ATOMIC ENERGY CENTRAL SCHOOL # 4, RAWATBHATA RAJASTHAN

DESCRIPTIVE TEST (2020 – 21)

SUB. : ENGLISH **Toal : 40**
CLASS : IX **TIME : 1:30 HRS.**

General Instructions:

1. This question paper has three sections:
   Section - A Reading - 12 Marks
   Section - B Writing - 10 Marks
   Section - C Literature – 18 Marks
2. Attempt all the questions.
3. All the answers must be correctly numbered.
4. Attempt all the questions in each section before going on to the next section.
5. Write your Name, Class & Section, Roll No, Five Digit No. at the top of your answer sheet.

SECTION-A (READING)

1. Read the following passage carefully and answer the questions that follow. (12)

Himalayan valley is the geographical guard of Indian territory against any foreign invasion keeping enemy at bay from western to the eastern subcontinent of the Asian Sphere. The valley abounds with a classified variety of different glaciers, wildlife, peaks and thick vegetation liable to support the homo sapiens. Pindari glacier is a range of four glaciers namely Sunderdunga, Namik, Pindari and Kafri. To go to Pindari glacier it is a 54 km, trek and the walking part are normally covered in four days. In this trek, we cross many mountains and forest and see a lot of wildlife. We were eight members in the team. The whole trip took us ten days in the mountains. Through the way our guide and my father explained to us the various features of the Himalayans we are passing through. We had to face bad weather for two days. There was a steep climb at some places and as we climbed up we were affected by high altitude sickness and lack of oxygen and we felt very tired.

Pindari glacier is surrounded on all sides by snow-covered peaks such as Nanda Devi, Nanda Kot, Nanda Khat Biliuri and many more. This glacier is a frozen river of ice and settled in such a way that it looks like a huge stair case. There I saw all physical features such as gorges, moraines, hanging valleys etc.

1.1. Answer the following questions briefly. (2x4=8)

1. What purpose does the Himalayan valley serve for the Indian territory?
2. Describe any two characteristics of the Pindari Glacier?
3. What difficulties did the climbers face on the way to the Pindari glacier?
4. What beautiful sights did the Narrator see at the glacier?

1.2 Find the words from the passage that mean the same as the following and fill in. Choose the correct option. (1x4=4)

Choose the most appropriate answer.

a) The word‘invasion’means_____.

i) to conquer ii) to create iii) to challenge iv) to confuse

b) The word‘wildlife’ means_____.

i) to live wildly ii) poisonous plants iii) wild animals iv) zoo animals.

c) The synonym of the word ‘altitude’ is _____.

i) width ii)depth iii)height iv)weight

d) In paragraph 2 _____means ‘characteristics’.

i) fragrance ii) features iii)range iv)sleep

SECTION-B (WRITING)

Q.2. Answer the following question. (10)

Mohit writes a page of his **diary** recording his experience of spending a winter night in the open when he saw a UFO (Unidentified Flying Object). Given below are the clues of his experiences. **Write a page of his diary** in about 100-150 words.

Clues: *December – Delhi – uncle - quite late - my dismay – house – locked – neighbors - attend some marriage - where to go – streets – colder – chilly - wind – saw a UFO*

OR

Develop **a story** with the help of the following outlines in 150-200 words. Also provide a **suitable title** to it.

young boy- travelling by a train-has briefcase – containing high amount of money- befriends a fellow traveller- train stops at a station for a few minutes - goes to bring some eatables – returns - briefcase gone

SECTION-C (LITERATURE)

3. Read the following stanza from the poem The Rain on the Roof and answer the following questions. 1× 3

When the humid shadows hover
Over all the starry spheres
And the melancholy darkness
Gently weeps in rainy tears,
What a bliss to press the pillow
Of a cottage – chamber bed
And lie listening to the patter
Of the soft rain overhead !

a. What does the phrase “humid shadows” refer to?
b. What are “starry spheres” ?
c. Why does the poet call the darkness melancholy ?

Q.4. Answer the following questions in 30-40 words each. 2×4 = 08

i) What did Kezia expect of her father?
ii) Why was Kezia afraid of her father ?
iii) What was Einstein’s special Theory of Relatively about?
iv) Why did Einstein wish to continue his education in German speaking Switzerland ?

Q.5. Answer the following question in about 100-120 words. (7)

Describe Albert Einstein’s childhood ?

OR

What moral lesson do you get from the poem, A Legend of the Northland.

Atomic Energy Central School No 4 Rawatbhata

CLASS 09 - HINDI A

Descriptive Type Test-1 (2020-21)

Time Allowed: 1 hour and 30 minutes **Maximum Marks: 40**

General Instructions:

All questions are compulsory.

खंड- (क)

1. **निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़कर पूछे गए प्रश्नों के उत्तर लिखिए- (8)** **[10]**

जहाँ भी दो नदियाँ आकर मिल जाती हैं, उस स्थान को अपने देश में 'तीर्थ' कहने का रिवाज़ है। और यह केवल रिवाज़ की ही बात नहीं है; हम सचमुच मानते हैं कि अलग-अलग नदियों में स्नान करने से जितना पुण्य होता है, उससे कही अधिक पुण्य संगम स्नान में है। किंतु, भारत आज जिस दौर से गुज़र रहा है, उसमें असली संगम वे स्थान, वे सभाएँ तथा वे मंच हैं, जिन पर एक से अधिक भाषाएँ एकत्र होती हैं।

नदियों की विशेषता यह है कि वे अपनी धाराओं में अनेक जनपदों का सौरभ, अनेक जनपदों के आँसू और उल्लास लिए चलती हैं और उनका पारस्परिक मिलन वास्तव में नाना के आँसू और उमंग, भाव और विचार, आशाएँ और शंकाएँ समाहित होती हैं। अतः जहाँ भाषाओं का मिलन होता है, वहाँ वास्तव में विभिन्न जनपदों के हृदय ही मिलते हैं, उनके भावों और विचारों का ही मिलन होता है तथा भिन्नताओं में छिपी हुई एकता वहाँ कुछ अधिक प्रत्यक्ष हो उठती है। इस दृष्टि से भाषाओं के संगम आज सबसे बड़े तीर्थ हैं और इन तीर्थों में जो भी भारतवासी श्रद्धा से स्नान करता है, वह भारतीय एकता का सबसे बड़ा सिपाही और संत है।

