ATOMIC ENERGY EDUCATION SOCIETY
PERIODIC TEST – II (2018-19)

CLASS: IX **DATE OF EXAM: 03-10-18** **TIME: 3 HOURS**
SUBJECT: MATHEMATICS **MARKS: 80**

GENERAL INSTRUCTIONS:

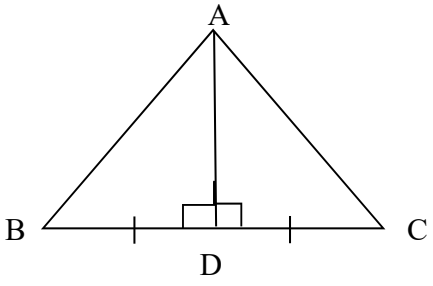
1. All questions are compulsory.
2. The question paper consists of 30 questions divided into 4 sections A,B,C,and D.
   Section A comprises 6 questions of 1 mark each.
   Section B comprises 6 questions of 2 marks each.
   Section C comprises 10 questions of 3 marks each
   Section D comprises 8 questions of 4 marks each.
3. Use of calculator is not permitted.

Section-A **(6 x 1M= 6 Marks)**

1. Write the rational number 54/100 in decimal form.
2. Find the value of x , if 34 x 35 = $(3^3)^x$
3. Find the value of the polynomial 5x-4x2+3 at x=0.
4. Find the value of K, if x=2, y=1 is a solution of the equation 2x+3y=K.
5. If an angle is 160 more than its complement, find its measure.
6. In ΔABC , $\angle B = 105°$ and $\angle C = 50°$, $find$ $\angle A$.

Section-B **(6 x 2M= 12 Marks)**

7. Express 0. $\overline{588}$ in the form of p/q.
8. If $a^2 + b^2 + c^2 = 250$ and ab + bc + ca=3, then find a + b + c.
9. Find two solutions of the equation 2x–3y=12.
10. If the point (3,4) lies on the graph of the equation 3y = ax + 7, find the value of a.
11. The supplementary angles are in the ratio 4:5, find the angles.
12. In Δ ABC , AD is the perpendicular bisector of BC (See the figure). Show that Δ ABC is an Isosceles triangle in which AB=AC



Section-C (10 x 3M= 30 Marks)

13. Represent $\sqrt{5.3}$ on the number line.

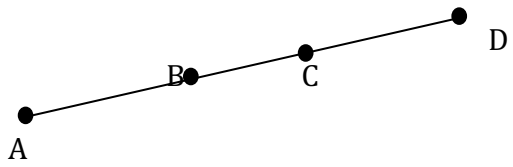
14. Show that (x–2) is a factor of the polynomial $f(x) = 2x^3 - 3x^2 - 17x + 30$.

15. In which quadrant do the given points lie?
    i) (4,–2) ii) (–3,7) iii) (–1,–2)

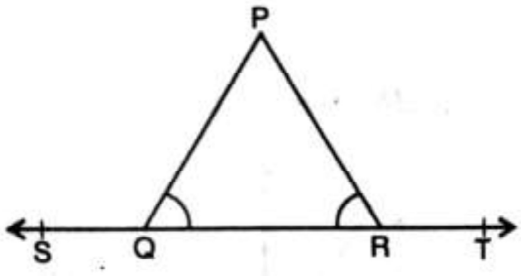
16. Solve the equation $2x + 1 = x - 3$ and represent the solutions
    i) On the number line ii) In the Cartesian plane.

