ODM PUBLIC SCHOOL

HOLIDAY HOME WORK

CLASS- STD-IX

ENGLISH

1. Write the character sketch of Berhaman, the and painter in 150 words.
2. Justify the title of the story 'The Bind of Love' in 100-200 words.
3. Write the Central there of the poem 'The Snake Trying' in 100-200 words.

MATHS

SECTION-A

1. Simplify : $\left[\frac{7^{-4}}{4^{-2}}\right]^{1/4}$
2. If $a^{\frac{1}{3}}+b^{\frac{1}{3}}+c^{\frac{1}{3}}=0$, then prove that $a+b+c=3a^{\frac{1}{3}}b^{\frac{1}{3}}c^{\frac{1}{3}}$?
3. P is point on y-axis at a distance of 6 units from x-axis lying below x-axis. What will be the coordinates of P?
4. Solve the equation x + 4 = 10 and state Euclid's axiom used.
5. In a cricket match, a batsman hits a sixer 8 times out of 32 balls played. Find the probability that a sixer is not hit in a ball.
6. If a circle is divided into eight equal parts, find the angle subtended by each arc at the centre.

SECTION – B

7. If $(3x-4y)^3=2yx^3-64y^3+axy^2+bx^2y$, then find the value of a + b.
8. Express the following equation as a linear equation in two variables in the standard form and indicate the values of a, b and c : $\frac{\sqrt{3}}{2}y=3$.
9. If the point $(2k-3,k+2)$ lies on the graph of equation $2x+3y+15=0$, find the value of k.
10. Consider two postulates given below :

(i) Given any two distinct points R and S, there exists a third point T which is in between R and S.

(ii) There exist at least three points which are not in the same straight line.

Now, answer the following questions:

(a) Do these postulates contain any undefined terms?

(b) Do they follow from Euclid's postulates? Explain.

11. The floor of a rectangular hall has a perimeter 150 m. If the cost of painting the four walls at the rate of Rs.10 per m^2 is Rs.9000, find the height of the wall.

12. In a data, 14 numbers are arranged in ascending order. If the 9^{th} entry is increased by 5, what will be the corresponding effect on the median?

SECTION-C

13. Represent $\sqrt{5}$ on the number line.

14. If $2x+3y=12$ and $xy=6$, find the value of $8x^3+27y^3$.

15. Gurnam and Akhthar have some money with them. Gurnam says to Akhthar, if you give me Rs.40, my money will be three times the money left with you. Represent this situation as a linear equation in two variables. Also, find two solutions for this equation.

OR

Half the perimeter of a rectangular garden in 36 m. Write a linear equation which satisfies this data. Draw the graph for the same.

16. In which quadrant or on which axis doe the points (-2, -4), (2, 4), (0, 2) and (4, -6) lie? Verify your answer by locating them on the Cartesian plane.

17. In figure-1, Sunita has a plot of land which she decides to use for building an old age home and a dispensary for the needy. Her plot is shown in the figure. Plot ABCD is a rhombus. If R is a point on diagonal BD, show that equal areas are allotted for building, old age home and the dispensary.

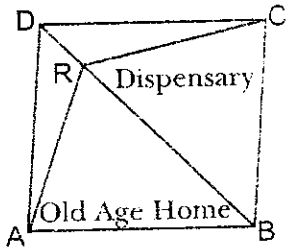

Fig. 1

18. In figure-2, if AB || CF, CD || EF, then find the value of x.

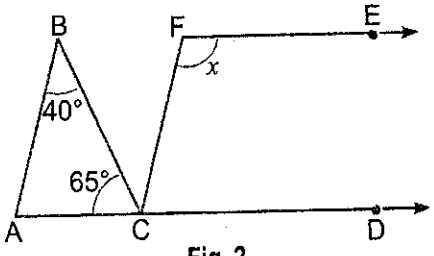

Fig. 2

OR

In figure-3, POQ is a line. Ray OR is perpendicular to line PQ. OS is another ray lying between rays OP and OR. Prove that

$\angle ROS = \frac{1}{2}(\angle QOS - \angle POS)$.

19. If the non-parallel sides of a trapezium are equal, prove that it is cyclic.

OR

Prove that quadrilateral formed by angle bisectors of a cyclic quadrilateral is also cyclic.

20. A die is thrown 1000 times with the frequencies for the outcomes 1, 2, 3, 4, 5 and 6 as given in the following table :

Outcome	1	2	3	4	5	6
Frequency	179	150	157	149	175	190

Find the probability of getting each outcome.