हमारी भाषाएँ जितनी ही तेज़ी से जगेंगी, हमारे विभिन्न प्रदेशों का पारस्परिक ज्ञान उतना ही बढ़ता जाएगा। भारतीय केवल अपनी ही भाषा में प्रसिद्ध होकर न रह जाएँ, बल्कि भारत की अन्य भाषाओं में भी उनके नाम पहुँचे और उनकी कृतियों की चर्चा हो। भाषाओं के जागरण का आरंभ होते ही एक प्रकार का अखिल भारतीय मंच आप-से-आप प्रकट होने लगा है। आज प्रत्येक भाषा के भीतर यह जानने की इच्छा उत्पन्न हो गई है कि भारत की अन्य भाषाओं में क्या हो रहा है, उनमें कौन-कौन ऐसे लेखक हैं, तथा कौन-सी विचारधारा वहाँ प्रभुसत्ता प्राप्त कर रही है।

i. लेखक ने आधुनिक संगम-स्थल किसको माना है और क्यों? **(2)**
ii. भाषा-संगमों में भारत की किन विशेषताओं का संगम होता है? **(2)**
iii. अलग-अलग प्रदेशों में आपसी ज्ञान किस प्रकार बढ़ सकता है? **(2)**
iv. दो नदियों का मिलन किसका प्रतीक है? **(2)**
v. विपरीतार्थक शब्द बताइए - भिन्नता, प्रत्यक्षा **(1)**
vi. इस गद्यांश का उचित शीर्षक लिखिए। **(1)**

खंड- (ख)

2. निर्देशानुसार उत्तर लिखिए- **[2]**

निम्नलिखित शब्दों में प्रयुक्त उपसर्ग एवं मूल शब्द अलग करके लिखिए- (किन्ही दो)

i. बावजूद
ii. आग्रह
iii. सत्कार

निम्नलिखित मूल शब्दों में प्रत्यय जोड़कर बनने वाले शब्द लिखिए- (किन्ही दो)

i. वाक्य + ओं
ii. प्रति + याँ
iii. कन् + इष्ठ

3. निम्नलिखित सामासिक विग्रह कीजिए एवं समास भी लिखिए- **[5]**

i. यथाशक्ति

ii. नवग्रह

iii. देशभक्ति

iv. नीलगाय

v. लम्बोदर

4. निर्देशानुसार उत्तर लिखिए- **[3]**

निम्नलिखित शब्दों में प्रयुक्त उपसर्ग एवं मूल शब्द अलग करके लिखिए-

i. अनियमित

ii. अनुकूल

iii. अव्यवस्थित

5. I. अर्थ के आधार पर निम्नलिखित वाक्यों के भेद लिखिए- (किन्हीं दो) **[5]**

i. शायद वह यहाँ आ गया।

ii. शाम हॉकी खेल रहा है।

iii. सड़क पर नियमों का पालन करना चाहिये।

II. अर्थ के आधार पर निम्नलिखित वाक्यों में परिवर्तन कीजिए-

i. शायद आज पिताजी आएँगे। (इच्छावाचक वाक्य)

ii. यदि वर्षा होती तो फ़सल भी होती। (विधानवाचक वाक्य)

iii. काश ! तुम कल आते। (प्रश्नवाचक वाक्य)

खंड- (ग)

6. **निम्नलिखित गद्यांश के आधार पर पूछे गए प्रश्नों के उत्तर दीजिए-** **[5]**

डी०एच० लॉरेंस की मौत के बाद लोगों ने उनकी पत्नी फ्रीड़ा लॉरेंस से अनुरोध किया कि वह अपने पति के बारे में कुछ लिखे। फ्रीडा चाहती तो ढेर सारी बातें लॉरेंस के बारे में लिख सकती थी। लेकिन उसने कहा-मेरे लिए लॉरेंस के बारे में कुछ लिखना असंभव-सा है। मुझे महसूस होता है, मेरी छत पर बैठने वाली गौरैया लॉरेंस के बारे में ढेर सारी बातें जानती हैं। मुझसे भी ज़्यादा जानती है। वो सचमुच इतना खुला-खुला और सादा-दिल आदमी था। मुमकिन है, लॉरेंस मेरी रगों में, मेरी हड्डियों में समाया हो। लेकिन मेरे लिए कितना कठिन है, उसके बारे में अपने अनुभवों को शब्दों का जामा पहनाना। मुझे यकीन है, मेरी छत पर बैठी गौरैया उसके बारे में और हम दोनों ही के बारे में, मुझसे ज़्यादा जानकारी रखती है।

i. डी०एच० लॉरेंस कौन थे? गद्यांश के आधार पर उनकी विशेषताएँ लिखिए।

ii. फ्रीडा ने लॉरेंस के बारे में कुछ लिखने से इनकार क्यों कर दिया?

iii. पाठ और पाठ के लेखक का नाम लिखिएI

7. किस घटना ने सालिम अली के जीवन की दिशा को बदल दिया और उन्हें पक्षी प्रेमी बना दिया? **[2]**

8. साँवले सपनों की याद पाठ के आधार पर सालिम अली के किन्हीं दो गुणों का उल्लेख कीजिए। **[2]**

9. सालिम अली का यह सफर उनके दूसरे सफर से किस तरह भिन्न है? **[2]**

10. आशय स्पष्ट कीजिए-सालिम अली प्रकृति की दुनिया में एक टीपू बनने की बजाए अथाह सागर बनकर उभरे थे। **[2]**

