ATOMIC ENERGY EDUCATION SCOIETY
HALF YEARLY EXAMINATION (2018-19)

Class – VIII **Date of Exam – 25-09-2018** **Time – 3Hrs.**
Subject – Science **Marks – 80**

General Instructions:

The question paper consists of four sections.
1. **Section A contains 20 questions of 1 mark each.**
2. **Section B contains 8 questions of 2 marks each.**
3. **Section C contains 8 questions of 3 marks each.**
4. **Section D contains 4 questions of 5 marks each.**

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SECTION- A **(1X20=20 MARKS)**

</div>

A. Choose the correct answer. Write only the answer against the correct question number in your answer sheet. Do not copy the question.

1. The process of separation of grain from the chaff after harvesting is known as _____

   a. tilling b. threshing c. spraying d. weeding

2. The disease caused by protozoa is _____
   a. tuberculosis b. polio c. typhoid d. malaria

3. Why are electrical wires covered with a plastic covering?
   a. Plastic is durable b. plastic is a bad conductor
   c. plastic is light weight d. plastic is not very expensive

4. Name the gas evolved when magnesium reacts with dilute hydrochloric acid.
   a. Chlorine b. Oxygen c. Hydrogen d. Nitrogen

5. Least polluting fuel for vehicles is _____
   a. Petrol b. Kerosene c. Diesel d. CNG

6. Burning of coal in a closed room will produce _____
   a. Carbon monoxide b. Carbon dioxide
   c. Oxygen d. Nitrogen Oxide

7. Which is the reason for the loss of biodiversity?
   a. Increase in population b. Deforestation
   c. Habitat destruction d. All of these

8. The control unit of cell is _____

   a. Nucleus b. cell wall c. cytoplasm d. ribosome

9. Which one is not a part of female reproductive organ?
   a. Ovary b. sperm c. uterus d. oviduct

10. The first menstrual flow begins at puberty is termed as _____
   a.Menarche b. Placenta c. Menopause d. Gestation.

B. Fill in the blanks .

11. The removal of unwanted plants from the field is called _____

12. Blue green algae fix _____ directly from air to enhance fertility of soil.

13. All the synthetic fibres are prepared using raw materials of petroleum origin arecalled ____

14. The only liquid metal is _____

15. Process of separation of different constituents from petroleum is called _____

16. The lowest temperature at which a substance catches fire is called its ____temperature.

17. _____ is a group of populations which are capable of interbreeding with each other.

18. _____ is an organic substance obtained from the decomposition of plants and animals.

19. A tadpole develops into an adult frog by the process of _____

20. Chemical substances produced by endocrine glands are called _____.

|SECTION -B | (2X8=16 MARKS)|

21 Why should we not let water collect in our neighbourhood?

22   State the difference between prokaryotes and eukaryotes.

23 Define endemic species. Write any two examples.

24 Differentiate between oviparous and viviparous animals.

25 Give reason for the following:

      a. Base of cooking utensils is coated with copper.

      b. Acidic food should not be stored in metal containers made up of copper and aluminum.

26. Why is water not suitable as fire extinguisher for fires involving oil and petrol?

27. Give the differences between thermoplastic and thermosetting plastics.

28. List any four changes in the body that take place at puberty.

|SECTION- C | (3X8=24 MARKS)|

29. List out the effects of deforestation on environment. (Any SIX effects)

30. Define asexual reproduction. Describe two methods of asexual reproduction inanimals.

31. What is acid rain? Write its harmful effects.

32. Explain the different uses of any three non-metals.

33. Describe the role of sex chromosomes in deciding the sex of the child.

34. Describe the various uses of microorganisms in our life.

35. What is 4R principle? Give your opinion about how it will help in saving ourenvironment.

36. Describe characteristics and uses of coke.

37. Explain various methods that can be used for food preservation.

38. Explain how fertilizers are different from manure.

39. Raju always stresses on saving paper. His friends often made fun of him as he worked on the plain side of the envelope etc. for rough work. One day the teacher scolded his friends and praised Raju.

      a. Why did the teacher praise Raju?
      b. Why should paper be saved? Prepare a list of ways by which you can save paper.
      c. What are the values shown by Raju?