17. Write 3 Euclid's axioms.

18. In the given figure, if AC=BD , then prove that AB=CD

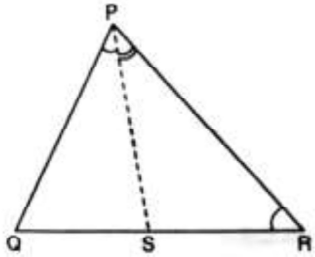


19. In figure ∠PQR = ∠PRQ, then prove that ∠PQS = ∠PRT

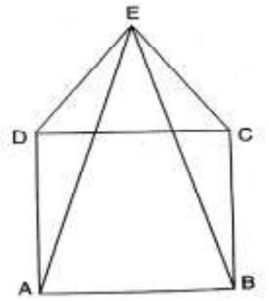


20. In Δ ABC, if 3∠A=4∠B=6∠C , Calculate ∠A, ∠B and ∠C.

21. In figure, PR > PQ and PS bisects ∠QPR. Prove that ∠PSR > ∠PSQ



22. ABCD is a square and DEC is an equilateral triangle.
Prove that AE = BE



Section – D **8 x 4M =32 Marks**

23. Find the values of a and b, $\frac{5+2\sqrt{3}}{7+4\sqrt{3}} = a - b\sqrt{3}$

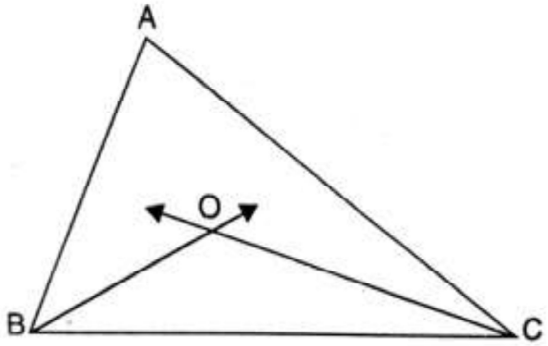
24. If a $=\frac{\sqrt{3}-\sqrt{2}}{\sqrt{3}+\sqrt{2}}$ and b $=\frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$,find the value of a^2+b^2 – 5ab

25. Verify that $x^3 + y^3 + z^3 - 3xyz = \frac{1}{2}(x + y + z)\,[\,(x - y)^2 + (y - z)^2 + (z - x)^2\,]$.

26. i) Plot the points A (1, 4.5), B (–1, 0), C (1, – 4.5) and D (3,0) on a graph paper.
ii) Name the figure ABCD.
iii) Find the area of ABCD.

27. In countries like USA and Canada, temperature is measured in Fahrenheit, whereas in countries like India, it is measured in Celsius. Here is a linear equation that converts Fahrenheit to Celsius. $F = \frac{9C}{5} + 32$
i)Draw the graph of the linear equation above using Celsius for X-axis and fahrenheit for Y-axis
ii) If the temperature is 30°C, What is the temperature in Fahrenheit?
iii) Is there a temperature which is numerically the same in both Fahrenheit and Celsius? If yes, find it.

28. In the figure, the bisectors of ∠ABC and ∠BCA intersect each other at the point O. Prove that $\angle BOC = 90° + \frac{1}{2}\angle A$



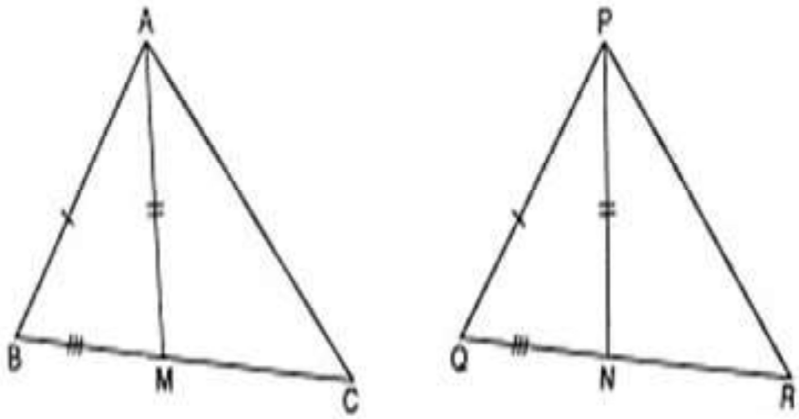
29. Prove that the sum of any two sides of a triangle is greater than the third side.

30. Two sides AB and BC and median AM of one triangle ABC are respectively equal to sides PQ and QR and median PN of triangle PQR (see figure).

Show that

i) ΔABM ≅ Δ PQN

ii) Δ ABC ≅ Δ PQR



ATOMIC ENERGY EDUCATION SOCIETY
PERIODIC TEST – II (2018-19)

CLASS – IX **DATE OF EXAM: 19-09-18** **TIME – 3 HOURS**
SUBJECT – ENGLISH **MARKS – 80**

General Instructions:
This paper consists of three sections:
Section A – Reading - 20 marks
Section B – Writing and Grammar - 30 marks
Section C – Literature - 30 marks.
All sections are compulsory.

SECTION A – (READING) (20 MARKS)

Q1. Read the passage given below and answer the questions that follow:

The most beautiful humming birds are found in the West Indies and South America. The crest of the tiny head of one of these shines like a sparkling crown of colourful light. The shades of colour that adorn its breast are equally brilliant. As the birds flits from one object to another, it looks more like a bright flash of sunlight than it does like a living being.

But, you ask, why are they called humming birds? It is because they make a soft, humming noise by the rapid motion of their wings – a motion so rapid, that as they fly, you can hardly see that they have wings. One day while walking in the woods, I found the nest of one of the smallest humming birds. It was about half the size of a very small hen and lay eggs, and it was attached to a twig no thicker than a steel knitting needle. It seemed to have been made of cotton fibres and was covered with the softest bits of leaf and bark. It had two eggs in it and each was about as large as a small sugar plum.

When you approach the spot where one of these birds has built its nest, it is necessary to be careful. The mother bird will dart at you and try to peck your eyes. It's sharp beak may hurt your eyes most severely and even destroy your sight.