11. सालिम अली और डी. एच. लॉरेंस में क्या समानता थी? **[2]**

Atomic Energy Central School No 4 Rawatbhata

CLASS 09 - MATHEMATICS

Online Descriptive Type Test - 1(2020-21)

Time Allowed: 1 hour and 30 minutes **Maximum Marks: 40**

Section A

1. The equation x - 2 = 0 on number line is represented by **[1]**

   a) infinitely many lines b) two lines

   c) a point d) a line

2. The taxi fare in a city is as follows: For the first kilometer, the fare is ₹8 and for the subsequent distance it is ₹5 per kilometer. Taking the distance covered as x km and total fare as ₹y, write a linear equation for this information. **[1]**

   a) y = 5x + 3 b) y = 5x – 3

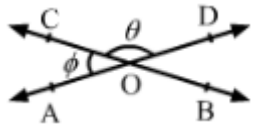
   c) x = 5y – 3 d) x = 5y + 3

3. x = 2, y = 5 is a solution of the linear equation **[1]**

   a) 5 x + y = 7 b) x + y = 7

   c) 5x +2y = 7 d) x + 2y = 7

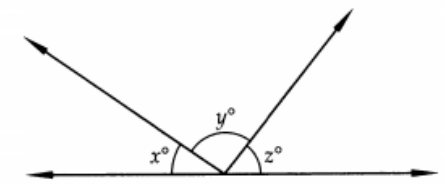
4. In the given figure, straight lines AB and CD intersect at O. If $\angle AOC = \phi, \angle BOC = \theta$ and $\theta = 3\phi$, then $\phi =$? **[1]**



   a) 40° b) 30°

   c) 45° d) 60°

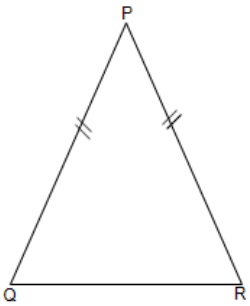
5. In Fig. if $\frac{y}{x} = 5$ and $\frac{z}{x} = 4$, then the value of x is **[1]**



   a) 8° b) 15°

   c) 18° d) 12°

6. In the adjoining figure, PQ = PR. If $\angle$Q = 70°, then measure of $\angle$P is **[1]**



a) 40° b) 70°

c) 110° d) 80°

7. The area of a right angled triangle is 20 m^2 and one of the sides containing the right triangle is 4 cm. Then the altitude on the hypotenuse is **[1]**

a) 10 cm b) $\frac{10}{\sqrt{41}}$ cm

c) $\frac{20}{\sqrt{29}}$ cm d) 8 cm

8. The Diagonals AC and BD of a Parallelogram ABCD intersect each other at point O. If $\angle DAC = 32^\circ$ and $\angle AOB = 70^\circ$, then $\angle DBC$ is equal to **[1]**

a) 86° b) 38°

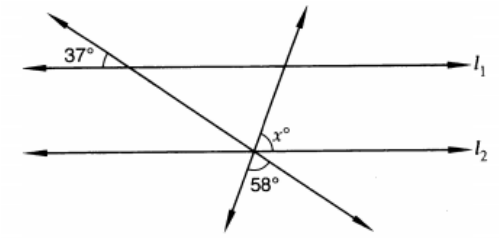
c) 32° d) 24°

9. If the diagonals of a rhombus are 18 cm and 24 cm respectively, then its side is equal to **[1]**

a) 20 cm b) 15 cm

c) 16 cm d) 17 cm

10. In Fig. if $l_1 \parallel l_2$, what is the value of x? **[1]**



a) 85° b) 75°

c) 70° d) 90°

OR

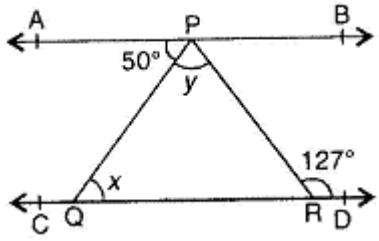
The measure of an angle is five times its complement. The angle measures

a) 75° b) 65°

c) 25° d) 35°

Section B

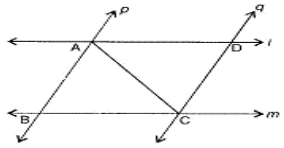
11. In figure, if AB || CD. $\angle APQ = 50^o$ and $\angle PRD = 127^o$. Find x and y. **[2]**



OR

Find the measure of an angle whose supplement is equal to the angle itself.

12. l and m are two parallel lines intersected by another pair of parallel lines p and q. Show that $\Delta ABC \cong \Delta CDA$. **[2]**



13. ABCD is a rhombus show that diagonal AC bisects $\angle A$ as well as $\angle C$ and diagonal BD bisects $\angle B$ as well as $\angle D$ **[2]**

Section C

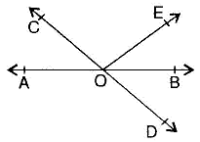
14. Give the geometric representation of y = 3 as an equation in two variables. **[3]**

OR

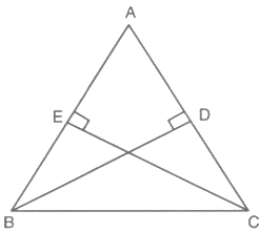
Fill in the blanks:

If (2, 0) is a solution of the linear equation 2x + 3y = k, then the value of k is _____.

