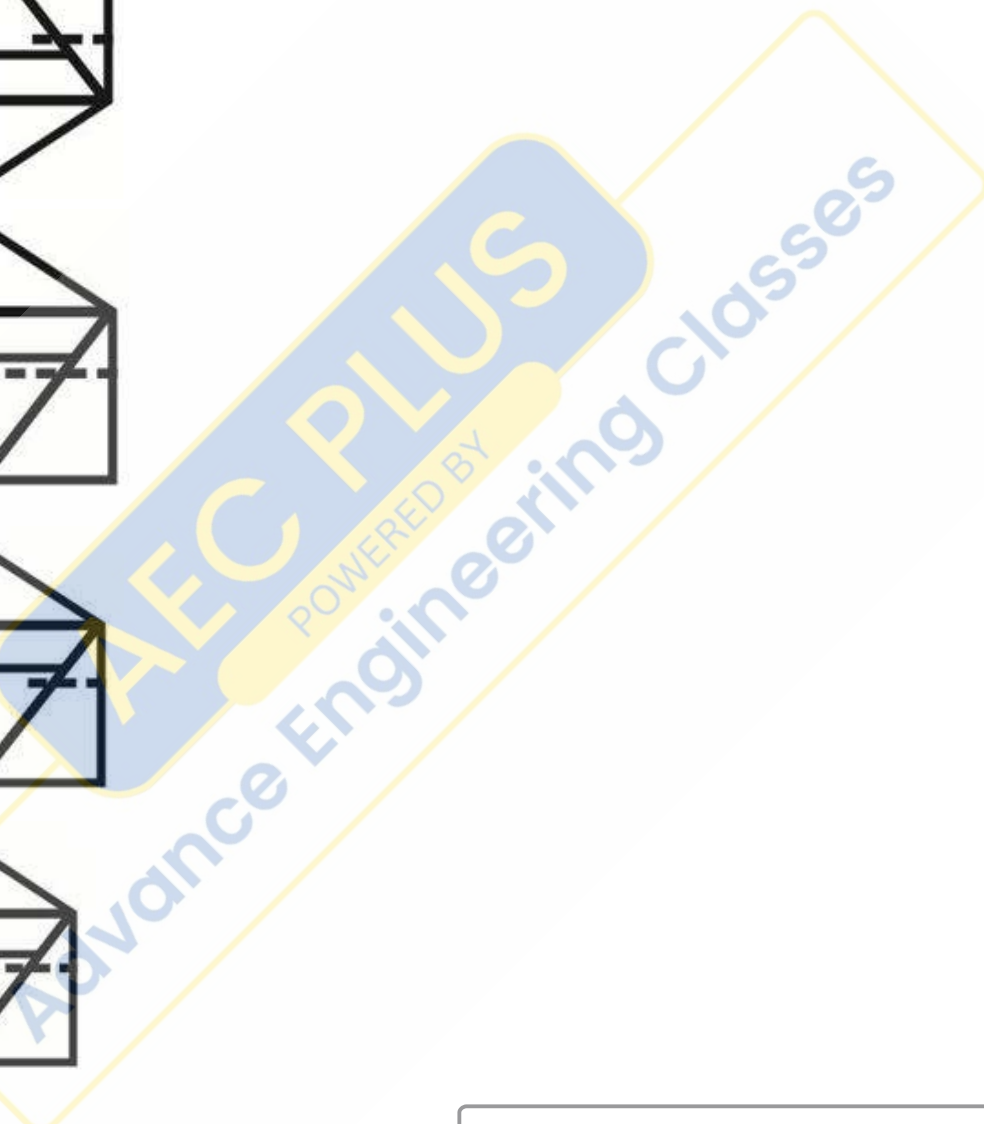
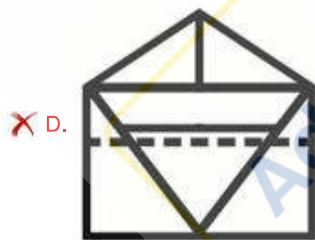
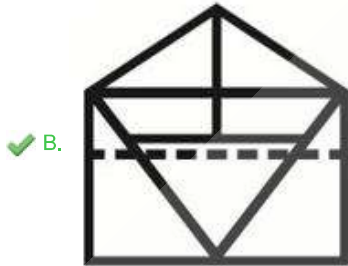
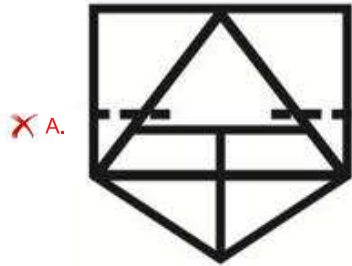
- A.
- B.
- C.
- D.

Question ID : 1841223307

Q.13 What will be the water image of following figure?



Ans



Question ID : 1841223308

Q.14 What will be the approximate value of the following expression?  
 $34.6 + 45.4 - 54.3 \times 1.3 + 78.9 \div 1.6$

- Ans  A. 67.72  
 B. 65.5  
 C. 56.72  
 D. 69.72

Question ID : 1841223312

Q.15 Which of the following meaningful word can NOT be formed by using the letters of the word ACROTROPHONEUROSIIS?

- Ans  A. Trophy  
 B. Across  
 C. Phone  
 D. Actress

Question ID : 1841223296

Q.16 Which letter cluster would replace question mark (?) in the given series?  
 BC, GX, LS, QN, ?

- Ans  A. IF  
 B. IV  
 C. VF  
 D. VI

Question ID : 1841223295

Q.17 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. Niece  
 C. Uncle  
 D. Brother-in-law

Question ID : 1841223299

Q.18 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. Gas  
 D. Solid

Question ID : 1841223300

Q.19 Which number would replace question mark (?) in the given series?  
729, 665, 601, 537. ?