The poor little thing knows no other way of defending its young, and instinct teaches it that you might carry off its nest if you find it.

(1 M x 8 = 8M)

(a) Where do we find the most beautiful humming birds of the world ?
(b) Why are such birds called humming birds?
(c) How does a humming bird look like?
(d) Describe the nest of the humming bird.
(e) What is the size of the egg of a humming bird?
(f) Why do we need to be careful when we go near a humming bird's nest?
(g) Why does humming bird hurt humans when they are near to her nest?
(h) Pick from the passage the correct synonym for the word 'dart'
(i) charge (ii) stop

Q2. Read the passage and answer the questions that follow:

Experts say that what customers buy in the name of herbal cosmetics is often the same synthetic cosmetic with a herb or two added, which works to lure customers. A product that says it is 100% natural may be misleading in the sense that it's difficult to stabilize a fully natural base and is always quite expensive, requiring advanced technology. The desired shelf life of a product is

expected to be at least two years, but that of a purely herbal product would be restricted to about six months. Also, the product won't be aesthetically appealing as the synthetic product. Hence, manufacturers of herbal products have to include synthetic based ingredients to balance the formula.

Herbal ingredients might also cause allergies as they may contain a large number of constituents which may be allergic to the user. Thus the concept of using 'total extracts' may be harmful, because there are several other ingredients going into the product. Also, things like pH need to be considered before using it.

According to legal experts, customer suing someone is extreme. Given the legal system in India and long drawn litigation process, consumers tend to pursue legal action against manufacturers/ distributors in the event of any problem. However, with the dawn of consumer forums and more effective laws protecting the interest of the consumers, the trend is slowly moving towards this direction.

At times it is not just manipulative manufacturers and passive consumers but sometimes weak and absurd rules regarding the process of manufacturing can also get fake production licences. Also one cannot make a generalization that synthetics are safe while naturals are harmful. I would say that the difference is that if one is a known devil (synthetics) the other is unknown. Unlike the case of synthetic cosmetics, herbal cosmetics are still in nascent stage. You don't have well defined standards for the use of raw materials in the production of herbal cosmetics.

Finally, the customers can also check out their cosmetics by using the 'cosmetic ingredients dictionary', a database of 19000 ingredients. It claims to help users check out what chemical compounds they use daily. This app lets you feed the names of the ingredients written in the container into the app and then get the reading about it.

(a) Why it is misleading when a product is labelled as 100% natural? (2M)
(b) Mention two drawbacks of natural products? (2M)
(c) Why is taking recourse to legal action gaining momentum? (2M)
(d) What is the cosmetics ingredient dictionary? (2M)
(e) Find words from the passage which mean the same as each of the following: (1M x 4 =4M)
   (i) components
   (ii) gathering
   (iii) length of life
   (iv) skilfull at influencing in an unfair way.

SECTION-B - WRITING AND GRAMMAR (30 MARKS)

Q3. Trees play an important role in our life. Felling of trees disturbs the eco-system. We should preserve trees and plants with great care. Write a paragraph in about 100-120 words on "Trees are our best friends". (8M)

OR

Recently you have visited a school for the deaf and dumb. You are sympathetic for their situation, they are in. Make a Diary entry writing down your feelings about their situation in about 100-120 words.

Q4. Neha wanted to write a short story but couldn't go beyond a line or two. Taking help from the information given below along with the lines Neha wrote, complete the story. **(10M)**

Mr. Aggarwal was a very wealthy businessman. One day he was alone sitting at his dining table when …… Outline:….. The theif entered…..Mr. Aggarwal thanked…..to give company…..birthday…..gave him food and drinks…..gave a purse full of silver coins……..years passed by…..fortune changed…..business ruined…..Mr. Aggarwal became poor…..50th birthday…..alone …..no food…..no drinks…..bell rang….. a man….emerged…..recognised…..the old thief…. Came with fruits, sweets and drinks and a bag full of money.

Q5. Fill in <u>any four</u> of the following blanks choosing the most appropriate option from the ones given below. Write the answers in your answer –sheet against the correct blank numbers. **(1Mx 4=4 M)**

Three years ago, fresh (a) ----- of school, I (b) ----- the intimidating task of choosing a career (c) ----- college started. My uncle, (d) ----- of the elders of the family, suggested (e) ----- I should do a summer job in a multinational company.

