

ଧରିତ୍ରୀ

DHARITRI



ଭୁବନେଶ୍ୱର, ରାଜିବାର, ଫେବୃଆରୀ ୧୦/୨୦୧୯ (୨୦ ପୃଷ୍ଠା)

Bhubaneswar, Sunday, February 10/ 2019 (୨୦ ପୃଷ୍ଠା)

★★★★★

୪୫ଶ ଭାଗ ୩୮ ସଂଖ୍ୟା

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PEETHA

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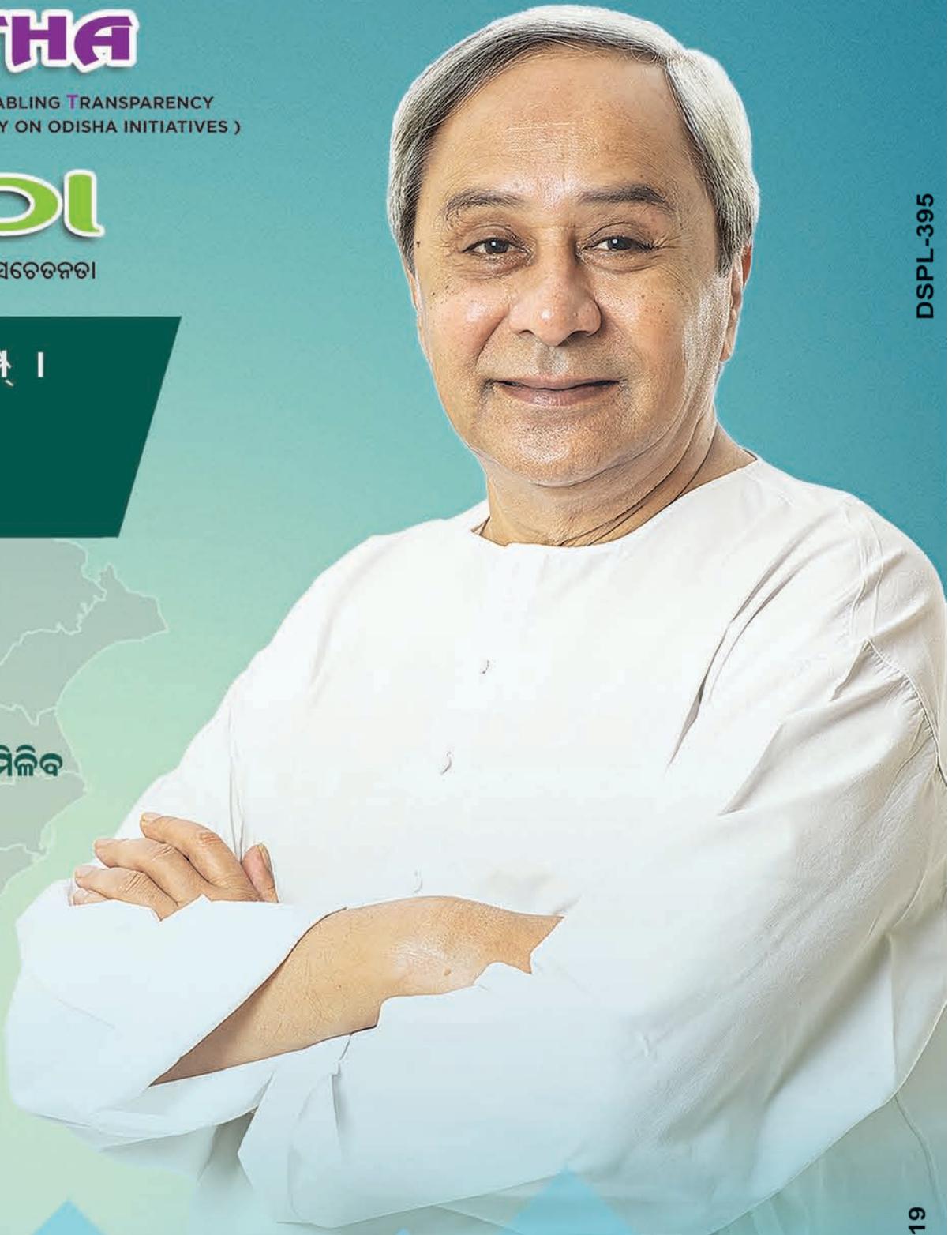
ପିଠା