40. a) Draw a neat diagram of a plant cell and label the following parts:

      i. Nucleus (ii) Vacuole (iii) Cytoplasm (iv) Cell Membrane

    b) Compare the plant cell with animal cell.

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परमाणु ऊर्जा शिक्षण संस्था

कक्षा–आठवीं   अर्धवार्षिक परीक्षा–2018–19   पूर्णांक – 80 अंक
विषय – हिन्दी   समय – 3 घंटे

प्र 01 निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़कर नीचे दिए गए प्रश्नों के उत्तर लिखिए ।   8 अंक

परिश्रम उन्नति का द्वार है। मनुष्य परिश्रम के सहारे ही मनुष्य जंगली अवस्था से वर्तमान अवस्था तक पहुँच सका है। इसी के सहारे उसने अन्न वस्त्र घर मकान, भवन, बाँध, पुल, सडके बनाई। तकनीक का विकास किया । जिसके सहारे आज यह जगमगाती सभ्यता चल रही है। परिश्रम केवल शरीर की क्रियाओं का ही नाम नहीं है। मन तथा बुद्धि से किया गया काम भी परिश्रम कहलाता है। हर श्रम में बुद्धि तथा विवेक का पूरा योग रहता है। परिश्रम करने वाला मनुष्य सदा सुखी रहता है। परिश्रमी व्यक्ति का जीवन सुखी रहता है। परिश्रमी व्यक्ति का जीवन स्वाभिमान से पूर्ण होता है। वह स्वयं अपने भाग्य का निर्माता होता है। उसमें आत्मविश्वास होता है। परिश्रमी किसी भी संकट को बहादुरी से झेलता है तथा उससे संघर्ष करता है। परिश्रम कामधेनु है। जिसमें मनुष्य की सभी इच्छाऐं पूरी होती है। मनुष्य को करते दम तक परिश्रम का साथ नहीं छोडना चाहिए। जो परिश्रम के वक्त इंकार करता है, वह जीवन में पिछड जाता है।

प्रश्न 1– परिश्रमी व्यक्ति में कौन कौन से गुण पाए जाते हैं?   2
       2– परिश्रम को कामधेनु कहने का क्या अर्थ हैं?   2
       3– परिश्रम की परिभाषा बताइए ।   2
       4– इस गद्यांश का शीर्षक लिखिए।   1
       5– वर्तमान अवस्था तक मानव कैसे पहुँचा हैं?   1

प्रश्न 02. निम्नलिखित काव्यांश को पढ़कर नीचे लिखे प्रश्नों के उत्तर लिखिए–7 अंक

हम सब सुमन एक उपवन के ।
रंग रंग के रूप हमारे
अलग अलग है क्यारी–क्यारी,

लेकिन हम सबसे मिलकर ही
इस उपवन की शोभा सारी ।
एक हमारा माली हम सब
रहते नीचे एक गगन के
हम सब सुमन एक उपवन के।
एक हमारी धरती सबकी ।
जिसकी मिट्टी से जन्मे हम,
मिली एक ही धूप हमें है
सींचे गए एक जल से हम ।
पले हुए हैं झूल झूलकर
पलनों में हम एक पवन के
हम सब सुमन एक उपवन के ।

01 इस काव्यांश के माध्यम से क्या संदेश दिया गया है?	2
02 अलग अलग है क्यारी–क्यारी का क्या अर्थ है?	2
03 इस काव्यांश में 'सुमन' किन्हें कहा गया है?	1
04 व्योम, अंबर, अनंत किसके पयार्यवाची हैं?	1
05 उपवन के दो समानार्थी शब्द लिखिए।	1

प्रश्न 03. क–   नीचे लिखे शब्दों के प्रचलित हिन्दी रूप लिखिए।   2
                  ग्यान, जीभि, पाऊॅ, तलि ।

  ख– 'नहीं' ओर 'अभी भी' को एक साथ प्रयोग करते हुए दो वाक्य
         बनाइए ।   2

  ग– 'पत्र' शब्द जोडकर दो नए शब्द बनाइए ।   2

  घ– 'इक' प्रत्यय के योग से बनने वाले दो उदाहरण लिखिए ।   2

  ङ – गुणवाचक विशेषण ओर संख्यावाचक विशेषण के दो–दो उदाहरण
         लिखिए ।   2

  च– नीचे लिखे पुनरावृत्त शब्दों से वाक्य बनाइए।   2
            बातो बातों में,   घडी घडी