- Ans  A. 437  
 B. 447  
 C. 499  
 D. 473

Question ID : 1841223310

Q.20 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

Section : General Awareness

Q.1 Which of the following built famous Brihadishwara Temple?

- Ans  A. Cheras  
 B. Cholas  
 C. Pallavas  
 D. Rashtrakutas

Question ID : 1841223319

Q.2 \_\_\_\_\_ 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. Naya Savera  
 D. Padho Pardesh

Question ID : 1841223316



**Q.3** 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. Nai Manzil
  - B. Samagra Shiksha
  - C. Padhe Betiyan, Badhe Betiyan
  - D. Beti Bachao, Beti Padhao

Question ID : 1841223315

**Q.4** Project Udaan, a language translator was launched in September 2021 by \_\_\_\_.

- Ans
- A. IIT Roorkee
  - B. IIT Bombay
  - C. IIT Hyderabad
  - D. IIT Guwahati

Question ID : 1841223314

**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. Germany
  - B. Australia
  - C. Belgium
  - D. South Korea

Question ID : 1841223317

**Q.6** Polyp and Medusa body forms are found in \_\_\_\_.

- Ans
- A. Phylum Mollusca
  - B. Phylum Ctenophora
  - C. Phylum Coelenterata (Cnidaria)
  - D. Phylum Echinodermata

Question ID : 1841223330

**Q.7** Which of the following award is given to Hyderabad-based International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)?

- Ans
- A. America Food Prize 2021
  - B. Africa Food Prize 2021
  - C. Asia Food Prize 2021
  - D. Europe Food Prize 2021

Question ID : 1841223313

**Q.8 Identify the correct match of sportsperson with the sport/games.**

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

Question ID : 1841223318

**Q.9 Which of these launched the second window of Swavalamban Challenge Fund (SCF) with Green Bharat as prioritised theme in November 2021?**

- Ans  A. National Housing Bank (NHB)  
 B. India Infrastructure Finance Company Ltd (IIFCL)  
 C. Small Industries Development Bank of India (Sidbi)  
 D. Industrial Finance Corporation of India (IFCI)

Question ID : 1841223327

**Q.10 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  
 C. A, D  
 D. A, B

Question ID : 1841223322

**Q.11 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 112  
 B. Article 151  
 C. Article 178  
 D. Article 165

Question ID : 1841223326

**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. 1984  
 B. 1975  
 C. 1990  
 D. 1960

Question ID : 1841223328

Q.13 Where is Paradwip port which specializes in the export of iron ore, located?

- Ans  A. Odisha  
 B. West Bengal  
 C. Andhra Pradesh  
 D. Karnataka

Question ID : 1841223329

Q.14 \_\_\_\_\_ is the classical music of Kashmir, which uses its own ragas (known as Muquam).

- Ans  A. Muquam Kalam  
 B. Kalam-e-Kashmir  
 C. Sufiana Kalam  
 D. Kalam-e- Shah

Question ID : 1841223324

Q.15 \_\_\_\_\_ is the main festival of Karnataka, which marks the Kannada New Year.

- Ans  A. Onam  
 B. Bonalu  
 C. Pongal  
 D. Ugadi

Question ID : 1841223325

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

- Ans  A. Article 300A  
 B. Article 279A  
 C. Article 290A  
 D. Article 338A

Question ID : 1841223332

Q.17 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 24  
 B. Article 26  
 C. Article 21  
 D. Article 20

Question ID : 1841223331

**Q.18** Who pioneered the movement in support of widow remarriage and girls' education in Andhra?

- Ans  A. Kandukuri Veeresalingam  
 B. Chembeti Sridharalu Naidu  
 C. Shree Narayana Guru  
 D. Jotirao Govindrao Phule

Question ID : 1841223321

**Q.19** Birju Maharaj, a recipient of Padma Vibhushan was legend of India's \_\_\_\_\_.

- Ans  A. Kuchipudi dance  
 B. Bharatnatyam dance  
 C. Mohiniattam dance  
 D. Kathak dance

Question ID : 1841223323

**Q.20** The Consumer Protection Act, 2019 extends to the whole of India except \_\_\_\_\_.

- Ans  A. The State of Sikkim  
 B. Andaman Nicobar Islands  
 C. the State of Jammu and Kashmir  
 D. Daman and Diu

Question ID : 1841223320

Section : Arithmetic Ability

**Q.1** The following is the chart relating to the production of fertilizers in 1000 tons by three companies for 4 years.



What is the difference in total production for companies A and B for years 2015-17 to companies B and C for the years 2016-2018.

- Ans  A. 100  
 B. 110  
 C. 130  
 D. 85

Question ID : 1841223352

Q.2 If  $(4x^2 + xy) : (3xy - y^2) = 22:9$ , find which of the following is  $x/y$ ?

- Ans
- A.  $\frac{3}{4}$
  - B.  $\frac{7}{8}$
  - C.  $\frac{2}{3}$
  - D.  $\frac{5}{6}$

Question ID : 1841223339

Q.3 The area of an equilateral triangle is  $121\sqrt{3}$  sq.cm, find the perimeter.

- Ans
- A. 62 cm
  - B. 52 cm
  - C. 56 cm
  - D. 66 cm

Question ID : 1841223348

Q.4 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.  $134\frac{2}{5}$  cm
  - B.  $166\frac{2}{3}$  cm
  - C.  $143\frac{1}{3}$  cm
  - D.  $153\frac{1}{4}$  cm

Question ID : 1841223349

Q.5 P lends identical sums of money to X, Y and Z for a period of 3 years. The simple interest charged being 6% p.a,  $8\frac{1}{3}$  % p.a and 12% p.a. At the end of the third year P invests the total interest received for one year @ 15% pa SI and earns an interest of ₹ 2607, find the individual amount lent by P to X, Y and Z.