(a)	(i) from	(ii) out	(iii) in	(iv) when
(b)	(i) in	(ii) was	(iii) have	(iv)had
(c)	(i) for	(ii) after	(iii) before	(iv) as
(d)	(i) are	(ii) was	(iii) one	(iv) who
(e)	(i) when	(ii) that	(iii) which	(iv) as

Q6. In the following passage one word has been omitted in each line .Write the missing word, in <u>any four</u> sentences of the given paragraph, along with the word that comes before and the word that comes after it in the space provided. **(1Mx 4=4M)**

	Before	Missing Word	After
The small town was the	e.g. was	<u>at</u>	the
foot of the mountains. Most the	(a)----------	----------	
people were farmers. There traders also	(b)----------	----------	
in the town. Though not rich were	(c)----------	----------	
happy contented. At one	(d)----------	----------	
time the peace broken by	(e)----------	----------	
several robberies.			

Q7. Rearrange <u>any four</u> of the following word clusters to make meaningful sentences. **(1Mx4=4M)**

(a) Most / the / library / or / in / school / one / is / important / places / of / college / the
(b) Well-stacked / good / must / institution / a / every / library / posses
(c) to / should / this / be / accessible / teachers / alike / students / and / easily
(d) storehouse / acts / library / as / a / the / knowledge / of
(e) is / opportunity / school / reading / good / a / in / culture / to / it / develop

SECTION C- LITERATURE (30 MARKS)

Q8. Read the following extract and answer the questions that follow: (1M x 4 = 4M)

The inspector had smiled after he was finished and patted Margie's head. He said to her mother, "It's not the little girl's fault, Mrs Jones. I think the geography sector was geared a little too quick. Those things happen sometimes I've slowed it up to an average ten year level'.

(a)"It's not the little girls fault……". The fault was that ……..
(b)According to the inspector , why was the performance of Margie worsening day by day?
(c)Which word in the passage stands for 'adjusted to a particular level'.
(d)Name the lesson the extract has been taken from?

Or

Read the following extract of the poem and answer the following questions:

"Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveller, long I stood
And look down one as far as I could
To where it went in the undergrowth"

(a)Name the poem and the poet.
(b)Why did the poet feel sorry?
(c)What does 'yellow wood' stand for?
(d)Pick out the word from the extract that means the same as 'deviated'.

Q9. Answer these questions in 30 to 40 words. (5 x 2M = 10M)

(a) What kind of teachers did Margie and Tommy have? Did they like them?
(b) How is 'Shehnai' different from 'Pungi'?
(c) What was the nightmare that Kezia had?
(d) What are the things the child sees in his way to the fair? Why is he lagging behind?
(e) Why does grandfather take Toto to Saharanpur and how? Why does the ticket collector insist on calling Toto a dog?

Q10. Answer anyone in 100 - 150 words: (8M)

(a) 'Machines can't replace human beings.' Explain it with reference to the lesson 'The fun they had.'

Or

What were the recurring themes of Bismillah Khan's music and how did they originate? What does this tell you about Bismillah Khan?

Q11. Compare the attitude of the child before and after his separation from his parents. The company of parents is more important than the things of pleasure. Do you agree?

Or

Describe Iswaran as a cook. What are the qualities that attract you the most? (8M)

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परमाणु ऊर्जा शिक्षण संस्था

आवधिक परीक्षा (2018-2019)

कक्षा : 9 (नौवीं) **विषय** : हिंदी **समय** : 3 घंटा **पूर्णांक** : 80

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निर्देश : 1- इस प्रश्न-पत्र-में चार खंड हैं क, ख, ग, और घ ।

2- चारों खण्डों के प्रश्नों के उत्तर देना अनिवार्य है ।

3- यथासंभव प्रत्येक खंड के उत्तर क्रमशः दीजिए ।

खंड क

प्रश्न 1 (अ) निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़कर पूछे गए प्रश्नों के उत्तर दीजिए –

समय के सदुपयोग का अर्थ है उचित अवसर पर उचित कार्य पूरा करना। आज का काम कल पर और कल का काम परसों पर टालने वाले लोग अपने जंजाल खड़ा करते चले जाते हैं और मरण टालते टालते एक दिन सचमुच मरण आ ही जाता है। उपयुक्त समय पर कार्य न करने वाले को समय नष्ट कर देता है। समय पर अध्ययन न करने वाले छात्र परिणाम आने पर रोते हैं और भविष्य बर्बाद कर लेते हैं। समय कभी किसी की प्रतीक्षा नहीं करता। समय ही तो जीवन है। समय को नष्ट करना जीवन को नष्ट करना है। समय सम्मान माँगता है। समय का सम्मान करने वाली जाति और देश अपनी शक्ति को कई गुना बढ़ा सकते हैं। फ्रैंकलिन का कथन भी है 'तुम्हें अपने जीवन से प्रेम है तो समय को व्यर्थ मत गँवाओ।' अतः समय की गंभीरता को समझते हुए इसका सदुपयोग करना सीखना चाहिए।