  छ– संज्ञा की परिभाषा लिखकर उसके भेद भी लिखिए ।   2

  ज– नीचे लिखे उपसर्गों से दो–दो शब्द बनाइए।   2
            भर, बद

प्रश्न 4 निम्नलिखित गद्यांश को पढ़कर नीचे दिए गए प्रश्नों के उत्तर लिखिए

5 अंक

दोषों का पर्दाफाश करना बुरी बात नही है। बुराई यह मालूम होती है, कि किसी के आचरण के गलत पक्ष को उद्घाटित करके उसमें रख लिया जाता है, और दोषोद्घाटन को एक मात्र कर्तव्य मान लिया जाता है। बुराई में रस लेना बुरी बात है। अच्छाई में उतना ही रस लेकर उजागर न करना ओर भी बुरी बात है। सैकड़ों घटनाएँ ऐसी घटती हैं, जिन्हें उजागर करने से लोक–चित्त में अच्छाई के प्रति अच्छी भावना लगती है।

प्र   01. उपर्युक्त गद्यांश के पाठ और लेखक का नाम लिखिए।
    02. लेखक ने बुरी बात किसे कहा हैं?
    03. लोगों में अच्छाई की भावना कैसे जाग्रत की जा सकती हैं?
    04. 'पर्दाफाश' शब्द का क्या अर्थ हैं?
    05. लेखक के अनुसार एकमात्र कर्तव्य क्या नहीं होना चाहिए ।

प्रश्न 05. नीचे लिखें प्रश्नों में से हिन्ही चार प्रश्नों के उत्तर लिखिए ।   **2x4=8 अंक**

1– कामचोर कहानी क्या संदेश देती हैं?

2– लेखक ने स्वीकार किया है कि लोगों ने उन्हें धोखा भी दिया है, फिर भी वे निराश नही है। आपके विचार से इस बात का क्या कारण हो सकता हैं?

3– पत्र जैसा संतोष फोन या एसएमएस का संदेश क्यों नही दे सकता ?

4– ''मैं हर पेड को अपना दुश्मन समझ रहा था।'' लेखक पेडों को अपना दुश्मन क्यों समझ रहे थें?

5– बदलू के मन की ऐसी कौन सी व्यथा थी जो लेखक से छिपी न रह सकी ।

प्रश्न 6 निम्नलिखित गद्यांश को पढ़कर नीचे दिए गए प्रश्नों के उत्तर लिखिए।
— 5 अंक

हम दीवानों की क्या हस्ती
हैं आज यहाँ, कल वहाँ चले
मस्ती का आलम साथ चला,
हम धूल उड़ातें जहाँ चले
आए बनकर उल्लास अभी,
आंसू बनकर बह चले अभी
सब कहते ही रह गए, अरे,
तुम कैसे आए, कहाँ चले?

प्रश्न —
1— कवि ओर कविता का नाम लिखिए।
2— यहाँ 'दीवाने' शब्द से क्या अर्थ है?
3— 'धूल उडाते जहाँ चले' का क्या तात्पर्य है?
4— दीवाने एक जगह पर क्यों नही रूकते थे?
5— दीवानें क्या बन कर आए और क्या बनकर चले गए?

प्रश्न 7 (अ) नीचे लिखें प्रश्नों में से किन्हीं चार प्रश्नों के उत्तर लिखिए। 2x4=8 अंक

01. फूलों को अनंत तक विकसित करने के लिए कवि कौन—कौन सा प्रयास करता हैं?

02. 'तलवार का महत्व होता है म्यान का नही' उक्त उदाहरण से कबीरदास क्या कहना चाहते हैं? स्पष्ट कीजिए ।

03. कवि ने पक्षी और बादल को भगवान के डाकिए क्यों बताया हैं? स्पष्ट कीजिए।

04. कविता में ऐसी कौन सी बात है जो आपको सबसे अच्छी लगी ?