15. In figure, lines AB and CD intersect at O. If $\angle AOC + \angle BOE = 70^o$ and $\angle BOD = 40^o$, find $\angle BOE$ and reflex $\angle COE$. **[3]**



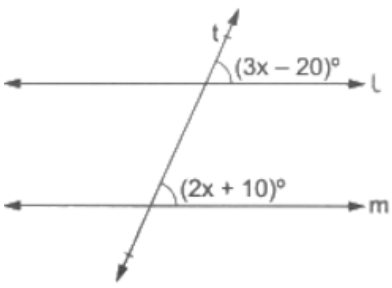
16. In figure, BD and CE are two altitudes of a $\triangle ABC$ such that BD = CE. Prove that $\triangle ABC$ is isosceles. **[3]**



17. P is the mid-point of the side CD of a parallelogram ABCD. A line through C parallel to PA intersects AB at Q and DA produced at R. Prove that DA = AR and CQ = QR. **[3]**

Section D

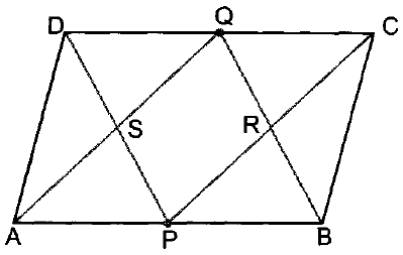
18. For what value of *x* will the line l and m be parallel to each other? **[4]**



19. ABC is a right triangle with AB = AC. Bisector of $\angle A$ meets BC at D. Prove that BC = 2 AD. **[4]**

20. 20. ABCD is a parallelogram in which P and Q are the mid-points of opposite sides AB and CD. **[4]**
If AQ intersects DP at S and BQ intersects CP at R, show that

i. APCQ is a parallelogram
ii. DPBQ is a parallelogram
iii. PSQR is a parallelogram



OR

Show that the line segments joining the mid-points of opposite sides of a quadrilateral bisect each other.

Atomic Energy Central School No 4 Rawatbhata

CLASS 09 - SCIENCE

Online Descriptive Type Test -1(2020-21)

Time Allowed: 30 minutes **Maximum Marks: 40**

General Instructions:

1.There are three sections in the question paper.

Section A- physics,Section B- chemistry,Section C- Biology

2.Students are advised to attempt each section separately and make a separate pdf for each section for uploading in google classroom separately.

3. Internal choice is provided in some questions . So, students are advised to attempt anyone of the two.

Section A (physics)

1. Match the following with correct response. **[1]**

(1) Newton's first law of motion	(A) The acceleration produced is directly proportional to the product of mass & force applied
(2) Newton's second law of motion	(B) When no force is exerted on an object it stays at rest or it moves in a straight light with constant speed
(3) Newton's third law of motion	(C) To every action, there is an equal & opposite reaction
(4) Galileo's law of inertia	(D) An object at rest or in uniform motion will remain at rest or uniform motion unless an unbalanced force is applied on it

a) 1-A, 2-C, 3-B, 4-D b) 1-D, 2-A, 3-C, 4-B

c) 1-B, 2-D, 3-A, 4-C d) 1-C, 2-B, 3-D, 4-A

2. A goalkeeper in a game of football pulls his hands backwards after holding the ball shot at the goal. This enables the goalkeeper to **[1]**

a) reduce the force exerted by the ball on hands

b) exert larger force on the ball

c) increase the rate of change of momentum

d) decrease the rate of change of momentum

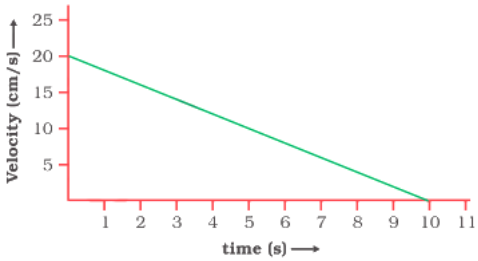
3. Body A is heavier than body Q. Which has more inertia? **[1]**

4. Describe balanced forces with the help of two examples. **[3]**

OR

When a carpet is beaten with a stick, dust comes out of it. Explain.

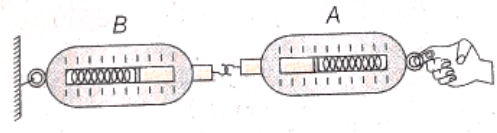
5. The velocity-time graph of a ball of mass 20 g moving along a straight line on a long table is given in Fig. **[3]**



How much force does the table exert on the ball to bring it to rest?

OR

Look at the diagram below and answer the following questions:



i. When a force is applied through the free end of the spring balance A, then the reading on the spring balance A is 15 g-wt. What will be the measure of the reading shown by spring balance B?

ii. Write the reasons for your answer.

iii. Name the force that balance A exerts on balance B and the force of balance B on balance A.

6. Give a reason for the following questions: **[5]**

i. It is difficult to balance our body when we accidentally step on a peel of a banana.

ii. Pieces of bursting crackers fall in all possible directions.

iii. A glass pane of a window is shattered when a flying pebble hits it.

iv. It is easier to stop a tennis ball than a cricket ball moving at the same speed.

v. A javelin thrower is marked foul if an athlete crosses over the line marked for the throw. Athletes often fail to stop themselves before the line.

Section B- Chemistry

7. The chemical symbol for nitrogen gas is **[1]**

a) Ni b) N

c) N_2 d) N^+

8. "Gram atomic mass of an element and the gram molecular mass of a compound contains the same number of molecules". This is a _____. **[1]**

a) False statement b) Partially false statement

c) True statement d) Partially true statement

9. Formula of the carbonate of a metal M is M_2CO_3. Write the formula of its chloride. **[1]**

10. Define atomicity. **[1]**

11. An elements Z forms an oxide with formula Z_2O_3. What is its valency? **[1]**

12. Define the terms:- **[3]**

a. Atomic number

b. Mass number

OR

An element shows variable valencies 4 and 6. Write the formula of its two oxides.

13. 'SO_2 is an air pollutant released during the burning of fossil fuels and from automobile exhaust'. **[5]**

i. Write the names of elements present in this gas.

ii. What are the valencies of sulphur in SO_2 and SO_3?

iii. Find out the number of molecules in 5 moles of SO_2.

iv. Calculate the number of moles in 320 g of SO_2 gas.

v. Calculate the molar mass of 10 moles of sodium sulphite.