1- समय के सदुपयोग का क्या अर्थ है? **2**

2- आपके अनुसार गद्यांश का शीर्षक क्या हो सकता है? **1**

3- उपयुक्त समय का उपयोग न करने वाले को क्या हानि होती है? **2**

4- छात्र के जीवन में समय का क्या महत्व है? **2**

5- रचना की दृष्टि से वाक्य का प्रकार बताइए **1**

तुम्हें अपने जीवन से प्रेम है तो समय को व्यर्थ मत गँवाओ।

ब--निम्नलिखित काव्यांश को ध्यानपूर्वक पढ़कर पूछे गए प्रश्नों के उत्तर दीजिए –

कठिन ग्रीष्म की दोपहरी में हरी दूब पर लेटी।

थकी खेत में घास काट कर वह किसान की बेटी।।

उपजाती है अन्न खेत में कठिन परिश्रम करके।

सोता रहता गाँव किन्तु वह चल देती है तड़के।।

मुँह पर है मुस्कान किन्तु माथे पर तरल पसीना।

वह सिखलाती है इस जग को अपने बल पर जीना।।

रंगे नहीं नाखून, न है ओंठो पर गहरी लाली।

बिता चुकी वह इसी खेत में मधुर उमरिया बाली।।

ऊपर है रसाल की छाया नीचे दूब हरी है।

लगता जैसे तरु के नीचे कविता सुप्त पड़ी है।।

पृथ्वी बोल रही देखो, यह ही है मेरी बेटी।

मेरी सेवा करके थक कर मेरे ऊपर लेटी।।

1- किसान की बेटी हरी घास पर क्यों लेती है? **1**

2- किसान की बेटी का रूप श्रृंगार लिखिए। **2**

3- किसान की बेटी खेतों में क्या करती है? **1**

4- किसान की बेटी को देखकर पृथ्वी के क्या उद्गार हैं? **2**

5- इस काव्यांश का उचित शीर्षक दे लिखिए **1**

खंड-ख

प्रश्न 2 (क) नीचे दिए गए प्रश्नों के निर्देशानुसार उत्तर दीजिए **1X7=7**

1- **'वास्तविक'** शब्द में मूल शब्द और प्रत्यय अलग कीजिए।

2- **'गुणवान'** शब्द से मूल शब्द और प्रत्यय को अलग कीजिए ।

3- **'विलक्षणता** शब्द में उपसर्ग प्रत्यय अलग कीजिए।

4- **'प्राध्यापक'** शब्द में मूल शब्द और उपसर्ग को पृथक कीजिए।

5- **'चौराहा'** शब्द में कौन सा समास है ?

6- **'नीलकंठ'** शब्द का समास विग्रह कीजिए।

7- **'युद्ध के लिए भूमि'** का समस्त पद लिखिए ?

ख-- अर्थ के आधार पर वाक्य भेद बताइए **1X4=4**

1- वाह ! कितना सुन्दर दृश्य है।

2- आप कहाँ जा रहे हैं?

3- मै आज नही जाउँगा।

4- आप वहाँ बैठिए।

ग--निर्देशानुसार उत्तर दीजिए **1X4=4**

1- मुख्यरूप से अलंकार कितने प्रकार के होते हैं?

2- **'कनक कनक तै सौगुनी मादकता अधिकाय**

वा खाए बौराए जग या पाए बौराय' में प्रयुक्त अलंकार लिखिए ?

3- **'चंद्रमुखी'** शब्द में उपमेय और उपमान अलग कीजिए।

4- **'मधुर मधुर मुस्कान मनोहर, मनुज वेश का उजियाला'** पंक्ति में कौन सी अलंकार प्रयुक्त हुआ है?

खंड ग

प्रश्न 3 अधोलिखित गद्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर दीजिए

डी एच लॉरेंस की मौत के बाद लोगों ने उनकी पत्नी फ्रीडा लॉरेंस से अनुरोध किया कि वह अपने पति के बारे में कुछ लिखें। 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 है। मुझसे भी ज्यादा 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 ज्यादा जानकारी रखती है।

1- उपर्युक्त गद्यांश किस पाठ से लिया गया है एवं इसके लेखक कौन हैं ? **1**

2- लॉरेंस के बारे में कौन अधिक जानता था? इससे उनके किस गुण का पता चलता है ? **2**

3- डी एच लॉरेंस के बारे में आप क्या जानते हैं? **2**

प्रश्न 4 अधोलिखित प्रश्नों में से किन्हीं चार प्रश्नों के उत्तर दीजिए- 2X4=8

1- किन घटनाओं से पता चलता है कि हीरा और मोती में गहरी दोस्ती थी?

2- लेखक लड़्कोर के मार्ग में अपने साथियों से किस कारण पिछड़ गया?

3- सर टामस 'हे' के मैना पर दया-भाव के क्या कारण थे?

4- छोटी बच्ची को बैलों के प्रति प्रेम क्यों उमड़ आया?