ସମକ୍ଷିକରଣ ଏବଂ ସଚେତନତା

ଏଥର ୪ ଦିନ ପରିବର୍ତ୍ତେ ୧୦ ଦିନ ହେବାକୁ ପାଉଛି ପିଠା କ୍ୟାମ୍ ।
ଏଇ ଫେବୃଆରୀ ମାସ ୧୦ ରୁ ୨୦ ତାରିଖ ମଧ୍ୟରେ ଆପଣଙ୍କ
ଗ୍ରାମ ପଞ୍ଚାୟତରେ ଆୟୋଜିତ ହେବ ପିଠା କ୍ୟାମ୍ ।

- ୪ ଲକ୍ଷ ଦ୍ଵିତୀୟିକାରୀ ପାଇବେ ବର୍କ୍ଷତ ଭରା
- ୩୩ ଲକ୍ଷ ପରିବାରକୁ ମିଲିବ ରତ୍ନ ଲେଖାଏଁ ଏଲ୍. ର. ବି ବଳ୍ବର
- ସ୍ଵାତଂସିକ ପର୍ଯ୍ୟାୟରେ ୩ ଲକ୍ଷ ଏସ୍.୬୧.କି ଗ୍ରୁପ୍‌କୁ ସ୍ଵାର୍ଗଫୋର୍ କିଣିବା ପାଇଁ ମିଲିବ
୩ ହଜାର ଟଙ୍କା ଲେଖାଏଁ ଆଧିକ ସହାୟତା
- କାଳିଆ ପୋଜନା ବିଷୟରେ ଲୋକମାନଙ୍କୁ ଦିଆଯିବ ପମ୍ପଣ୍ଡ ସୁଚନା
- ଖାଦ୍ୟ ସୁରକ୍ଷା, ଖୁମି ଓ ଜନଜାତି ସମକ୍ଷିକରଣ ବିଷୟରେ
କରାଯିବ ସରେତନ

ଯୋଜନାରେ ସଜ୍ଜତା ଆଣିଲା ପିଠା
ଆହୁରି ସଶକ୍ତ ହେଲା ନବୀନ ଓଡ଼ିଶା



ପଞ୍ଚାୟତିରାଜ ଓ ପାନୀୟ ଜଳ ବିଭାଗ, ଓଡ଼ିଶା ସରକାର

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DSPL-395



Exam Mate



Mock Test Paper for Std X, XII CBSE Board, IIT - JEE Main & Advanced.

FOR ANSWERS VISIT : www.dharitri.com

MOCK TEST PAPER # 11

CLASS-X (MATHEMATICS)

Time Allowed : 3 hours

Maximum Marks: 80

GENERAL INSTRUCTIONS

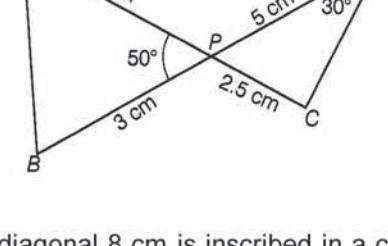
- All questions are compulsory. There are 30 questions in all.
- This question paper has four sections : Section A, Section B, Section C and Section D.
- Section A contains 6 questions of one mark each, Section B contains 6 questions of two marks each, Section C contains 10 questions of three marks each, Section D contains 8 questions of four marks each.
- There is no overall choice. However, an internal choice has been provided in four questions of three marks each and three questions of four marks each. You have to attempt only one of the choices in such questions.
- Use of calculators is not permitted.

SECTION-A

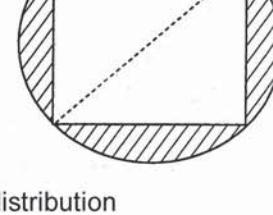
- Can two numbers have 18 as their HCF and 380 as their LCM ? Give reasons.
- If 7 times the 7th term of an AP is equal to 11 times the 11 terms, then find its 18th term.
- If $\sin\theta - \cos\theta = 0$, then find the value of $(\sin^4\theta + \cos^4\theta)$.
- Find the area of the square that can be inscribed in a circle of radius 8 cm.
- A girl calculates that the probability of her winning the first prize in a lottery is 0.08. If 6000 tickets are sold, then how many tickets has she bought ?
- Will the median class and modal class of grouped data always be different ? Justify your answer.