- Ans
- A. ₹ 18000
  - B. ₹ 21600
  - C. ₹ 22000
  - D. ₹ 19800

Question ID : 1841223341

Q.6 Which of the following numbers is exactly divisible by 44?  
192156, 210422, 184360, 209414

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

Question ID : 1841223336

Q.7 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. ₹ 39725  
 C. ₹ 40878  
 D. ₹ 48636

Question ID : 1841223342

Q.8 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. 65  
 B. 71  
 C. 54  
 D. 79

Question ID : 1841223346

Q.9 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. 52,400  
 B. 1,36,800  
 C. 1,06,600  
 D. 1,57,200

Question ID : 1841223338

Q.10 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. 34  
 B. 42  
 C. 40  
 D. 36

Question ID : 1841223334

**Q.11** 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. 8 hours  
 B. 16 hours  
 C. 12 hours  
 D. 10 hours

Question ID : 1841223344

**Q.12** 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. 150 m  
 B. 195 m  
 C. 180 m  
 D. 205 m

Question ID : 1841223345

**Q.13** If  $\sqrt{3} = 1.73$ , find the value of  $\frac{\sqrt{3}}{2-\sqrt{3}}$ .

- Ans  A. 6.34  
 B. 6.19  
 C. 6.46  
 D. 6.27

Question ID : 1841223335

**Q.14** 12 men and 16 boys can finish a work in 3 days and 16 men and 8 boys can finish the same work in  $3\frac{2}{11}$  days. Find how long will a boy take to finish the work alone?

- Ans  A. 84 days  
 B. 96 days  
 C. 60 days  
 D. 72 days

Question ID : 1841223343

**Q.15** Anil purchased two shirts one at a certain price and another at  $\frac{3}{4}$ th 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. ₹ 3890  
 D. ₹ 3465

Question ID : 1841223340

**Q.16** An alloy contains 30% copper, 26% nickel and rest zinc. How much zinc is present in 14 kg of the alloy?

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

Question ID : 1841223337

**Q.17** 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.18** 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. 48 years  
 B. 52 years  
 C. 50 years  
 D. 55 years

Question ID : 1841223347

**Q.19** Based on the table below of marks obtained by 100 students in 2 subjects and the aggregate. Answer the following question.

Marks out of 80	70 and above	60 and above	50 and above	40 and above	20 and above
Maths	9	25	62	78	100
Science	4	20	56	80	100
Aggregate	7	23	59	79	100

What is the percentage of students getting at least 60 marks in science over those getting 50% in maths? (approximately)

- Ans  A. 26%  
 B. 18%  
 C. 23%  
 D. 31%

Question ID : 1841223351



Q.20 Solve: 
$$\frac{0.04 \times 0.04 \times 0.04 + 0.06 \times 0.06 \times 0.06}{0.04 \times 0.04 - 0.04 \times 0.06 + 0.06 \times 0.06}$$

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

Question ID : 1841223333

## Section : General English

Q.1 Select the most appropriate meaning of the given idiom.  
make ends meet

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

Question ID : 1841223364

Q.2 Complete the following proverb.  
a \_\_\_\_\_ can't change its \_\_\_\_\_.

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

Question ID : 1841223363

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

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

Question ID : 1841223357

Q.4 Select the most appropriate synonym of the given word.  
IRKSOME

- Ans  A. Helpful  
 B. Interesting  
 C. Tireless  
 D. Annoying

Question ID : 1841223358

**Q.5** 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; coarse
  - C. course; course
  - D. coarse; course

Question ID : 1841223361

**Q.6** Select the sentence part which has an error in spelling. If there is no error, select 'No error'.

His lifestyle entailed a number of dietary prohibitions which traditionally included vegetarianism.

- Ans
- A. His lifestyle entailed a number of
  - B. No error
  - C. traditionally included vegetarianism.
  - D. dietary prohibitions which

Question ID : 1841223366

**Q.7** Select the most appropriate antonym of the given word.  
**ACCELERATE**

- Ans
- A. Hasten
  - B. Hinder
  - C. Quicken
  - D. Expedite

Question ID : 1841223360

**Q.8** Complete the following proverb.  
a bird in hand is \_\_\_\_.

- Ans
- A. more valuable than two on the tree
  - B. better than three
  - C. worth two in the bush
  - D. to be set free

Question ID : 1841223362

**Q.9** Select the most appropriate option to fill in the blank.  
We \_\_\_\_ believe that lives of great men can make our lives sublime.

- Ans
- A. Strongly
  - B. Narrowly
  - C. Widely
  - D. Intelligently

Question ID : 1841223355

**Q.10** Select the most appropriate synonym of the given word.  
**INGENUOUS**

- Ans  A. Honest  
 B. Worried  
 C. Clever  
 D. Deceitful

Question ID : 1841223359

**Q.11** Select the most appropriate option to fill in the blank.  
Father got angry \_\_\_\_\_ Avika as she was busy playing with mobile.

- Ans  A. From  
 B. On  
 C. With  
 D. To

Question ID : 1841223354

**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 remembered today for his formulation of an atomic theory of the universe.

- Ans  A. No error  
 B. primarily remembered today for his formulation  
 C. Democritus was a Greek philosopher  
 D. of an atomic theory of the universe.