5- सालिम अली ने पूर्व प्रधानमंत्री के सामने पर्यावरण से सम्बन्धित किन संभावित खतरों का चित्र खींचा होगा कि जिससे उनकी आँखें नम हो गई थीं?

6- बालिका मैना ने सेनापति 'हे' को कौन कौन से तर्क देकर महल की रक्षा के लिए प्रेरित किया?

प्रश्न 5 निम्नलिखित काव्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर दीजिए

रस्सी कच्चे धागे की, खींच रही मैं नाव।
जाने कब सुन मेरी पुकार, करें देव भवसागर पार।
पानी टपके कच्चे सकोरे, व्यर्थ प्रयास हो रहे मेरे।
जी में उठती रह-रह हूक, घर जाने की चाह है घेरे।।
खा-खाकर कुछ पाएगा नहीं,
न खाकर बनेगा अहंकारी।
सम खा तभी होगा समभावी,
खुलेगी साँकल बंद द्वार की।।

1- **'प्रयास व्यर्थ होना'** को कवयित्री ने किस उदहारण द्वारा व्यक्त किया है? **2**

2- उपर्युक्त पद्यांश किस **पाठ** से उद्धृत है एवं इसकी **लेखिका** कौन हैं? **1**

3- **'बंद द्वार' की साँकल खुलने** से कवयित्री का क्या अभिप्राय है? **2**

प्रश्न 6 अधोलिखित प्रश्नों में से किन्हीं चार प्रश्नों के उत्तर दीजिए- **2X4=8**

1- कबीर ने ईश्वर को **'सब स्वाँसों की स्वाँस में'** क्यों कहा है?

2- कवयित्री का **'घर जाने की चाह'** से क्या तात्पर्य है?

3- **लकुटी और कामरिया पर** कवि सब कुछ न्योछावर करने को क्यों तैयार है?

4- किस शासन की तुलना **तम** के प्रभाव से की गई है और क्यों?

5- कवि को कोयल से ईर्ष्या क्यों हो रही है?

6- निम्नलिखित पंक्तियों के **काव्य-सौंदर्य** को स्पष्ट कीजिए।

या मुरली मुरलीधर की अधरान धरी अधरा न धरौंगी।

प्रश्न 7 लेखिका ने अपनी नानी को कभी देखा भी नहीं फिर भी उनके व्यक्तित्व से वे क्यों प्रभावित थीं? 4

अथवा

आप अपनी कल्पनानुसार लिखिए कि परदादी ने पतोहू के लिए पहले बच्चे के रूप में लड़की पैदा होने की मन्नत क्यों मांगी ?

खंड-घ

प्रश्न 8 निम्नलिखित में से किसी एक विषय पर दिए गए संकेत बिंदुओं के आधार पर निबंध लिखिए। 10

क राष्ट्रीय एकता

⇨ भारत में विभिन्नता
⇨ अनेकता में एकता
⇨ राष्ट्रीय एकता के बाधक तत्व
⇨ समाधान

ख ग्लोबल वार्मिंग और जन जीवन

⇨ ग्लोबल वार्मिंग का अर्थ एवं स्वरुप
⇨ हानियाँ और खतरे
⇨ बचाव के उपाय
⇨ उपसंहार

ग जीवन में कम्प्यूटर की उपयोगिता

⇨ वर्तमान युग कम्प्यूटर युग
⇨ कम्प्यूटर की उपयोगिता
⇨ स्वचालित गणना प्रणाली
⇨ कार्यालय तथा इंटरनेट में सहायक
⇨ नवीनतम उपकरणों में उपयोगिता

प्रश्न 9 अपने क्षेत्र की यातायात व्यवस्था को सुधारने के लिए आयुक्त यातायात के नाम पत्र लिखिए। 5

प्रश्न 10 स्वच्छता अभियान पर दो मित्रों का संवाद लिखिए । 5

अथवा

लड़का लड़की एक समान विषय पर दो मित्रों/ सहेलियों में संभावित संवाद लिखिए।

ATOMIC ENERGY EDUCATION SOCIETY
PERIODIC TEST – II (2018-19)

CLASS: IX **DATE OF EXAM: 25-09-18** **TIME: 3 HOURS**
SUBJECT: SCIENCE **MARKS: 80**

General Instruction: All questions are compulsory.