[Given, atomic masses of S = 32 u,

O = 16 u, Na = 23 u and $N_A = 6.022 \times 10^{23}$ per mol]

Section C- Biology

14. The conducting cells of xylem are **[1]**

a) tracheids and xylem fibres b) tracheids and vessels

c) vessels and sieve tubes d) vessels and xylem fibres

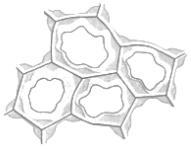
15. Which tissue is commonly known as "Packaging tissue" ? **[1]**

16. i. Identify the tissue given in the following figure. **[3]**

ii. Mention the characteristic features of the cells.

iii. Specify the function of this tissue.

iv. Name any one part of the plant, where these cells are present.



OR

Write one function of the following.

a) Root hair b) cuticle c) cork

17. (i) What is the difference between aerenchyma and chlorenchyma? **[3]**

(ii) Define differentiation.

18. (i) Draw a labeled diagram to show the location of various meristems in plant body. **[5]**

(ii) How xylem is different from phloem?(any 3 points).

Atomic Energy Central School No 4 Rawatbhata

CLASS 09 - SOCIAL SCIENCE

Online Descriptive Type Test -1(2020-21)

Time Allowed: 1 hour and 30 minutes **Maximum Marks: 40**

Section A

1. Who in France, wanted the government to encourage cooperatives and replace capitalist enterprises? **[1]**

   a) Robert Owen
   b) Louis Blanc
   c) Rousseau
   d) Karl Marx

2. A special secret police was formed by Bolsheviks called: **[1]**

   a) Cheka
   b) Aurora
   c) Duma
   d) Soviets

3. How many people practised agriculture in Russia before the Revolution? **[1]**

   a) 70%
   b) 85%
   c) 50%
   d) 30%

4. The western coastal strip, south of Goa is referred to as **[1]**

   a) Kannad
   b) Northern Circar
   c) Coromandel
   d) Konkan

5. The administrative headquarters of Lakshadweep **[1]**

   a) Amini
   b) Agatti
   c) Minicoy
   d) Kavaratti

6. Which of the following islands of India are called Coral Islands? **[1]**

   a) Lakshadweep
   b) Narcondam
   c) Andaman
   d) Great Nicobar

7. Which of the following is Incorrect? **[1]**

   a) Literacy rate have increased in India from 1951 to 2019.
   b) Kerala has the highest literacy rate in India.
   c) Literacy rate among female is higher than the male.
   d) None of these.

8. Which work, done mostly by woman, is not considered in the National Income? **[1]**

   a) Household work
   b) Work done in a private company
   c) Teaching work in schools
   d) Own business work

9. Which country has the longest written constitution? **[1]**

   a) USA, UK
   b) Pakistan

c) India d) Japan

10. The land of the law would not discriminate between citizens on the basis of caste, religion, and gender. Choose one word for this statement? **[1]**

a) Sovereignty b) Liberty

c) Justice d) Equality

Section B

11. Write briefly about Bloody Sunday? **[3]**
12. State any three differences between the Himadri range and Shiwalik range. **[3]**
13. Describe how the Himalayas were formed. **[3]**
14. What is mid day meal schemes? Explain. **[3]**

OR

Explain Disguised Employment.

15. What do you understand by constitutional amendment? **[3]**

Section C

16. Explain the views of the socialists on private property with special emphasis on Karl Marks. **[5]**

OR

Explain the ideology of the three power groups present in Russian society, i.e. the liberals, the radicals, and the conversations.

17. 'Human resources are indispensable factor of production'. Explain. **[5]**
18. Highlight any five difficult circumstances under which the Indian Constitution was drawn up. **[5]**

Solution

Class 09 - Mathematics

Online Descriptive Type Test - 1(2020-21)

Section A

1. **(c)** a point
   Explanation: x – 2 = 0
   x = 2 is a point on the number line

2. **(a)** y = 5x + 3
   Explanation: Taxi fare for first kilometer = ₹8
   Taxi fare for subsequent distance = ₹5
   Total distance covered = x
   Total fare = y
   Since the fare for first kilometer = ₹8
   According to problem, Fare for (x - 1) kilometer = 5(x - 1)
   So, the total fare y = 5(x - 1) + 8
   $\Rightarrow$ y = 5(x - 1) + 8
   $\Rightarrow$ y = 5x – 5 + 8
   $\Rightarrow$ y = 5x + 3
   Hence, y = 5x + 3 is the required linear equation.

3. **(b)** x + y = 7
   Explanation: x = 2 and y = 5 satisfy the given equation.

4. **(c)** 45°
   Explanation: We have:
   $\theta + \phi = 180^\circ$ [$\because$ AOD is a straight line]
   $\Rightarrow 3\phi + \phi = 180^\circ$ [$\because \theta = 3\phi$]
   $\Rightarrow 4\phi = 180^\circ$
   $\Rightarrow \phi = 45^\circ$

5. **(c)** 18°
   Explanation: In the given figure, we have x°.y° and z° forming a linear pair, therefore these must be supplementary.
   That is,
   x + y + z = 180^o ...(1)
   Also,
   $\frac{y}{x} = 5$
   y = 5x ...(2)
   And
   $\frac{z}{x} = 4$
   z = 4x ...(3)
   Substituting (ii) and (iii) in (i), we get:
   x + 5x + 4x = 180°
   10x = 180°
   $x = \frac{180^\circ}{10}$
   x = 18^o

6. **(a)** 40°
   Explanation: Since, It is given that PQ=QR, then $\angle$Q = $\angle$R (Isosceles trangle property)
   As $\angle$Q = 70^o, therefore $\angle$R = 70^o
   Sum of all the three angles of triangle = 180^o, therefore $\angle$P + $\angle$Q + $\angle$R = 180^o
   $\angle$P = 180 - 70 - 70 = 40^o