Question ID : 1841223367

**Q.13** 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. Besides  
 B. Under  
 C. Over  
 D. Through

Question ID : 1841223353

**Q.14** 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 the ball  
 B. on the ropes  
 C. on top of the world  
 D. on the hot seat

Question ID : 1841223365

**Q.15** 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. are spending  
 C. spent  
 D. spend

Question ID : 1841223356

**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** Extrusive Igneous rocks are formed \_\_\_\_\_.

- Ans  A. from the change over of some rocks  
 B. from cooled down magma on the earth's surface  
 C. from sediments deposited by wind and water  
 D. from the solidified magma inside the earth

Question ID : 1841223370

**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 What kind of rock is the basalt rock?**

- Ans**  A. extrusive igneous rock  
 B. intrusive igneous rock  
 C. sedimentary rock  
 D. metamorphic rock

Question ID : 1841223371

**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 Match the change of rocks.

main ingredient	changed form
a. clay	1. marble
b. limestone	2. granite
c. molten magma inside earth	3. sandstone
d. grains of sand	4. slate

- Ans
- A. a-2, b-1, c-3, d-4
  - B. a-1, b-2, c-4, d-3
  - C. a-3, b-4, c-1, d-2
  - D. a-4, b-1, c-2, d-3

Question ID : 1841223372

**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 : 19**

**Q.19 In which kind of rocks are the fossils of animals and plants found?**

- Ans**
- A. intrusive igneous rocks
  - B. metamorphic rocks
  - C. sedimentary rocks
  - D. extrusive 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 : 20**

**Q.20** The theme of the passage revolves around \_\_\_\_.

- Ans**  A. the types of rocks  
 B. volcanoes  
 C. changing of rocks  
 D. crust of the earth

Question ID : 1841223369

**Section : General Hindi**

**Q.1** यह सभा के \_\_\_\_\_ का चुनाव है। उचित शब्द का चयन कर वाक्य पूर्ण कीजिए।

- Ans**  A. पदाधिकारियों  
 B. पदाधिकारियों  
 C. पदाधिकारियों  
 D. पदाधिकारियों

Question ID : 1841223388

**Q.2** संदिग्ध वर्तमान काल वाला वाक्य कौनसा है?

- Ans**  A. गाड़ी दोपहर को आती है।  
 B. अब तो वह मरता है।  
 C. सिपाही रात को पहरा देता है।  
 D. तेरे लिए गौतमी अकुलाती होंगी।

Question ID : 1841223386



Q.3 इनमें 'होश की दावा करना' मुहावरे का अर्थ है-

Ans  A. सोच-समझकर कहना

B. घमंड चूर हो जाना

C. आश्चर्य में होना

D. होश उड़ जाना

Question ID : 1841223383

Q.4 इनमें 'संस्तुति' का पर्यायवाची शब्द कौनसा है?

Ans  A. प्रार्थना

B. घोषणा

C. सिफारिश

D. प्रतिष्ठान

Question ID : 1841223380

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

Ans  A. अ: + एव

B. अ + तएव

C. अत + एव

D. अत: + एव

Question ID : 1841223378

Q.6 अपादान कारक युक्त वाक्य है-

Ans  A. शिकारी ने खरगोश मारा।

B. वह कुल्हाड़ी से वृक्ष काटता है।

C. माँ ने बच्चे को बुलाया।

D. छत से उतरी हुई लता।

Question ID : 1841223375

Q.7 इनमें कौनसा पूर्ण भूतकाल वाला वाक्य नहीं है?

Ans  A. सिकंदर ने हिन्दुस्तान पर चढ़ाई की थी।

B. देश में अकाल पड़ा था।

C. आज सबेरे मैं आपके यहाँ गया था।

D. हो सकता है कि उसने यह बात सुनी हो।

Question ID : 1841223385

Q.8 इनमें अधिकरण कारक की विभक्ति कौनसी है?

Ans  A. से

B. पर

C. री

D. अरे

Question ID : 1841223374

Q.9 अधोलिखित में 'ख्याली पुलाव पकाना' किस मुहावरे का अर्थ है?

- Ans  A. हवाई किला बनाना  
 B. हवाई उड़ाना  
 C. हवाई किला ढा देना  
 D. हवा फिरना

Question ID : 1841223382

Q.10 इनमें कौनसा अनिश्चित संख्यावाचक विशेषण नहीं है?

- Ans  A. पूरा आनंद  
 B. पूरे टुकड़े  
 C. बहुतेरे उपाय  
 D. सब पेड़

Question ID : 1841223377

Q.11 किस विकल्प में लोकोक्ति और उसका अर्थ सुमेलित नहीं है?

- Ans  A. साँच को आँच कहौं – 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.12 'खीझना' का विलोम युग्म कौनसा है?

- Ans  A. बूझना  
 B. रीझना  
 C. मिलना  
 D. चिढ़ाना

Question ID : 1841223381

Q.13 तुम यह काम \_\_\_\_\_ करो। उचित क्रिया विशेषण का चयन कर रिक्त स्थान की पूर्ति कीजिए।

- Ans  A. केवल  
 B. न  
 C. नहीं  
 D. मत

Question ID : 1841223376

Q.14 किस विकल्प में शब्द का संधि विच्छेद अनुचित है?

- Ans  A. वि + सम = विषम  
 B. प्र + मान = प्रमाण  
 C. अहो + रूप = अहोरूप  
 D. सम् + कल्प = संकल्प

Question ID : 1841223379

Q.15 किस विकल्प में सर्वनाम तथा विशेषण का शुद्ध रूप प्रयुक्त नहीं हुआ है?