21. A right triangle ABC with sides 5 cm, 12 cm and 13 cm is revolved about the side 12 cm. Find the volume of the solid so obtained.

22. Construct a right triangle whose base is 12 cm and sum of its hypotenuse and other side is 18 cm.

OR

Construct a triangle XYZ in which $\angle Y = 30°, \angle Z = 90°$ and $XY + YZ + ZX = 11\,cm$.

23. Evaluate : $\frac{15}{\sqrt{10} + \sqrt{20} + \sqrt{40} - \sqrt{5} - \sqrt{80}}$, when it is given that $\sqrt{5} = 2.236$ and $\sqrt{10} = 3.162$.

24. If $a^3 + b^3 + c^3 = 3abc$ and $a + b + c = 0$, prove that $\frac{(b+c)^2}{3bc} + \frac{(c+a)^2}{3ac} + \frac{(a+b)^2}{3ab} = 1$.

25. D is a point on side BC of ΔABC such that AD = AC (see figure). Show that AB > AD.

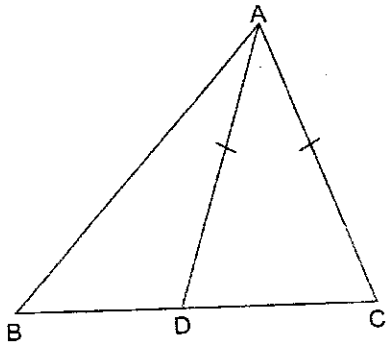

Fig. 4

26. In figure-5, ABCDE is a pentagon. A line through B parallel to AC meets DC produced at F. Show that (i) ar (ACB) = ar(ACF), (ii) ar (AEDF) = ar (ABCDE).

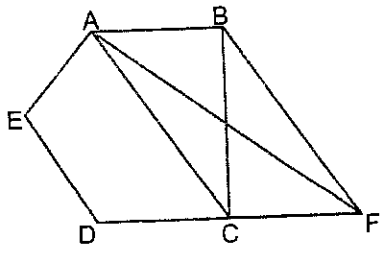

Fig. 5

OR

In figure-6, X and Y are the mid-points of AC and AB respectively, QP ||BC and CYQ and BXP are straight lines. Prove that ar ($\triangle ABP$) = ar ($\triangle ACQ$).

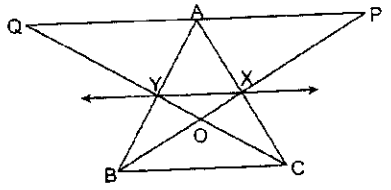

Fig. 6

27. l, m and n are three parallel lines intersected by transversals p and q such that l, m and n cut off equal intercepts AB and BC on p (see figure-7). Show that l, m and n cut off equal intercepts DE and EF on q also.

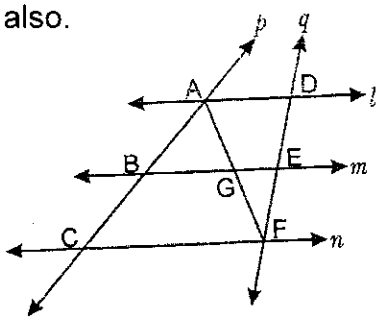

Fig. 7

28. Find the area of an isosceles triangle whose one side is 10 cm greater than its each equal side and its perimeter is 100 cm. (Take $\sqrt{5} = 2.236$)

29. The ratio of total surface area to the curved surface area of a right circular cylinder is 3 : 2. Find the volume, if its total surface area is 14784 cm^2.

OR

A cloth having an area of 165 m^2 is shaped into the form of a conical tent of radius 5 cm.

(i) How many students can sit in the tent if a student on an average, occupies $\frac{5}{7} m^2$ on the ground?

(ii) Find the volume of the cone.

30. A class consists of 50 students out of which 30 are girls. The mean marks scored by girls in a test is 73 (out of 100) and that of boys is 71. Determine the mean score of the whole class.

OR

Prepare a continuous grouped frequency distribution from the following data:

Mid-point	5	15	25	35	45
Frequency	4	8	13	12	6

Also find the size of class intervals.