7. **(c)** $\frac{20}{\sqrt{29}}$ cm

Explanation: Area of right angle triangle = 20 sq. m

$\Rightarrow \frac{1}{2} \times$ Base $\times$ Height = 20

$\Rightarrow \frac{1}{2} \times$ Base $\times$ 4 = 20

$\Rightarrow$ Base = 10 cm

Then, Hypotenuse = $\sqrt{10^2 + 4^2} = 2\sqrt{29}$ m

If the altitude drawn to the hypotenuse of a right angle triangle, then the length of required altitude = $\frac{10 \times 4}{2\sqrt{29}} = \frac{20}{\sqrt{29}}$ cm

8. **(b)** 38°

Explanation: $\angle$DAC = $\angle$ACB = 32^o (alternate angles)

$\angle$AOB + $\angle$COB = 180^o (linear pair)

$\angle$COB = 180 - 70^o = 110^o

In triangle BOC,

$\angle$BOC + $\angle$OCB + $\angle$CBO = 180^o (angle sum property)

110^o + 32 ^{o}+ $\angle$CBO = 180^o

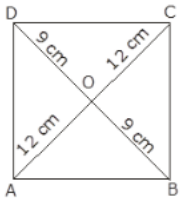
$\angle$CBO = 180^o - 142^o = 38^o

9. **(b)** 15 cm

Explanation:

Given,

ABCD is a rhombus



AC = 24 cm, BD = 18 cm

AB = BC = CD = DA [side of rhombus]

We know that diagonals of rhombus bisect each other at 90^o

In right Δ AOB

AB^2 = BO^2 + AO^2

AB^2 = 12^2 + 9^2 = 144 + 81 = 225

AB = $\sqrt{225}$ = 15 cm

Side of rhombus = 15 cm

10. **(a)** 85°

Explanation: Given that,

$l_1 \parallel l_2$

Let transversal P and Q cuts them

$\angle$1 = 37^o

$\angle$4 = 58^o

$\angle$5 = x^o

$\angle$1 = $\angle$2 = 37^o (Corresponding angles) (i)

$\angle$2 = $\angle$3 (Vertically opposite angle)

$\angle$3 = 37^o

$\angle$3 + $\angle$4 + $\angle$5 = 180^o (Linear pair)

37^o + 58^o + x = 180^o

x = 85^o

OR

(a) 75°

Explanation: Let the measure of the required angle be x°

Then, the measure of its complement will be (90 − x)°

∴ x = 5 (90 - x)

⇒ x = 450 - 5x

⇒ 6x = 450

⇒ x = 75°

Section B

11. x = ∠APQ = 50^o . . . . [Alternate interior angle]

    ∠APQ + y = ∠PRD = 127^o . . . [Alternate interior angle]

    50^o + y = 127^o

    y = 127^o – 50^o = 77^o

    OR

    Let the measure of an angle be x, then measure of its supplement is also x.

    Since the sum of supplementary angles is 180°.

    ∴ $x + x = 180^\circ \Rightarrow \quad 2x = 180^\circ$

    $\Rightarrow \quad x = 90^\circ$

12. Given : l || m and p || q

    To prove : DABC ≅ DCDA

    Proof : l || m and p || q . . . . [Given]

    In DABC and DCDA

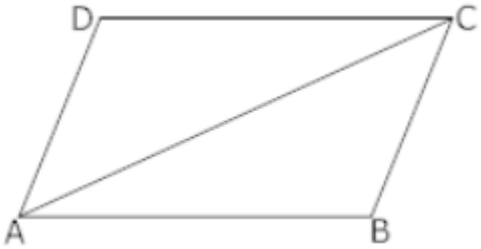
    ∠BAC = ∠DCA . . . . . [Alternate interior angles as AB || DC]

    Similarly, ∠ACB = ∠CAD . . . [Alternate interior angles as BC || DA]

    AC = DA . . . [Common]

    DABC ≅ DCDA [By ASA congruency]

13. Given: ABCD is a rhombus

    In △ABC and △ADC,

    AB = CD [Sides of a rhombus]

    BC = DA [Sides of a rhombus]

    AC = AC [Common]

    ∴ △ABC ≅ △ADC [By SSS Congruency]

    ∴ ∠CAB = ∠CAD And ∠ACB = ∠ACD

    Hence AC bisects ∠A as well as ∠C

    Similarly, by joining B to D, we can prove that △ABD ≅ △CBD

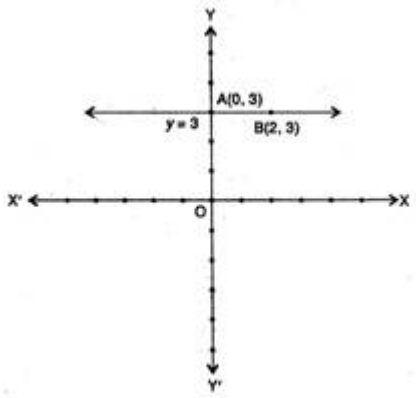
    Hence BD bisects ∠B as well as ∠D

Section C

14. The given equation is

    y = 3

    ⇒ 0.x + 1.y = 3



It is a linear equation in two variables x and y. This is represented by a line. All the values of x are permissible because 0.x is always 0. However, y must satisfy the relation y = 3. Hence, two solutions of the given equation are x = 0, y = 3 and x = 2, y = 3.

Thus the graph AB is a line parallel to the x-axis at a distance of 3 units above it.