SECTION-B

- Prove that, if x and y are both odd positive integers, then $x^2 + y^2$ is even but not divisible by 4.
- Find the zeroes of the polynomial by factorisation $7y^2 - \frac{11}{3}y - \frac{2}{3}$
- Find the coordinates of the point R on the line segment joining the points P(-1, 3) and Q(2, 5) such that $PR = \frac{3}{5}PQ$
- In figure, two line segments AC and BD intersect each other at the point P such that PA = 6 cm, PB = 3 cm, PC = 2.5 cm, PD = 5 cm, $\angle APB = 50^\circ$ and $\angle CDP = 30^\circ$. Then find $\angle PBA$.



- In the figure, a square of diagonal 8 cm is inscribed in a circle. Find the area of the shaded region.



- Consider the following frequency distribution

| Class | 0-5 | 6-11 | 12-17 | 18-23 | 24-29 |
|-----------|-----|------|-------|-------|-------|
| Frequency | 13 | 10 | 15 | 8 | 11 |

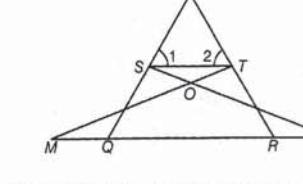
Find the upper limit of the median class.

SECTION-C

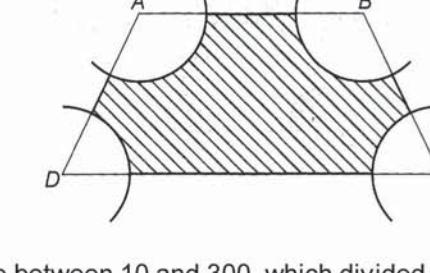
- If HCF of 210 and 55 is expressible in the form $210x + 55y$. Find y.
- In a competitive examination, 1 mark is awarded for each correct answer while 1/2 mark is deducted for every wrong answer. Jayanti answered 120 questions and got 90 marks. How many questions did she answer correctly ?

- Find the roots of the equation $4x^2 + 4bx - (a^2 - b^2) = 0$ by the method of completing the square.
- The sum of the first n terms of an AP whose first term is 8 and the common difference is 20 is equal to the sum of first 2n terms of another AP whose first term is -30 and the common difference is 8. Find n.

- In figure, if $\angle 1 = \angle 2$ and $\triangle NSQ \cong \triangle MTR$, then prove that $\triangle PTS \sim \triangle PRQ$



- Draw a circle of radius 4cm. Construct a pair of tangents to it, the angle between which is 60° . Also justify the construction. Measure the distance between the centre of the circle and the point of intersection of tangents.
- If $a \sin\theta + b \cos\theta = c$, then prove that $a \cos\theta - b \sin\theta = \sqrt{a^2 + b^2 - c^2}$
- In figure, ABCD is a trapezium with $AB \parallel DC$. $AB = 18 \text{ cm}$, $DC = 32 \text{ cm}$ and distance between AB and DC = 14 cm. If arcs of equal radii 7 cm with centres A, B, C and D have been drawn, then find the area of the shaded region of the figure.



- How many numbers lie between 10 and 300, which divided by 4 leave a remainder 3 ?
- A die has its six faces marked 0, 1, 1, 1, 6, 6. Two such dice are thrown together and the total score is recorded.
 - How many different scores are possible ?
 - What is the probability of getting a total of 7 ?