05. 'यह कठिन समय नही हैं' यह बतानें के लिए कविता में कौन—कौन से तर्क प्रस्तुत किए गए हैं?

प्रश्न 07 (आ) निम्नलिखित में से किसी एक प्रश्न का उत्तर लिखिए।   3 अंक

बच्चों को पूरी तरह नौकरी के भरोसे छोड़ना सही है या गलत। इस पर अपने विचार व्यक्त कीजिए।

अथवा

घर में मेहमान के आने पर आप उनका अतिथि सत्कार कैसे करेगें। इस विषय पर अपने विचार व्यक्त कीजिए।

प्रश्न 08. निम्नलिखित प्रश्नों में से किन्ही चार प्रश्नों के उत्तर लिखिए –
                                                          2x4=8 अंक

1. अहमद नगर के किले के साथ कौन सी घटना जुडी हुई है?
2. भारतीय संस्कृति की विशेषता क्या मानी गई हैं?
3. सिंधु घाटी सभ्यता कितनी पुरानी हैं? और इससे हमें किन–किन चीजों की जानकारी मिलती हैं?
4. गणित की कौन सी देन भारत ने विश्व को दी थी? भारत के प्रमुख गणित शास्त्रियों के नाम लिखिए ।
5. गुप्तकाल भारत का स्वर्णयुग क्यों कहा जाता हैं?

प्रश्न 09. खेल सामग्री हेतु प्रधानाचार्य को पत्र लिखिए ।   5 **अंक**

अथवा

समय का महत्व बताते हुये अनुज को पत्र लिखिए ।

प्रश्न 10. निम्नलिखित में से किसी एक विषय पर अनुच्छेद लिखिए –   7 अंक

अ– किसी यात्रा के यादगार खट्टे मीठे अनुभव ।

ब– मेले या हाट में देखी गई आकर्षक वस्तु ।

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ATOMIC ENERGY EDUCATION SOCIETY
HALF-YEARLY EXAMINATION (2018-19)

CLASS: VIII   DATE OF EXAM: 26-09-18   TIME: 3 HOURS

SUBJECT: ENGLISH   MARKS: 80

General Instructions:

This paper contains four sections.

      Section A-Reading   20

      Section B- Writing   20

      Section C- Grammar 15

      Section D- Literature 25

All questions are compulsory.

SECTION - A (READING)

Q1. Read the following passage and answer the questions that follow.

WATER: LIFE'S MAIN SOURCE

Man does not live by food alone. Water is vital to human health and fitness. Although it is not a nutrient per se as are carbohydrates, fats, proteins, vitamins and minerals. It, in fact, is a key nutrient in as much as no life is possible without it. Whereas we can do for weeks without food , we cannot live without water longer than a couple of days.

Water approximates 60 per cent of the body weight of human adults. The total amount of water in a man weighing 70 kilograms is approximately a little over 40 litres.It is an excellent solvent-more substances are soluble in water than in any other liquid known so far. This makes it an ideal constituent of the body fluids which sustain life supporting chemical reactions. It dissolves varied products of digestion and transports them to the rest of the body. Likewise, it dissolves diverse metabolic wastes and helps drain them out of the body. Besides, it performs variety of functions-some well-known and well understood while other not so well appreciated yet vital. The no less important role of water is to distribute/dissipate the body heat efficiently, thereby regulating body's temperature. Water accomplishes this role ideally because it has high thermal conductivity ensuring rapid heat transfer from one part to the other.

Above all, water has a high specific heat, implying that it takes a lot of heat to raise the temperature of water and likewise much heat must be lost to lower its temperature.

Drinking a lot of water is an inexpensive way to stay healthy. Even excess of water is harmless. Water therapy-drinking a litre or so the first thing in the morning is kidney-friendly.

The water regulation in the body is affected by hypothalamus in two ways

i e., (i) by creating the sensation of thirst which makes us drink water and

    (ii) by controlling the excretion of water as urine. If water regulation fails, medical emergency ensues.