OR

4

15. Lines AB and CD intersect at O

$\therefore \angle AOC = \angle BOD$ . . . . [Vertically opposite angles]

But $\angle BOD = 40^o$ . . . . [Given] . . . (1)

$\therefore \angle AOC = 40^o$ . . . . (2)

Now, $\angle AOC + \angle BOE = 70^o$

$\Rightarrow 40^o + \angle BOE = 70^o$

$\therefore \angle BOE = 70^o - 40^o$

$\therefore \angle BOE = 30^o$

Again,

Reflex $\angle COE = \angle COD + \angle BOD + \angle BOE$

$= \angle COD + 40^o + 30^o$ . . . . [Using (1) and (2)]

$= 180^o + 40^o + 30^o$ . . . . [As ray OA stands on the line CD]

$= 250^o$

$\therefore \angle AOC + \angle AOD = 180^o$. . . . . [Linear Pair Axiom]

$\therefore \angle COD = 180^o$

$\Rightarrow$ a = 2k, b = 3k

Putting the values of a and b in (1), we get

$2k + 3k = 90^o$

$5k = 90^o = k = \frac{90^0}{5}$

$\Rightarrow k = 18^o$

$a = 2k = 2\ (18^o) = 36^o$ and $b = 3k = 3(18^o) = 54^o$ . . . . . (2)

As ray OX is perpendicular to line MN

$\therefore \angle XOM + \angle XON = 180^o$ . . . . [Linear Pair Axiom]

$b + c = 180^o$

$\therefore 54^o + c = 180^o$ . . . [Using (2)]

$\therefore c = 180^o - 54^o \therefore c = 126^o$

16. In $\triangle$ABC and $\triangle$ACE, we have

$\angle ADB = \angle AEC = 90^\circ$ [Given]

$\angle BAD = \angle CAE$ [Common angle]

and, BD = CE [Given]

So, by ASA(Angle-Side-Angle) congruence criterion, we obtain

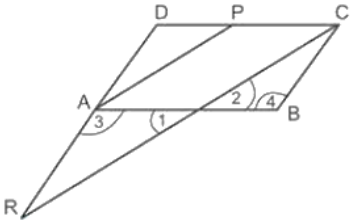
$\Delta ABD \cong \Delta ACE$

$\Rightarrow$ AB = AC [$\because$ Corresponding parts of congruent triangles are equal]

Hence, $\triangle$ABC is isosceles.

17. ABCD is a parallelogram. P is the mid-point of CD. CR which intersects AB at Q is parallel to AP

In $\triangle DCR, P$ is the mid-point of CD and AP || CR,



$\therefore$ A is the mid-point of DR, i.e., AD = AR.

[$\because$The line drawn through the mid-point of one side of a triangle parallel to another side intersects the third side at its mid-point.]

In $\triangle ARQ$ and $\triangle BCQ$, we have

AR = BC [$\because$ AD = AR [proved above) and AD = BC]

$\angle 1 = \angle 2$ [Vertically opposite angles]

$\angle 3 = \angle 4$ [Alt. $\angle s$]

$\therefore \triangle ARQ \cong \triangle BCQ$ [By AAS Congruence rule]

CQ = QR [CPCT]

CQ = QR

Hence, DA = AR and CQ = QR

Section D

18. For the lines l and m to be parallel

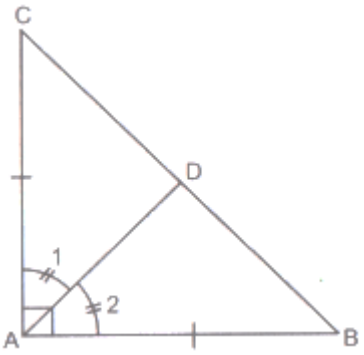
$\Leftrightarrow (3x - 20)^0 = (2x + 10)^0$ [Corresponding Angles]

$\Leftrightarrow x = 30^0$

For $x = 30^0$, l and m will be parallel to each other.

19. Given: ΔABC is a right angled triangle. Bisector of $\angle$A meets BC at D.

Also, given AB = AC & $\angle A = 90^\circ$.....(1)



To prove: BC = 2AD

Proof:

Now, in ΔCAD and ΔBAD, we have :-

AC = AB [from (1)]

$\angle CAD = \angle BAD$ [$\because$ AD is the bisector of $\angle A$]

$\Rightarrow \angle 1 = \angle 2$. [See figure]

AD = AD [Common side]

So, By SAS criterion of congruency of triangles, we have

$\Delta CAD \cong \Delta BAD$

$\therefore \quad CD = BD$ [CPCT]

Hence , D is midpoint of hypotenuse AC.

Since ,Mid-point of hypotenuse of a rt. Δ is equidistant from the vertices of the Δ.

Hence, AD = BD = CD .....(2)

Now, BC = BD + CD

$\Rightarrow \quad BC = AD + AD$ [Using (2)]

$\Rightarrow BC = 2AD$

Hence, proved.

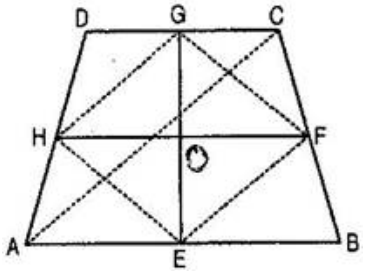
20. i. Since ABCD is a parallelogram, we have
AB = CD
$\frac{1}{2}$AB = $\frac{1}{2}$DC
Since P and Q are the mid-points of AB and CD, we have
AP = QC
Also, AP ‖ QC
Therefore, APCQ is a parallelogram.

ii. Similarly, quadrilateral DPBQ is a parallelogram, because
DQ ‖ PB and DQ = PB

iii. In quadrilateral PSQR,
SP ‖ QR (SP is a part of DP and QR is a part of QB)
Similarly, SQ ‖ PR
So, PSQR is a parallelogram.

OR

Given: A quadrilateral ABCD in which EG and FH are the line-segments joining the mid-points of opposite sides of a quadrilateral.



To prove: EG and FH bisect each other.
Construction: Join AC, EF, FG, GH and HE.
Proof: In ABC, E and F are the mid-points of respective sides AB and BC.
∴ EF || AC and EF = $\frac{1}{2}$ AC .....(i)
Similarly, in ADC,
G and H are the mid-points of respective sides CD and AD.
∴HG || AC and HG = $\frac{1}{2}$ AC .....(ii)
From eq. (i) and (ii), we get,
EF || HG and EF = HG
∴ EFGH is a parallelogram.
Since the diagonals of a parallelogram bisect each other, therefore line segments (i.e. diagonals) EG and FH (of parallelogram EFGH) bisect each other.
Hence Proved.