SECTION-D

- The sum of the first five terms of an AP and the sum of the first, seven terms of the same AP is 167. If the sum of the first ten terms of this AP is 235, find the sum of its first twenty terms.
- A railway half ticket cost half the full fare but the reservation charges are the same on a half ticket as on a full ticket. One reserved first class ticket from the stations A to B costs Rs.2530. Also, one reserved first class ticket and one reserved first class half ticket from stations A to B costs Rs. 3810. Find the full first class fare from stations A to B and also the reservation charges for a ticket.
- If (-4, 3) and (4, 3) are two vertices of an equilateral triangle, then find the coordinates of the third vertex, given that the origin lies in the interior of the triangle.
- In a right angle $\triangle ABC$ in which $\angle B = 90^\circ$, a circle is drawn with AB as diameter intersecting the hypotenuse AC at P. Prove that the tangent to the circle at P bisects BC.
- Prove that: $\frac{1 + \cos\theta - \sin\theta}{1 + \cos\theta + \sin\theta} = \frac{1 - \sin\theta}{\cos\theta}$
- A ladder against a vertical wall at an inclination α to the horizontal. Its foot is pulled away from the wall through a distance p, so that its upper end slides a distance q down the wall and then the ladder makes angle β to the horizontal. Show that $\frac{p}{q} = \frac{\cos\beta - \cos\alpha}{\sin\alpha - \sin\beta}$
- A milk container of height 16 cm is made of metal sheet in the form of a frustum of a cone with radii of its lower and upper ends as 8 cm and 20 cm, respectively. Find the cost of milk at the rate of Rs. 22 per L which the container can hold.
- Determine the mean of the following distribution

| Marks | Number of students |
|-----------|--------------------|
| Below 10 | 5 |
| Below 20 | 9 |
| Below 30 | 17 |
| Below 40 | 29 |
| Below 50 | 45 |
| Below 60 | 60 |
| Below 70 | 70 |
| Below 80 | 78 |
| Below 90 | 83 |
| Below 100 | 85 |

For Answers visit: www.dharitri.com

ADMISSION OPEN FOR (CRASH COURSE - ENGINEERING & MEDICAL)

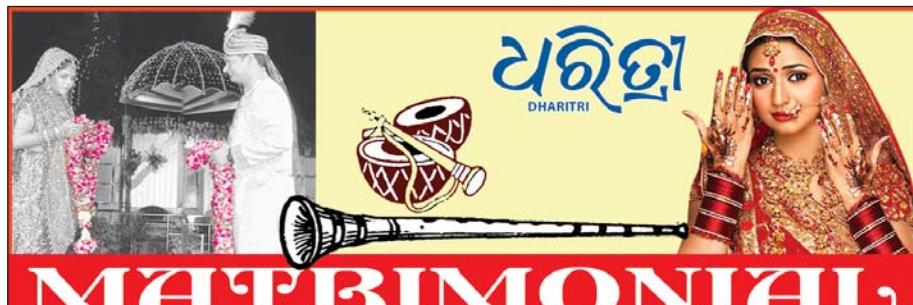


Preparation For:-IITJEE Main & Advanced, Medical (NEET / AIIMS), KVPY, Olympiad, NTSE & Board.

SCHOOL INTEGRATED PROGRAM (Xth Going to XIth Student), Ph. No. 0674 - 2421400, 2421800, 85990 87100 / 85990 87200

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Urgent bride requirement for Gudia groom qualification IT, Height- 5'7". Contact: 6370096605, 9778124128. D-10918

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Well settled Karan groom DOB- 04.09.89. B.tech in Mechanical engineering working as a Manager. Only son, from Kendrapada, contact: 8328831148. D-11053

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Groom wanted for Utkal Brahmin bride age 28+ height 5'6" Rasi- Mina, Debagana M.A in English BED. Sound health, groom be Teacher, Lecturer, Engineer or Govt. Service. Contact: 9732563395, 8250378568. D-10798

Groom wanted for Utkal Brahmin bride age 28+ height 5'6" Rasi- Mina, Debagana M.A in English BED. Sound health, groom be Teacher, Lecturer, Engineer or Govt. Service. Contact: 9732563395, 8250378568. D-10798

Widow bride Teacher 35, Clerk 42, Engineer 38 (caste-no-bar). 7873374269. D-65475

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ଭୁବନେଶ୍ୱର ଉତ୍ତରା / Krupajal ପାଖରେ ଘରବାଟି ପାରେଇ ମୁଣ୍ଡ ପଚାରୁ ବିକ୍ରିହେବ। 9178660666. D-65558

Plot on lowest budget Brahma nai hario, 9km. from BBSR 16km. from Cuttack 250/- sqft. 7809525452. D-65817

Farm Ikon 2003 NXT Diesel car with new AC Clutch pressure plate good running condition for sale. M: 891730377. D-11015

Chevrolet Travora top model 2008 white excellent condition. 299000/- 7377740724. D-65814