- Ans  A. तुमसे कोई काम नहीं हो सकता।  
 B. उसने हमको कहा।  
 C. भारत के और देशों के साथ संबंध अच्छे हैं।  
 D. सभी चीजें यहाँ छोड़ दो।

Question ID : 1841223387

**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 महिमा  
 B. आचरण और समाज  
 C. आचरण की शुद्धता  
 D. आचरण की सभ्यता

Question ID : 1841223394

**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 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 : 18**

**Q.18** गद्यांश के अनुसार मनुष्य जीवन पर कौनसा प्रभाव चिरस्थायी होता है?

- Ans**  A. मौन व्याख्यान का  
 B. कला का  
 C. साहित्य का  
 D. संस्कृति का

Question ID : 1841223393

**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. विद्या और कला द्वारा  
 B. आचरण की सभ्यता प्राप्त कर  
 C. मौन व्याख्यान द्वारा  
 D. साहित्य और धन द्वारा

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. अहंकार, क्रोध और करुणा  
 B. विनम्रता, दया और प्रेम  
 C. घृणा, शांति और दया  
 D. चित्रकला, संगीत और लेखन

Question ID : 1841223392

**Section : Discipline1****Q.1 What is the effect of the tempature on the solubility of oxygen in water?**

- Ans  A. Solubility declines with increase in temperature  
 B. Solubility declines with decrease in temperature  
 C. Solubility does not depend on temperature  
 D. Solubility rises with increase in temperature

Question ID : 1841223397

**Q.2 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. 20  
 C. 0.5  
 D. 5.0

Question ID : 1841223406

**Q.3 The sum upto infinite of a geometric series, when  $|r| < 1$ , is (where 'a' is first term and 'r' is common ratio)**

- Ans  A.  $a/(1-r)$   
 B.  $r/(1-a)$   
 C.  $(1-a)/r$   
 D.  $(1-r)/a$

Question ID : 1841223399

Q.4 Capillary Tube Refrigeration have \_\_\_\_ internal diameters and \_\_\_\_ length and they are coiled to several turns so that it would occupy less space.

- Ans
- A. very big, very big
  - B. very small, very small
  - C. very small, very long
  - D. very big, very small

Question ID : 1841223412

Q.5 Which of the following is not a method for locating the centroid of an area?

- Ans
- A. Graphical Method
  - B. Analytical Method
  - C. Method of Integration
  - D. Solemnity Method

Question ID : 1841223403

Q.6 What will be the Modulus of the complex number  $(5-5i)/(3-4i)$ ?

- Ans
- A.  $\sqrt{5}$
  - B.  $\sqrt{2}$
  - C.  $\sqrt{7}$
  - D.  $\sqrt{3}$

Question ID : 1841223400

Q.7 A Queen Post roof is Suitable for span which of the following span?

- Ans
- A. 2-5 m
  - B. 8-12 m
  - C. 5-9 m
  - D. 3-7 m

Question ID : 1841223414

Q.8 If a object is charged by induction, then the object \_\_\_\_\_.

- Ans
- A. drops portion of the charge on it
  - B. drops entire of the charge on it
  - C. changes neutral
  - D. does not drop any charge

Question ID : 1841223395

Q.9 '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. Funicular Force Theorem
  - B. Newton Theorem
  - C. Varignon's Theorem
  - D. Law of triangle of forces

Question ID : 1841223402

Q.10 "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. Substitution
  - B. Maximum Power Transfer
  - C. Superposition theorem
  - D. Thevenin Theorem

Question ID : 1841223410

Q.11 The energy essential to transfer a 50-coulomb charge through a potential difference of 2 V is:

- Ans
- A. 100 J
  - B. 50 J
  - C. 25 J
  - D. 10 J

Question ID : 1841223407

Q.12 Which of the following is not used as Coagulants for drinking water treatment?

- Ans
- A. Ferrous sulphate
  - B. Sodium aluminate
  - C. Chlorinated ferrous sulphate
  - D. Ferric chloride

Question ID : 1841223398

Q.13 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. 3 Mega ohm
  - B. 2 Mega ohm
  - C. 1 Mega ohm
  - D. 4 Mega ohm

Question ID : 1841223409

Q.14 Which of the following is the unit of inertia of mass?

- Ans  A. kg/m  
 B. m<sup>3</sup>  
 C. kg/m<sup>2</sup>  
 D. kg-m<sup>2</sup>

Question ID : 1841223404

Q.15 Parallel axis theorem given by the following expression, where (I = moment of inertia, I<sub>c</sub> = moment of inertia about the center, M = mass h = distance between the two axes).

- Ans  A.  $I = (I_c)^2 + Mh^2$   
 B.  $I = I_c + Mh$   
 C.  $I = (I_c)^2 + Mh$   
 D.  $I = I_c + Mh^2$

Question ID : 1841223405

Q.16 The melting temperature of a solid is usually considered to be \_\_\_\_\_ the freezing point of the corresponding liquid.

- Ans  A. Lower than  
 B. Zero  
 C. Same as  
 D. Higher than

Question ID : 1841223396

Q.17 For the 'gears' which of the following is false?

- Ans  A. It is having Constant velocity ratio  
 B. It is having bulky construction  
 C. It is having Positive drive  
 D. It is transmitting large power

Question ID : 1841223411

Q.18 Which of the following is a essential part of the boiler?

- Ans  A. Pressure guage  
 B. Safety valve  
 C. Heat exchanger  
 D. Economizer

Question ID : 1841223413



Q.19 The size of the earthing wire is dependent of the which of the factor?

- Ans  A. Ampere capacity of the service wires  
 B. Atmospheric surroundings  
 C. Humidity of the soil  
 D. Voltage of the service wire

Question ID : 1841223408

Q.20 In this system the force acting on a body are in the same plane, but their lines of action do not meet at the same point. This is known as:

- Ans  A. Coplaner Non-concurrent Force System  
 B. Coplaner concurrent Force System  
 C. Non-Coplaner Non-concurrent Force System  
 D. Non-Coplaner concurrent Force System

Question ID : 1841223401

Section : Discipline2

Q.1 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  $\Delta$  is \_\_\_\_\_.

- Ans  A. Duty in meters  
 B. Depth of water in cms  
 C. Area of the irrigation  
 D. Depth of water in meters

Question ID : 1841223426

Q.2 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.3 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. Perennial irrigation system  
 C. Lift irrigation system  
 D. Flooding type irrigation system

Question ID : 1841223424

Q.4 Which of the following is not a classification of Brick bond?