SECTION -- A

1. What do you mean by apiculture? 1
2. Name the physical quantity which changes continuously in any circular motion. 1
3. Calculate the amount of glucose required to prepare 250 g of 5% solution of glucose by mass. 2
4. Which cell organelle is called power house of the cell and why? 2
5. Why do the passengers fall forward when a fast moving bus stops suddenly? 2
6. What is composite fish culture? Write two advantages of it. 3
7. Write three functions of endoplasmic reticulum. 3
8. What are the three types of meristematic tissues on the basis of location? Answer with a diagram. 3
9. Give reasons: 3
   a) Steam causes more severe burns
   b) We can pass our hand easily through water but not through an almirah.
   c) When water boils the temperature remains constant.
10. Name the fluid connective tissue in our body. Also mention the different components present in it. 3
11. Draw a velocity- time graph for an object in uniform motion. Show that the area under the velocity time-graph gives the displacement of the object in the given time interval. 3
12. State Newton's second law of motion and give related expression. Why does a cricket player lower his hands while catching the ball? 3
13. A ball is thrown vertically upwards with a velocity of 49 m/s. Calculate 3
    (i) the maximum height to which it rises,
    (ii) the total time it takes to return to the surface of the earth. ($g = 9.8ms^{-2}$)
14. Derive an expression for the acceleration due to gravity on the surface of the earth. How does weight of an object change as the object moves from equator to pole of the earth? 3

15. Name the following: 3
(i) One cell organelle having its own DNA.
(ii) Tissue which connects bones with bones.
(iii) Suicidal bags of the cell.
(iv) Structures present on the rough endoplasmic reticulum
(v) Tissue which transports food in the plants.
(vi) Substance which forms the matrix of bones.

16. What is evaporation? Explain four factors which affect the rate of evaporation. 5

17. a) Draw the flow chart for obtaining different gases from air . 2
b) Write three differences between colloidal solution, solution and suspension. 3

18. Differentiate between the different types of muscles on the basis of location and function. Also draw the diagram of the three types of muscles. 5

19. a) Write three differences between prokaryotic and eukaryotic cells . 3
b) What will happen if fresh grapes are kept in concentrated sugar solution? Also name the process. 2

20. (i) State the law of conservation of momentum and derive related expression. 3
(ii) How much momentum will an object of mass 10 kg transfer to the floor, if it falls from the height of 5m.($g = 10\ m/s^2$) 2

21. (i) State universal law of gravitation and derive the expression for force between two objects of mass m_1 and m_2 separated by a distance 'd '. 3
(ii) Mass of an object is 20 kg. Find its weight on the surface of the earth and on the moon. (g of Earth = 10 ms^{-2}) 2

SECTION - B

22. Name the compound formed by heating iron filing with sulphur powder. 2
What will happen if we add carbon tetra chloride to this compound?

23. Write two precautions which we should follow while making a temporary slide of onion peel. 2

24. What is the colour of copper sulphate crystals? What happens when it is heated? 2

25. Draw a nerve cell and label it. 2

26. Two forces, 20 Newton and 50 Newton are applied on an object in opposite directions. Find the net force on the object. Also, draw the diagram for it. 2

27. An object of mass 400g is at rest. Find the direction and magnitude of the frictional force exerted between the object and the surface of the path to make the object move in the direction of east. ($g = 9.8 ms^{-2}$) 2

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ATOMIC ENERGY EDUCATION SOCIETY

PERIODIC TEST- II (2018-19)

Class: IX **Marks: 80**

Subject: Social Studies **Time: 3 Hours**

General Instructions:

(i) The question paper has 26 questions. All questions are compulsory.
(ii) Marks are indicated against each question.
(iii) Questions from serial number 1 to 7 are very short answer questions. Each question carries 1 mark.
(iv) Questions from serial number 8 to 18 are 3 marks questions. Answer of these questions should not exceed 80words each.
(v) Questions from serial number 19 to 25 are 5 marks questions. Answer of these questions should not exceed 120 words each.
(vi) Question Number 26 is a map question of 5 marks from Geography. After Completion, attach the maps inside the answer book.

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1. Where and when Napoleon was finally defeated? (1)

2. Who were called kulaks? (1)

3. Which two countries are separated by the Palk Strait? (1)

4. Name the two peninsular rivers which flow into the Arabian Sea. (1)

5. Which South Indian river is known as “Dakshin Ganga” ? Why ? (1)

6. Who was the chairman of the Drafting committee of the Indian constitution? (1)

7. What is called working capital? (1)

8. What was the role of philosophers in the French Revolution? (3)

9. What were the main features of the French constitution of1791? Explain the revolutionary importance of the ‘Declaration of Rights of Man and Citizen’? (3)

10. How did the Russian Revolution influence the world? (3)

11. Give three arguments in favour of democracy. (3)

12. What was the significance of the Karachi session of the congress in shaping the ideals of constitution of India? (3)

13. What were the three major international events that inspired our leaders in shaping the ideals of the constitution of India? (3)

14. Distinguish between Converging and Diverging tectonic plates (any three) (3)

15. The diverse physical features of the land have immense future possibilities of development. How do you think, each physiographic division of India is identified with different type of resource? (3)