Hyundai Creta- 2016, Sx(0), Cruze- 2014, LTZ, Lancer Cedia Sports red, Skoda Octavia, Nissan Teanna, Land Rover. 7381091234, 9861194627. D-65330

2/3 BHK ready to move flats for sale at DHPL Pride, Ghatikia near DAV Kalinga Nagar, starting at Rs.32 lakhs. Contact: 9937059891, 9 3 4 8 2 5 3 4 6 3 , 8908292617. D-11034

ଭୁବନେଶ୍ୱର ଗମାଟୋ ନିକଟରେ electricity 30' ରୋଡ ଥାଏ ମୁଣ୍ଡ ପଚାରୁ 9776452737. D-65355

7 guntha gharabadi converted road side land at Bhatapada, Salepur, located adjacent to (Jagatpur-Kendrapada Highway) for immediate sale. Contact: 7829553888. D-10995

21000 Sqft. under construction Hostel at Kalarahanga, Total 52 rooms, 28 nos. drawing dining, G+2 building, Sufficient parking, Expected Bed 215 nos., Price- 6.5 Crore/ Negotiable Contact: 9439856856. D-11033

30 feet main road 30 feet sub road yellow zone plot near Vipul Garden & Tata Ariyan Khandagiri. 9437426733. D-10891

ଭୁବନେଶ୍ୱର KEC, କୁଡ଼ାଆପୋଖରୀ 01୬୭ 30' road ଥାଏଇ ଅଣ୍ଟିମ boundarywall electric, gharabari, Temple, ନାମପଳକ ସହ sqft. 650/-ରେ ବିଆୟାଇଥି 7008045582, 9078967488. D-11018

Readymade Ghari (prawn farm) Gadadharipur, Jagatsinghpur 7 acres land 15,00,000/-, 7809525452. D-65818

ଭୁବନେଶ୍ୱର କଟଣୀଗେର କିଛିଦୂରାରେ 1200 sqft. 1,80,000/-, BEC କଲେଜ ୦୧୬୭ 1200ରୁ 3,00,000/- (outright). 9938177361, 7749026703. D-65354

Flats available for sale at Pokhariput, Bhubaneswar. RERA, BDA & SBI approved. Call: 7381863666, 7381267666. D-65518

Patia KIIT ଜଳନାଥ ମନ୍ଦିର ନିକଟରେ ବାସୋପୋଣୀ ମୁଣ୍ଡ ପାରେଇ electricity 30' road, registration ସହିତ sqft. 1100/- 9937374868. D-65357

Book one 2BHK & 3BHK duplex at Bharatpur near Kalinga Studio Chhak. Cost 60 lakh to 85 lakh. 7978214375. D-64579

3 Bedroom vastu based new premium duplex (Group Housing) for immediate sale at Garage Chhak, Bhubaneswar. Contact Deepak: 9937329999. D-64578

NH-16 ପାଖରେ 30' ରୋଡ ଥାଏ ସଙ୍ଗେସଙ୍ଗେ ଘରକରି ରହିଥାଏଥାବା BDA yellowzone monthly instalment 10,000/- 7735738102. D-11016

Newly construction Triplex at Sreevihar, Chandrasekharpur (infront of Indian Oil Headoffice). 9437096921, 9938855111. D-64784

4000 sqft. SC land (Gharabari) BDA approved sft. height boundarywall at Patia. 9437096921, 9938855111. D-64785

Tamando ବକାର ପାଇସରେ ଘରବାରି ପାରେଇ ହୋଇ ରହିଥାବା plot ମିଳୁଅଛି। 9439864322. D-65351

3BHK ready to move premium duplex at DHPL Sahoo Residency near Mancheswar Railway Station. Contact: 9937059891, 9 3 4 8 2 5 3 4 6 3 , 8908292617. D-10956

ଭୁବନେଶ୍ୱର କଟଣୀଗେର (ବିଭାଗିତା-କଟକ) NH 100' bypass road sideରେ ଗ୍ରୋପୋଣୀ ପାଇସରେ 9437971401. D-64787

Following plots at Argul for sale. These plots are near to IIT Gate (within 1km.). 1. Plot no.- 41/787 and 40/786 are together 199 decimal with boundary wall, gates, watchman room.