- Ans  A. Single Flemish bond  
 B. Flint Bond  
 C. Dutch Bond  
 D. Raking Bond

Question ID : 1841223416

Q.5 This is the undersurface of the arch:

- Ans  A. Soffit  
 B. Crown  
 C. Springers  
 D. Arcade

Question ID : 1841223417

Q.6 The ratio of mean supply of canal to its full capacity is known as \_\_\_\_\_ factor.

- Ans  A. Discharge  
 B. Efficiency  
 C. Supply  
 D. Capacity

Question ID : 1841223422

Q.7 Which of the thinner is commonly used in distempers?

- Ans  A. Naphtha  
 B. Water  
 C. Turpentine  
 D. White spirit

Question ID : 1841223419

Q.8 Common criteria for the size of Door used in India is:

- Ans  A. Width = 0.4 to 0.6 x Height  
 B. Width = 0.8 to 1.0 x Height  
 C. Height = 0.4 to 0.6 x width  
 D. Height = 0.8 to 1.0 x width

Question ID : 1841223418

Q.9 A closed conduit for supplying water under pressure is known as \_\_\_\_\_.

- Ans  A. Power  
 B. Hydraulic  
 C. Feeder  
 D. Penstock

Question ID : 1841223425

Q.10 Darcy's Frictional \_\_\_\_\_ varies from 0.0005 for new pipe to 0.01 for old pipes.

- Ans
- A. Effect
  - B. Value
  - C. Coefficient
  - D. Unit

Question ID : 1841223428

Q.11 The velocity of fluid particle at the center of the pipe section is \_\_\_\_\_.

- Ans
- A. Minimum
  - B. Maximum
  - C. Equal
  - D. Zero

Question ID : 1841223429

Q.12 For the Francis Turbines flow ratio, ratio varies from \_\_\_\_\_.

- Ans
- A. 0.10 to 0.12
  - B. 0.30 to 0.45
  - C. 0.05 to 0.03
  - D. 0.15 to 0.30

Question ID : 1841223431

Q.13 Which of the following is the hardware part of the computer system?

- Ans
- A. Caches Memory
  - B. SQL
  - C. Buffer
  - D. Excel

Question ID : 1841223432

Q.14 Which of the following is not an example of shallow foundation?

- Ans
- A. Grillage footing
  - B. Wall footing
  - C. Open Caissons
  - D. Isolated footing

Question ID : 1841223415

Q.15 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.16 The patches of the plaster when scaled off either due to lack of adhesion or failure of bond with the under coat is called as \_\_\_\_\_.

- Ans  A. Flaking  
 B. Hacking  
 C. Peeling  
 D. Grinning

Question ID : 1841223421

Q.17 Dimensionless parameter not applicable to flowing fluids, is \_\_\_\_\_.

- Ans  A. Reynold's number  
 B. Kinetic viscosity  
 C. Friction factor  
 D. Pressure coefficient

Question ID : 1841223427

Q.18 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.  $E = 2h/3$   
 B.  $E = 5h/2$   
 C.  $E = 7h/2$   
 D.  $E = 3h/2$

Question ID : 1841223430

Q.19 The theory which gives equal weightage to horizontal and vertical creep is known as \_\_\_\_\_ theory.

- Ans  A. Bligh's  
 B. Kennedy's  
 C. Lacey's  
 D. Fender's

Question ID : 1841223423

Q.20 Which of the following is a operating system?

- Ans  A. Firefox  
 B. Fedora  
 C. Mozilla  
 D. MATLAB

Question ID : 1841223434

Section : Discipline3

Q.1 Longitudinal and transverse joints in concrete are provided to prevent \_\_\_\_ cracking of concrete.

- Ans  A. Sudden  
 B. Prograssive  
 C. Intensive  
 D. Gradual

Question ID : 1841223442

Q.2 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. 2.73 units  
 B. 0.81 units  
 C. 1.6 units  
 D. 1.5 units

Question ID : 1841223447

Q.3 Which of the following is not the example of gravity conduits?

- Ans  A. Open channel  
 B. Flumes  
 C. Pipelines  
 D. Tunnels

Question ID : 1841223453

Q.4 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. 30%  
 B. 40%  
 C. 10%  
 D. 20%

Question ID : 1841223446

Q.5 A load  $W$  falls upon a bar from a height,  $h$  extending it through  $\delta$ . The energy stored in the bar is \_\_\_\_.

- Ans  A.  $W\delta/2$   
 B.  $Wh$   
 C.  $W(h + \delta)$   
 D.  $W\delta$

Question ID : 1841223450

**Q.6 Relation between Specific Creep 'C' and time under load 't' is given by ('a' and 'b' are constant).**

- Ans
- A.  $c = ta/(a+bt)$
  - B.  $c = t/(a+bt)$
  - C.  $c = tb/(a+bt)$
  - D.  $c = t/(a+bt)$

Question ID : 1841223440

**Q.7 The wire winding or strapping of a thin cylinder will increase pressure carrying capacity. The longitudinal stress \_\_\_\_\_.**

- Ans
- A. will remain unaffected
  - B. may increase or decrease
  - C. will increase
  - D. will decrease

Question ID : 1841223445

**Q.8 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.9 Mass concrete in which large stones each of 500N or more are embedded is known as \_\_\_\_\_.**

- Ans
- A. Pozzolanic Concrete
  - B. Boron Concrete
  - C. Terrazo Concrete
  - D. Cyclopean Concrete

Question ID : 1841223443

**Q.10 Point of contraflexure will not occur in case of \_\_\_\_.**

- Ans
- A. simply supported beam loaded by u. d. l. and propped in centre
  - B. a propped cantilever loaded by u. d. l.
  - C. a simply supported beam loaded by u. d. l.
  - D. a fixed beam loaded by u. d. l.