Based on your reading of the above passage, complete the following statements **(8)**

1. Water is vital to human health and fitness because------------------------
2. Water is called a key nutrient because------------------------------
3. Water is an ideal constituent of the body fluids because------------------
4. More substances are soluble in water than in any other liquid. This helps water to
   perform two important functions-
   These are (1) --------------------   (2) ------------------------------
5. Water regulates body temperature efficiently as--------------------------
6. Hypothalamus regulates water in two ways (1). -------------------- (2).------------------------

Q.2 Read the following passage carefully and answer the questions that follow.

BLUE WHALES ---THE LARGEST ANIMALS

Blue whales are the largest of animals known, either living or extinct. About six metres long at birth, they grow rapidly-at peak rates they can gain up to three kilos in an hour and consume up to 90 kilos a day of fat-rich breast milk to reach up to 30 metres on maturity. Their social grouping is usually small, involving only pairs or a few individuals. They have no vocal cords, so their repetitive moaning, rumbling calls are made by vibrating nasal air sacs-a bit like the sound made when humans snore or blow their noses. Their calls are of such low frequency that they're mostly inaudible to human ears, but they can reach188 decibels (far louder than a screaming jet engine or even rock music at peak intensity) and can be detected up to 400 kilometres away.

Despite its incredible size, few people have ever seen a blue whale. Official records show a mere 35 sightings in Australian waters between 1887 and 1999. Whaling is the reason: species after species were drastically over-hunted. Hump-back whales, blue whales, fin whales, sei whales and minke whales were targeted in turn as catches declined. Official estimates are that the original Southern Hemisphere blue whale population was once about 225,000 but only a few thousand remain.
The tell-tale burst of white spray cannons nine metres into the air when the whales exhale from twin blowholes atop their heads. Blue whales feed almost exclusively on swarms of krill, tiny prawns-like animals, scooping up several tonnes a day.

In one mighty mouthful these animals swallow as much as 50 cubic meters of water. It will slowly force all that water out through the baleen plates—stiff, feathery combs attached to its upper jaw. The plates filter out the thousands of krill it has just taken in with all that water. Then it will scrape off the krill with its tongue and that's breakfast, lunch and dinner for a blue whale.
Blue whales are still highly vulnerable. Large-scale commercial krill harvesting would deplete their sole food supply. Many blues must also deal with busy shipping traffic and other underwater noise issues like marine seismic exploration for oil and gas and navy sonar and submarine testing.

Whales rely heavily on sound to communicate at great distances and experts fear that noise pollution might disrupt whale social interactions, damage their sensitive ears or drive them away from vital feeding and breeding grounds.

1. The tables below contain facts related to blue whales. Pick out the relevant words and fill the blanks **(4)**

ITEMS	DETAILS
1. Size at birth-	----------------------
2-----------------	Thirty meters long
3 Rate of growth	----------------------
4----------------------	Usually small

2. Write functions of the following features of a blue whale. **(4)**
   (i) twin blowholes (ii) vibrating nasal air sacs

3. Complete the following statements. **(3)**

(a) Usually the calls of the blue whales are of such low frequency-----------------------------

(b) It is officially estimated that the blue whale population in the Southern Hemisphere
    is now---------------------------

(c) Two factors which may drive the blue whales away from their vital feeding and
    breeding grounds are
    (i)---------------------------- (ii) ----------------------------

4. Find a word from the passage which means **(1)**
   (a) No longer in existence

<div align="center">

SECTION - B   (WRITING)

</div>

Q3 Your school has decided to present a programme on All India Radio, from AIR station of your city, in the popular programme 'Meet the Young Artists'. Write a notice in not more than 50 words for your school notice board inviting talented students to appear for trial for different items on 26th November in the school's open-air theatre. The famous presenter Mr Alok Kumar is invited for the trial. Sign as Ankit/Ankita, Secretary, Cultural Club of the school. **(4)**

Q4 Man is becoming the victim of Nature's fury. It is because of his greed more than his needs. Write a letter to the editor of a National News Paper in 150 words, expressing your concern for the degrading environment and suggestions to protect it. You are Siddharth/Sudha. **(6)**

Q 5 Varun decided to write a story, but after some time, he could not complete the story as he lost interest .Complete his story on the basis of the beginning given below

"Once a rich lady, who lived in a spacious mansion, became blind. She called in Specialist……. **(10)**