Solution

Class 09 - Social Science

Online Descriptive Type Test -1(2020-21)

Section A

1. **(b)** Louis Blanc
   Explanation: Louis Blanc
2. **(a)** Cheka
   Explanation: The secret police (called the Cheka first, and later OGPU and NKVD) punished those who criticised the Bolsheviks.
3. **(b)** 85%
   Explanation: 85% of people did farming in Russia which was very high as compared to other European nations.
4. **(a)** Kannad
   Explanation: The western coast, sandwiched between the Western Ghats and the Arabian Sea, is a narrow plain. It consists of three sections. The northern part of the coast is called the Konkan (Mumbai – Goa), the central stretch is called the Kannad Plain while the southern stretch is referred to as the Malabar coast.
5. **(d)** Kavaratti
   Explanation: Kavaratti
6. **(a)** Lakshadweep
   Explanation: Lakshadweep
7. **(c)** Literacy rate among female is higher than the male.
   Explanation: Literacy rate among female is higher than the male.
8. **(a)** Household work
   Explanation: Women are not paid for the services or household work delivered in the family. So, household work is not considered in the National Income.
9. **(c)** India
   Explanation: India
10. **(d)** Equality
    Explanation: Equality

Section B

11. A. Over 1, 10,000 workers under the leadership of father Gapon reached the winter Palace for their demands.
    B. The police and the Cossacks attacked them.
    C. Over 100 workers were killed and about 300 wounded.
    D. This incident is known as Bloody Sunday.
12. **The differences between Himadri and Shiwalik ranges are:**

Feature	Himadri Range	Shiwalik Range
Location	This is the Northernmost and innermost range of Himalayas.	This is the outermost range of Himalayas.
Altitude	The average altitude of this range is 6000m.	The average altitude varies from 900 to 1100m.
Composition	The core of this part of Himalayas is composed of granite.	This range is composed of unconsolidated sediments brought down by rivers from the main Himalayan ranges.

13. A.According to the Theory of Plate Tectonics, the Earth's crust was initially a single, giant super-continent called Pangea. Its northern part was the Angara land and the southern part was the Gondwana land.
    B.The convectional currents split the crust into a number of pieces, thus leading to the drifting of the Indo-Australian plate after being separated from the Gondwana land, towards north.

C.The northward drift resulted in the collision of the plate with the much larger Eurasian Plate. Due to this collision, the sedimentary rocks which were accumulated in the geosyncline known as the Tethys were folded to form the mountain system of western Asia and Himalaya.

14. A. Mid-day scheme is to provide nutritional food to students during the school time.
    B. This scheme has been implemented to encourage attendance and retention of children in schools.
    C. It aims at improving the nutritional status of the children.

    OR

    A. This type of unemployment is a typical of the agricultural sector where more people are working on a piece of farm than are required.
    B. The unemployment is hidden but the acid test of the unemployed force comes when they are withdrawn from the field and it does not lead to fall in production.
15. A. The constitution of India is a long and detailed document. It needs to be amended quite regularly to keep it updated.
    B. The makers of the constitution felt that it has to be in accordance with people's aspirations and changes in society.
    C. They did not see it as a sacred, static and unalterable law.
    D. So, a constitutional amendment is a change in the constitution made by the supreme legislative body in a country.
    E. These amendments have been made from time to time as per social and political changes. They help in sustaining democratic change.

Section C

16. A. Socialists were against private property, and saw it as the root of all social ills of time.
    B. Socialists favoured society as a whole rather than individually controlled property; more attention would be paid to collective social interests.
    C. Marx argued that industrial society was capitalist. Capitalists owned the capital invested in factories, and the profit of capitalists was produced by workers.
    D. Workers had to overthrow capitalism and the rule of private property.
    E. Marx believed that to free themselves from capitalist exploitation, workers had to construct a radically socialist society where all property was socially controlled.

    OR

    Liberals:

    i. Liberals were one of the groups which looked to change society. They wanted a 'secular' nation that tolerated all religions.
    ii. They opposed religious discrimination and the uncontrolled power of dynastic rulers. They wanted to safeguard the rights of individuals.
    iii. They wanted a representative, elected Parliamentary Government and a well-trained judiciary that was independent of rulers and officials.

    Radicals:

    i. They wanted a government based on the majority of a country's population. They supported universal adult suffrage, including the vote for women.
    ii. Unlike liberals, they opposed the privileges of great landowners and wealthy factory owners.
    iii. They were not against the existence of private property but opposed the concentration of property in the hands of a few.

    Conservatives:

    i. They were opposed to liberals and radicals. They generally opposed the idea of change during the 18th century.
    ii. By the 19th century, they accepted that some change was inevitable, but believed it had to be brought about through a slow process.
    iii. They respected old or past traditions and customs.
17. A. Yes, human resources are indispensable factor of production.
    B. Human resources have ability to put together land labor and physical capital.
    C. With the efforts of human resources the production process is possible.
    D. Every process of production is organized by combining land labour and physical capital and human

capital.

E. The quality of human resource is the symbol of economic and social status of people. As such, human development requires improvements.

F. The healthy, educated, efficient and skilled people are the asset of the nation.

18. A. India's Constitution was drawn up under very difficult circumstances.

B. The making of the constitution for the huge and diverse country like India was not an easy affair.

C. At the time, the people of India were emerging from the status of subject to that of citizens.

D. The country was born through a partition on the basis of religious differences. This was a traumatic experience for the people of India and Pakistan.

E. At least ten lakh people were killed on both sides of the border in partition related violence.

F. The British had left it to the rulers of the princely states to decide whether they wanted to merge with India or with Pakistan or remain independent.

G. The merger of these princely states was a difficult and uncertain task.

H. When the constitution was being written, the future of the country did not look as secure as it does today. The makers of the constitution had anxieties about the present and the future of the country.