16. Mention any three differences between Traditional and Modern farming methods. (3)

17. What is the difference between disguised unemployment and seasonal unemployment? (3)

18. What were the major causes of poverty in India? (3)

19. What were the causes of the immediate outbreak of the French Revolution of 1789? (5)

20. What were the major policies adopted by Bolshevik government under the leadership of Vladimir Lenin in Russia ? (5)

21. Do you think, Pakistan under General Musharaf was a democracy? Give reasons. (5)

22. What is meant by the term constitution? Describe any four main features of the constitution of India. (5)

23. Give an account of Inter State disparities of poverty in India ? (5)

24. How are Indian rivers classified into two groups? Write any four major differences between them? (5)

25. How are economic activities undertaken under three categories? Explain each of them with examples. (5)

26. On the given map of India, locate the following features. (1X5=5)

(a) Goa (b) Uttarakhand (c) Mt Everest (d) River Mahanadi (e) Coromandal Coast

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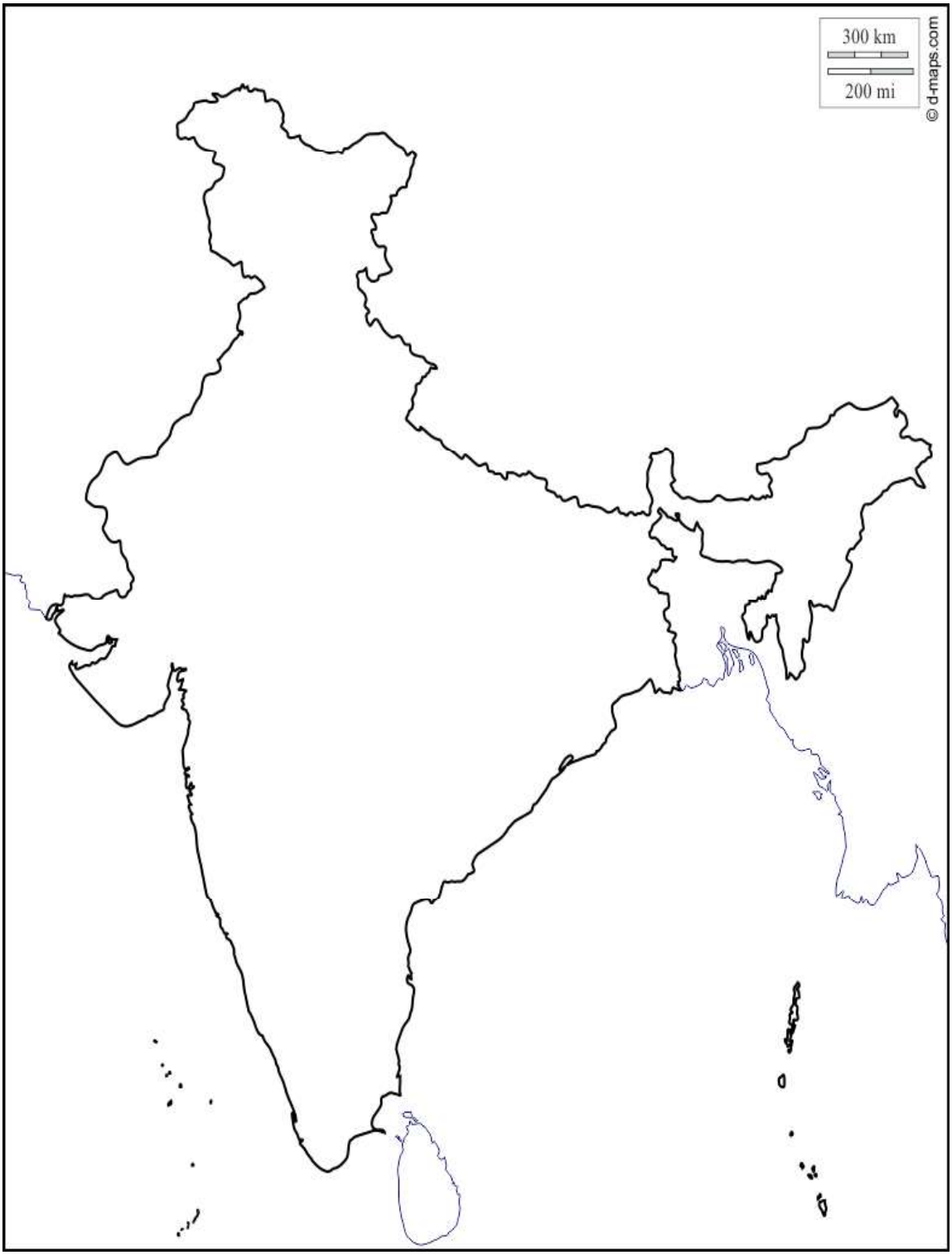
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