SECTION - C (GRAMMAR)

Q 6. This passage has not been edited. There is one word missing from each line. Write the word before, the missing word and the word after. (½ x 6 = 3 Marks)

Many people hung their heads to avoid work.	**eg**: avoid	the	work
Sathya Kama got up said	a) _____	_____	_____
"I will do this work." Some advised him not to go as he will be all alone in forest without food.	b) _____	_____	_____
The boy said, " I will not alone for	c) _____	_____	_____
I will have these cows to give me company."			
The Guru was happy that at least among his	d) _____	_____	_____
many pupils volunteered to undertake job	e) _____	_____	_____
as service toward Guru. He blessed	f) _____	_____	_____
him for his service.			

Q 7 . Do as directed **(4 Marks)**

a) Fill the blanks with proper form of verbs.
My little sister is very naughty. When she had (i) _____ (come) back from school yesterday, she (ii) _____ (tear) her dress. **(1/2x2=1 Mark)**

b) Fill in the blanks with the correct form of the verbs given in the bracket.
(i) I _____ cut my hair every month.
(ii) I _____ repair my bicycle yesterday.
(Fill in the blanks using had to / have to / has to) **(1/2 x 2 = 1 Mark)**

c) Write the noun forms of :
(i) Maintain
(ii) Persist **(1/2 x 2 = 1 Mark)**

d) Make meaningful sentences with the idiomatic phrases given below.
(i) At close quarters
(ii) Beat about the bush **(1/2 x 2 = 1 Mark)**

Q 8. Rearrange the following words / phrases to form meaningful sentences.

(1x4=4Marks)

a) poverty / the village people / from / most / suffer / of

b) in rural areas / is / employment opportunities / there / of / lack

c) come to cities / in / people / so, / of work / search

d) appalling conditions/ cities/ in/they/live/ in

Q.9. Read the following conversation and complete the paragraph given below.

(1x4=4 Marks)

Ram : At last, you have decided to go to Kerala. Congratulations, you are going to God's own country.

Mohan : They say Kerala is one of the most beautiful places in India. People like its beaches, backwaters and canals.

Ram: Every inch of Kerala is lush green. Kerala has everything that soothes one's eyes.

Mohan: Hope you enjoy your holidays in Kerala.

Congratulating Mohan that at last he had decided to go to Kerala, Ram added (a)------------
Mohan replied that it is said that Kerala is one of the most beautiful places in India and added
that (b)-------------------------------. Ram told Mohan that every inch of Kerala is lush green
and added that (c)------------------------.Mohan hoped that Ram(d)------------------ in Kerala.

SECTION -D   LITERATURE

Q.10. Read the given extract of the poem and   answer the questions that   follow   (4)

> "Come and hire me,'' I cried, while in the morning
> I was walking on the stone-paved road.
> Sword in hand the king came in his chariot.
> He held my hand and said, ''I will hire you with my power,''

1. Name the poem and the poet.
2. Who is the speaker in the poem?
3. Whom does 'He' refer to in line 4?
4. 'the king, sword in hand' suggests
   a) Wealth   b) Power   c) More power than wealth

Q.11. Read the given extract and answer the questions   (4)

"We met every day for a whole week. I arranged for a car to take you to Hudroofalls"
    1. Who said this to whom?
    2. Where did they meet?
    3. In which year did they meet?
    4. At that time according to the speaker, where did they stay?

Q 12. Answer the following questions (any four)   (8)

  1 Why do you think the desk had been sold, and when?
  2 What were the warning signs that both Tilly and her mother saw?
  3 In what ways did the British officers exploit Indians?
  4 What are the three qualities that played a major role in the author's climb?
  5 What were the 'symbols of reverence' left by members of the team on Everest?

Q 13. Answer the following questions (any two)   (4)

  1. The camel said, 'Humph' repeatedly. How did it affect him?
  2. Why did Velu run away from home?
  3. Why was it still winter in one corner of the garden?
  4. What was Mrs Gupta's advice to Hafeez Contractor? What made her advise him so?