SCIENCE

PHYSICS

1. Derive equation of motion using Graphical method.
2. What is conservation of momentum? Derive necessary condition for conservation of momentum.
3. What is conservation of energy? Prove conservation of energy for a freely falling body.
4. What is kinetic energy? Derive necessary formula to calculate K.E. What is potential energy? Derive necessary formula to calculate P.E.
5. What is Newton's Second Law of motion? Prove that Newton's first law is a special care of second law.
6. Establish relationship between g and G.
7. Prove that weight of object on surface of moon is 1/6 times weight of object on surface of earth.
8. Compare mass and weight Mass of an object on surface of moon is 10 kg. Calculate its mass and weight on earth.
9. What are different conditions of sink and float when an object with in a liquid of density.
10. What is an echo? Find minimum distance between source and obstacle for production of echo.

CHEMISTRY

1. Describe an activity to show that particles of matter have spaces between them.
2. Explain the following with reasons :
   (i) Although rubber is a solid still it is stretchable.
   (ii) Why sugar doesn't have a definite shape?
3. What is diffusion? How temperature affects the rate of diffusion?
4. Why during meeting or boiling there is no rise in temperature? Define latent heat of vapourisation. How much is it for water?
5. Which one gives more severe cool, Ice at 0°C or water at 273 K. And Why?
6. Explain the following.
   (a) Shopkeeps sprinkle water at the front of their shops in summer?
   (b) Why do we feel cook after perspiration and also prefer to sit under fan?
7. Convert the following
   (a) 373 K = ( )°F
   (b) -45°C = ( )°F
8. Give four major differences between mixture and compound with two examples from each.

9. Mention five major differences between colloid and suspension.
10. Name the type of colloid, their dispersing phase and dispersing medium in the following: smoke, shoe-polish, gum stone.
11. Distinguish between saturated solution, un-saturated solution and super saturated solution.
12. Determine the solubility and concentration of following solution. If there maximum 48 g of sugar can dissolve in 180 ml of water at 25°C.
13. How much $BaSO_4$ will precipitate out, if 23.5 g of Na_2SO_4 get dissolved in 31.2g of $BaCl_2$ to form 17.9g of NaCl?
14. Compute the molar mass, gram molecular mass and FUM of $Ca(HCO_3)_2$ and Na_2SO_4.
15. (i) Determine the no. of moles of SO_2 gas present in 4g of it's sample?
    (ii) How many molecules of O_2 are found in 1.6 g of oxygen?

BIOLOGY

1. Explain the role played by lichens, moss and trees in soil formation.
2. Two similar plastic trays filled with soil and manure are taken. In tray A mustard seeds are sown and watered for 4-5 days until they germinate into seedlings and the seedlings grow into small plants. Watering of the tray A is stopped for the next 2-3 days and the small plants are allowed to grow. Trays A and B are placed over a brick in a tilted position. Now both the trays are watered with equal amount of water using a water can. Now answer the questions given below :
   (a) Name the natural phenomenon indicated in Tray B.
   (b) Less of water flowing out is indicated in Tray A. Give reason.
   (c) Why is the top layer of the soil considered the most important layer?
3. What causes encephalitis? How does it enter the body? Which organ does it infect? What are the symptoms if this organ is infected?
4. (a) Explain the three basic features for grouping all organisms into five major kingdoms.
   (b) Euglena is a dual organism. Why?
5. (a) Why do we keep both snake and turtle in the same class?
   (b) Name the largest group of animals? Write the salient features of this group. Give two examples.
6. What crucial role does it play in the liver cells of vertebrates?
7. What is endocytosis?
8. What is meant by membrane biogenesis? Which cell organelle is concerned with membrane biogenesis?
9. Blood is considered to be a connective tissue. Give reason
10. The epidermis in desert plants is covered by waxy coating. Name the substance which constitutes the coating. State three advantages for this coating.

SST

ECONOMICS

1 Mark Questions: -

01. What do you mean by MSP?
02. How will you explain the term of unemployment?
03. What is poverty?
04. What are the factors of human poverty?
05. Mention one reason how India has become self-sufficient in food grains?
06. Name the state in which grain banks have been set up by the NGOs.
07. Define 'Buffer Stock'.
08. Give two examples of co-operatives.
09. Give the full form of ICDS.
10. Name two states which recorder significant increase in rice yield in 2012-13.

3 Mark Questions: -

01. Why is food security essential? How food security is affected during the disaster?
02. Give an account of inter-state disparities.
03. Describe the global poverty trends.
04. Explain the activities of ration shops.
05. What is the rationing system?
06. Mention the activities of the FCI
07. Differentiate between seasonal hunger and chronic hunger
08. Elucidate the targeted anti-poverty programmes undertaken by the government.