Question ID : 1841223451

**Q.11 For the same given length, cross-section and material which column can carry highest load.**

- Ans  A. Free at one end, fixed at other  
 B. Fixed at one end, hinged at other  
 C. Hinged at both ends  
 D. Fixed at both ends

Question ID : 1841223444

**Q.12 C<sub>3</sub>A content is found more effective for following type of cement \_\_\_\_\_.**

- Ans  A. Rapid hardening cement  
 B. Low heat cement  
 C. Air Entraining cement  
 D. Sulphate resisting cement

Question ID : 1841223436

**Q.13 Which of the following is admixture that slows the chemical process of hydration?**

- Ans  A. Acrylic polymer  
 B. Acrylic Acid  
 C. Carboxylated Acrylic Ester  
 D. Calcium sulphate

Question ID : 1841223439

**Q.14 A cantilever beam AB of length 'l' is supported at 'B' and carries a UDL 'w' per unit length . Which is incorrect?**

- Ans  A. The reaction at the support B is  $WL/4$ .  
 B. structure is redundant by one degree.  
 C. Number of equations of equilibrium is 3  
 D. Total no. of unknowns, '4'

Question ID : 1841223449

**Q.15 Which of the following test apparatus is used to find the Soundness of Cement?**

- Ans  A. Vicat Apparatus  
 B. Le Chaterlier's flask  
 C. Pycnometer  
 D. Le-Chatelier mold

Question ID : 1841223438

Q.16 What is the reason to reinforced concrete by steel rods?

- Ans  A. Concrete is very weak in tension  
 B. Steel is stiffer than concrete  
 C. Concrete is a costly material  
 D. Concrete is very strong in compression

Question ID : 1841223448

Q.17 Fat concrete is one which contains large proportion of \_\_\_\_\_.

- Ans  A. Mortar  
 B. Sand  
 C. Aggregate  
 D. Cement

Question ID : 1841223441

Q.18 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. 12 kg  
 B. 3 kg  
 C. 1 kg  
 D. 6 kg

Question ID : 1841223437

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

- Ans  A. 150-350  
 B. 0-10  
 C. 500-1000  
 D. 10-150

Question ID : 1841223454

Q.20 As per IS 269:1989 for 33 grade cement weight of the magnesia not more than \_\_\_\_\_ in composition.

- Ans  A. 10%  
 B. 8%  
 C. 0.06  
 D. 12%

Question ID : 1841223435

Section : Discipline4



**Q.1** Between Biological Oxygen Demand and Chemical Oxygen Demand the greater of the two is \_\_\_\_\_.

- Ans  A. Chemical Oxygen Demand  
 B. Both are equal  
 C. Biological Oxygen Demand  
 D. Depends on the sewage characteristics

Question ID : 1841223457

**Q.2** Coarse grained soil contains material half of which is larger than \_\_\_\_\_ micron.

- Ans  A. 150  
 B. 300  
 C. 75  
 D. 600

Question ID : 1841223467

**Q.3** What will be self-cleansing velocity for 30 to 60 cm diameter sewer is?

- Ans  A. 45 cm/sec  
 B. 75 cm/sec  
 C. 65 cm/sec  
 D. 55 cm/sec

Question ID : 1841223461

**Q.4** French polish is a \_\_\_\_\_ varnish.

- Ans  A. Spirit  
 B. Refined  
 C. Oil  
 D. Kero

Question ID : 1841223465

**Q.5** Membrane theory technique is used for testing \_\_\_\_\_.

- Ans  A. Poliomyelitis  
 B. Copper  
 C. Dissolved gases  
 D. B Coli

Question ID : 1841223456

Q.6 Immediately above the pump \_\_\_\_\_ valve is placed to reduce back surge of water hammer.

- Ans
- A. Float
  - B. Sluice
  - C. Reflux
  - D. Air

Question ID : 1841223460

Q.7 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.  $Q = 4637\sqrt{P(1-0.01\sqrt{P})}$
  - B.  $Q = 4637\sqrt{P(1.2)}$
  - C.  $Q = 3182\sqrt{P}$
  - D.  $Q = 5663\sqrt{P}$

Question ID : 1841223458

Q.8 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.  $(W2-W3)/(W2-W1) * 100$
  - B.  $(W2-W3)/(W3-W1) * 100$
  - C.  $(W2-W3)/(W1-W2) * 100$
  - D.  $(W1-W2)/(W2-W3) * 100$

Question ID : 1841223470

Q.9 Carborundum is a \_\_\_\_\_ abrasive stone.

- Ans
- A. polishing
  - B. mild
  - C. surfacing
  - D. robust

Question ID : 1841223464

Q.10 As per IS 3025 Part 23 (1986), before the determination of Alkalinity waste water sample should be free from which of the following?

- Ans
- A. chlorine
  - B. phenolphthalein
  - C. Odour
  - D. Turbidity

Question ID : 1841223459

Q.11 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.  $VW(1 + w)$

Question ID : 1841223471

Q.12 Lime concrete in foundation should be laid in horizontal layer, not exceeding \_\_\_\_\_ mm thick when consolidated.

- Ans
- A. 250
  - B. 150
  - C. 100
  - D. 300

Question ID : 1841223469

Q.13 As per IS 2386 (1963) what should be minimum weight of sample havinf maximum size of 50 mm in substantial portion.

- Ans
- A. 100 Kg
  - B. 50 Kg
  - C. 25 kg
  - D. 6 Kg

Question ID : 1841223462

Q.14 Wired glass is prepared by embedding wire netting in glass plate during \_\_\_\_\_.