Q14. 'Owning things is human; sharing them is divine'. Explain it taking the ideas from the
    story 'The Selfish Giant'   **(5)**
    .
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ATOMIC ENERGY EDUCATION SOCIETY
HALF - YEARLY EXAMINATION – (2018-19)

CLASS: VIII   **DATE OF EXAM: 01-10-18**   **TIME: 3 HOURS**

SUBJECT: MATHEMATICS   **MARKS: 80**

General Instructions:

1. This paper consists of 4 sections.
2. Section A has 6 Questions each question carries 1 mark
3. Section B has 6 Questions each question carries 2 mark
4. Section C has 10 Questions each question carries 3 mark
5. Section D has 8 Questions each question carries 4 mark
6. Use of calculator is not permitted.

SECTION – A   (1 x 6 =6M)

1) Write the rational numbers that are equal to their reciprocals.

2) If on dividing a number by 18, the result is -144. Find the number.

3) Find the number of sides of a regular polygon whose each exterior angle is 60^0.

4) The probability that it will rain tomorrow is 0.25. What is the probability that it will not rain tomorrow.

5) Find the value of $\sqrt{16 + \sqrt{81}}$

6) Find the cube of 0.01

SECTION – B   (2 x 6 =12M)
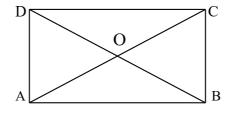
7) Find four rational numbers which are less than –7.

8) One number is half the other, together they are equal to 6. Find the numbers.

9) Is it possible to construct a quadrilateral A B C D in which AB = 3cm, BC = 5cm, $\angle$B =120^0,
   $\angle$C=105^0 and $\angle$ A= 160^0? If not why?

10) Himanshu draws a ball from a bag that contains 10 White and 20 Yellow balls. Find the probability
    of choosing a White ball.

11) Write the Pythagorean triplets, whose one number is 14.

12) Find the cube root of 614125 through estimation.

SECTION – C   (3 X 10 =30M)

13) Find $\dfrac{3}{7} + (\dfrac{-6}{11}) + (\dfrac{-8}{21}) + (\dfrac{5}{22})$

14) Solve: $5x - 2(2x - 7) = 2(3x - 1) + \dfrac{7}{2}$

15) A B C D is rectangle. Its diagonals meet at O. Find x, if OA= 2x+4 and OD= 3x+1.

16) Construct a rhombus whose diagonals are 5.2 cm and 6.4 cm long.

17) Construct quadrilateral ABCD, where AB = 4 cm BC = 5 cm, CD = 6.5 cm and

   $\angle B = 105^{\mathbf{o}}$ and $\angle C = 80^{\mathbf{o}}$.

18) Draw a histogram for the frequency distribution of heights of 50 students of a class (in cm).

CLASS INTERVAL	135 - 140	140 - 145	145 - 150	150 - 155	155 - 160
FREQUENCY	6	15	18	8	3

19) The diagonals of a rhombus are 8cm and 15 cm. Finds its sides.

20) Find the greatest number of five-digit, which is a perfect square.

21) Is 68600 a perfect cube? If not, find the smallest number by which 68600 must be multiplied
    to get a perfect cube.

22) Difference of two perfect cubes is 189.If the cube root of smaller of the two numbers is 3,find
    the larger number.

SECTION – D   (4 x 8 =32M)

23) Find ten rational numbers between $-\dfrac{2}{5}$ and $\dfrac{1}{2}$.

24) The digits of a two-digit number differ by 3.If the digits are interchanged, and the resulting number is added to the original number, we get 143. What can be the original number.

25) Solve : $x - \dfrac{x-1}{2} = 1 - \dfrac{x-2}{3}$

26) The ratio between exterior and interior angle of a regular polygon is 1:3. Find the number of sides of the polygon. Also, find each of the interior and exterior angles.

27) Construct a trapezium ABCD, in which AB=6.2 cm, BC=4.2cm, CD=3.5 cm, $\angle B=75^0$ and DC || AB.

28) The following data represents the approximate percentage water in various oceans. Prepare a pie-chart for the given data.

Pacific	40%
Atlantic	30%
Indian	20%
Others	10%

29) Find the least square number, that is divisible by each of the number 8, 15and 20.

30) Find the least number, which must be added to 6412 so as to get perfect square. Also find the square root of the perfect square so obtained.

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