Bhubaneswar AIIMS Hospital, MOBus stand ନିକଟରେ gharabari plot sale. 8480745797. D-65342

2BHK flat at KG Apartment Garage Chhak, Bhubaneswar. Buyer. 8328890345. D-65606

ଭୁବନେଶ୍ୱର Khordha NHରୁ 100' ଦୂରତାରେ BDA plot 400/-ରେ ମିଳୁଅଛି। 9090963952. D-65328

ଭୁବନେଶ୍ୱର Sum Hospital ନିକଟ କାଟେଶୀରେ yellowzone gharabari plot 550/- 9777553622. D-64777

Bhubaneswar ହୋପୋଳ ପାଖରେ ଘରବାରି ବାଉଣ୍ଡାରି plot କିମ୍ବି ସଙ୍ଗେସଙ୍ଗେ ଘରକୁ 9556403869, 9937355539. D-10830

ନିଖରା ଭୁବନେଶ୍ୱର 01୬୭ 3,60,000/- general plot 1200ରୁ 5,40,000/- (outright). 9938177361, 7749026703. D-65353



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GENERAL

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Gharabari plot with Bank loan facility near Gohiria Chhaka 2KM. from NH-5 first boundary then Registration electricity frontage 100ft. blacktop pichu road East/ North facing under BDA approval, 1100/- sqft. Negotiable. 9937120995. D-64786

4BHK Duplex at Kalarahanga near Patia Station at reasonable & affordable price. Ready to move 3BHK flat at Nayapalli Behera sahi nearer to NH-5 please contact: 8249222916, 9938792922. D-10956

ଭୁବନେଶ୍ୱର କଟଣୀଗେର (ବିଭାଗିତା-କଟକ) NH 100' bypass road sideରେ ଗ୍ରୋପୋଣୀ ପାଇସରେ 9437971401. D-64787

Following plots at Argul for sale. These plots are near to IIT Gate (within 1km.). 1. Plot no.- 41/787 and 40/786 are together 199 decimal with boundary wall, gates, watchman room.

Sapce for Nursing Home, Educational Institute, Bank, office, warehouse near Padmabati Market Sundarpada. 9437926044. D-10662

10,000 sqft. 1st, 2nd, 3rd floor for Lodge, Hotel, Bank, MNC, Mahal on Janpath, Ashok Nagr, close to Railway Station. 7656947172. D-65605

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1 Bhk flat for rent at Nirupamma Apartment near Kalinga Stadium, Nayapalli, Bhubaneswar. Rent 8000 contact: 7 0 0 8 7 3 0 8 6 0 , 7008856130, 9937292259, 9338010976. D-53640

Commercial Office space available at Esplanade Mall Rasulgarh, Bhubaneswar. 7978426155. D-65474

Book 4BHK duplex having land area 1500 sqft. and construction area 2000 sqft., back side of AMRI Hospital, Khandagiri, Bhubaneswar. Possession in June 2020. Price- 62.5 lakhs. 7504392698. D-65565

2 room house marble flooring toilet kitchen opposite Hotel Presidency Nayapalli. 9437305947. D-65358

2BHK fully furnished 1st floor at Satabdinagar Bhubaneswar for rent contact: 9438658196. D-63209

Single room with attached toilet at IRC Village for Ladies accommodation only: 9937560970. D-64580

3 room duplex near, Kalarahanga, Patia, Bhubaneswar. Rent-9000/- PM. 9938695933, 8851368162. D-65551

Commercial space 800 and 2500 sqft. for office/ godown. Contact: 9437033691. D-65608

Ground floor and First Floor available for any type of show room, banks, mall, offices etc. 7000sq ft in each floor. Basement parking available. Opp. Sadar Police Station, Jeypore. Contact Ph. 9437165309. D-10979

Space for Bank ATM and 3BHK house available for rent at prime location in Khurda Town. Contact: 9583009617. D-11027

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3BHK ground floor enough parking for office/ residence at VSS Nagar near Prabhujee School. 7978059473. D-10999

300 sqft. with showroom for shop near Reliance Fresh, Ruchika Market, Baramunda, Bhubaneswar. Contact: 8763246739. D-58040

3BHK flat Shibani Villa Badagada Canal Road. Rent. 15,000/- 7735738098. D-11017

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