- Ans
- A. heating
  - B. preparation
  - C. rolling
  - D. manufacture

Question ID : 1841223466

Q.15 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. 60
  - B. 40
  - C. 80
  - D. 25

Question ID : 1841223468

Q.16 The effect of rib shortening in two-hinged arch is to reduce the value of horizontal thrust by \_\_\_\_.

- Ans  A. about 3 %  
 B. about 2 %  
 C. about 4 %  
 D. about 1 %

Question ID : 1841223473

Q.17 Kankar is used for producing \_\_\_\_ lime.

- Ans  A. Building  
 B. Fat  
 C. Pure  
 D. Hydraulic

Question ID : 1841223463

Q.18 What will be the dilution of sewage which may be disposed of without treatment into a water body?

- Ans  A. More than 500  
 B. More than 300  
 C. More than 150  
 D. Less than 150

Question ID : 1841223455

Q.19 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.20 The kinematic indeterminacy of the pin-jointed space frame is \_\_\_\_.

- Ans  A.  $D_k = 2j - r$   
 B.  $D_k = 3j - r$   
 C.  $D_k = j - r$   
 D.  $D_k = 6j - r$

Question ID : 1841223472

Section : Discipline5

Q.1 Paper space is often used to create complex multiple view drawings, it is known as \_\_\_\_\_.

- Ans  A. Layout  
 B. Limits  
 C. Title block  
 D. Space

Question ID : 1841223483

Q.2 The wearing surface prepared by laying bitumen concrete is known as \_\_\_\_\_.

- Ans  A. Sheet Asphalt  
 B. Wearing coat  
 C. Renewal coat  
 D. Flooring

Question ID : 1841223485

Q.3 In structural steel, Upper yield point in the stress-strain curve can be avoided by \_\_\_\_\_.

- Ans  A. Cold Working  
 B. Hot Working  
 C. Galvanising  
 D. Quenching

Question ID : 1841223490

Q.4 What should be the minimum width of the passenger railway platform for BG track?

- Ans  A. 2.66 m  
 B. 3.66 m  
 C. 4.66 m  
 D. 5.66 m

Question ID : 1841223488

Q.5 What is full form of CAD?

- Ans  A. Computer Added Drawing  
 B. Computer Aided Detailing  
 C. Computer Aided Design  
 D. Computer Added Design

Question ID : 1841223482

**Q.6** A technique by which a new employee is rehabilitated into changed surrounding and introduced to the practices. This process is known as \_\_\_\_\_.

- Ans
- A. Development
  - B. Induction
  - C. Training
  - D. Placement

Question ID : 1841223478

**Q.7** Annual installment of the sinking fund will be given by the following formula \_\_\_\_\_ (n = number of year, i = interest rate, s = amount of sinking fund)

- Ans
- A.  $I = S / ((1+i)^n - 1)$
  - B.  $I = Si / ((1+i)^n - 1)$
  - C.  $I = i / (S(1+i)^n - 1)$
  - D.  $I = Si / ((1+i)^n - 1)$

Question ID : 1841223494

**Q.8** What amount will be received at the end of 30 year if Rs. 1 invested with compound interest rate of 10%?

- Ans
- A.  $1.1^{30}$
  - B.  $0.1^{30}$
  - C.  $0.9^{10}$
  - D.  $31^{10}$

Question ID : 1841223493

**Q.9** Coal tar has some \_\_\_\_\_ oil which evaporate by exposure.

- Ans
- A. Volatile
  - B. Lean
  - C. Soft
  - D. Fluidy

Question ID : 1841223486

**Q.10** Tangent length of a simple circular curve of radius 'R' and deflection angle  $\theta$  is \_\_\_\_\_.

- Ans
- A.  $R \tan \theta / 2$
  - B.  $R \cot \theta / 2$
  - C.  $R \sin \theta / 2$
  - D.  $R \sin \theta$

Question ID : 1841223487

Q.11 For reversal of stresses the most suitable bolt is \_\_\_\_\_.

- Ans  A. Ordinary Bolt  
 B. Black Bolt  
 C. Friction grip Bolt  
 D. Turned Bolt

Question ID : 1841223491

Q.12 The \_\_\_\_\_ command defines line characteristics consisting of dashes, dots, and spaces.

- Ans  A. LINETYPE  
 B. POLYLINE  
 C. LINE  
 D. DONUT

Question ID : 1841223484

Q.13 Equation of three moments is used for the analysis of the \_\_\_\_\_.

- Ans  A. Continuous beam  
 B. Simply supported beam  
 C. Both continuous and fixed beams  
 D. Fixed beam

Question ID : 1841223476

Q.14 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.15 Which of the following is not a type of organization?

- Ans  A. Line and staff organization  
 B. Line organization  
 C. Functional organization  
 D. Directive organization

Question ID : 1841223477

Q.16 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.17 The effective length of the fillet weld is \_\_\_\_\_.

- Ans
- A. Total length -2 x weld size
  - B. Total length - $\sqrt{2}$  x weld size
  - C. Total length -2 x throat size
  - D. 0.7 x total length

Question ID : 1841223492

Q.18 What is the formula to calculate the 'expected time' (a = optimistic time, m = most likely time, b = pessimistic time)

- Ans
- A.  $T_e = (2a + 4m + b)/6$
  - B.  $T_e = (a + 4m + b)/6$
  - C.  $T_e = (a + 4m + b)/8$
  - D.  $T_e = (a + 4m + 5b)/6$

Question ID : 1841223479

Q.19 A propped cantilever beam of span 5 m carries 30 kN load 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 Signals for main and branch lines are fixed on the same vertical post. Such signals are known as \_\_\_\_\_.

- Ans
- A. Calling Signal
  - B. Co-acting Signal
  - C. Repeating Signal
  - D. Routing Signal

Question ID : 1841223489