GEOGRAPHY

01. Name different types of Plate boundaries.
02. Name four divisions of Northern Plains.
03. Name the physical divisions of India.
04. Discuss Indus Water Treaty.
05. Define Natural Vegetation.

06. Name Two Bio-sphere Reserves of India.

07. Discuss the mechanism of Monsoons.

08. State the differences between Mountain forests and Tidal forests.

09. Discuss the important features of 'National Population policy 2000'.

10. On an outline of the Political Map of India, locate and label the following:

(a) Palk Strait (b) Andaman Sea

(c) Gulf of Kutchh (d) Nilgiri hills

(e) Khasi Hills (f) AnaiMoodi

(g) Thar Desert (h) Sunderbans

(i) A state having highest population density (2001 Census)

(j) Direction of winds of Arabian Sea branch and SW Monsoons.

HISTORY

01. Name the book written by Montesquieu and mention the proposal suggested by him?

02. Name the book written by Rousseau and mention the proposal suggested by him?

03. What do you mean by Marseilles?

04. What was Jacobian club and how did it get its name?

05. What was Duma?

06. Briefly explain the immediate cause for the abolition of Monarchy and declaration of France as a Republic.

07. According to the Europeans, the traditional system of cultivation called shifting cultivation was harmful. Give reasons.

08. In a map of Europe, locate the following places:

(1) During the Second World War in 1939, the country which Germany invaded.

(2) Any two important Axis powers of Europe.

(3) The important two Powers of Tripartite Pact and Second World War.

(4) Locate Germany, Spain, France, Italy, Poland, Austria, Belgium.

CIVICS

(1) Who was the head of ZANU-PF party?

(2) What do you mean by socialist?

(3) Define clause

(4) Who gave the slogan of "Protect the self respect of the Telugus".

(5) Why do you need a parliament?

(6) Explain the powers of the prime minister

(7) Describe the ethnic massacre in Kosovo.

(8) Write a short note on Right to Equality.

(9) What do you mean by right against exploitation? Explain

(10) What is a party ticket?

ODIA

୧. ଉପସର୍ଗ : ପ୍ରଥମ ୧୦ଟି ଉପସର୍ଗ ପଢ ଓ ଖାତାରେ ଲେଖ ।

୨. ପ୍ରଶ୍ନାବଳୀ : 'ଶକ୍ତି ଓ ଜ୍ଞାନ' (ପ୍ରବନ୍ଧ)

୩. ପ୍ରଶ୍ନାବଳୀ : 'ମାଟିର ମଣିଷ' (କବିତା)

୪. ରଚନା : (କ) ଛାତ୍ର ବିଶୃଙ୍ଖଳା

(ଖ) ବନ୍ୟଜନ୍ତୁ ସଂରକ୍ଷଣ

୫. ଦରଖାସ୍ତ : ବେତାର ଶିକ୍ଷାଦାନ ପ୍ରସାରଣ ସମ୍ବନ୍ଧରେ ଶିକ୍ଷକଙ୍କୁ ପତ୍ର ।

HINDI

१. दिए गए संकेत बिंदुओं के आधार पर निम्नलिखित में से किसी एक विषय पर ८० से १०० शब्दों में अनुच्छेद लिखिए —

(क) हड़तालों का देश के आर्थिक विकास पर प्रभाव –

- हड़तालों का कारण और प्रभाव
- हड़तालों के प्रकार और हानि
- उपाय

(ख) राष्ट्रीय विकास में मीडिया की भूमिका –

- मीडिया राष्ट्र का प्रमुख स्तंभ
- मीडिया और व्यावसायिकता
- राष्ट्र पर पड़ रहे कुप्रभाव का निराकरण

२. विदेश जाने वाले अपने मित्र को शुभकामना देते हुए पत्र लिखिए ।

३. समाज में बढ़ते भ्रष्टाचार व उसके दुष्परिणाम पर अध्यापिका व छात्र के बीच होने वाली बातचीत को अपने शब्दों में लिखिए ।

४. आपका छोटा भाई लापता है । उसको ढूँढ़ने हेतु अखवार में देने के लिए २० से २५ शब्दो में एक विज्ञापन तैयार कीजिए ।

५. उपसर्ग तथा प्रत्यय के दस-दस उदाहरण लिखिए ।

SANSKRIT

१. अपठित अनुच्छेदम् - पञ्च

२. चित्रलिखनम् - पञ्च

३. पत्रलिखनम् - पञ्च