

ଧରିତ୍ରୀ

DHARITRI

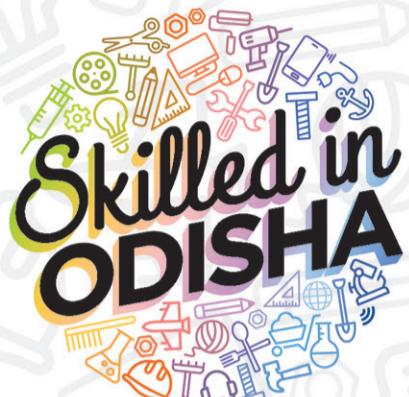
ସମ୍ବଲପୁର, ଶୁକ୍ରବାର, ଡିସେମ୍ବର ୨୮/୨୦୧୮ (୨୦ ପୃଷ୍ଠା) Sambalpur, Friday, December 28/ 2018

୧୫ଟି ଭାଗ ୧୩ ସଂଖ୍ୟା

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ମୂଲ୍ୟ ₹୪୫

| ★★



DSPL-314

ଆଜେଇ ହୋଇଛି ଦକ୍ଷ ଓଡ଼ିଆ ଓଡ଼ିଶାର ହେଲା ଜୟ ।

ଓଡ଼ିଶା ପାଇଛି ଦେଶରେ ଦ୍ୱିତୀୟ ସର୍ବାଧୂଳି ପଦକ ।

ରାଷ୍ଟ୍ରୀୟ ପ୍ରତିଯୋଗିତାରେ ଓଡ଼ିଶାର ୨୧ ଜଣ ପ୍ରତିଯୋଗୀ ଇଣ୍ଡିଆ ଡିଲ୍ସ ୨୦୧୮ ରେ ହାସଲ କରିଛନ୍ତି ୪ ସ୍ଵର୍ଣ୍ଣ, ୯ ବ୍ରୋଞ୍ଜ ପଦକ ଆଉ ୨ ମେଡାଲିଅନ୍ତର୍ଭାବରେ ଅନୁଷ୍ଠାନିକ ପଦକ । ବିଜେତାମାନେ ରୁଷିଆର କାଜାନ୍ ଠାରେ ୨୦୧୯ ରେ ଅନୁଷ୍ଠାନିକ ହେବାକୁ ଥିବା କୌଶଳ ବିକାଶ ଦୁନିଆର ଅଳିମ୍ପିକ "ଖାଲିର୍ଡ ଡିଲ୍ସ" ରେ ଭାରତର ପ୍ରତିନିଧିତ୍ୱ କରିବା ପାଇଁ ପ୍ରତିଦ୍ୱାନ୍ତିକ ପଦକ ପାଇଁ ପ୍ରତିଦ୍ୱାନ୍ତିକ ପଦକ କରିବେ ।

ଏହିମାନଙ୍କ ମଧ୍ୟରୁ ଦୁଇଜଣ ଚମିଅନ୍ ଖାଲିର୍ଡ ଡିଲ୍ସ ୨୦୧୯ ର ପ୍ରାରମ୍ଭିକ ପର୍ଯ୍ୟାୟରେ ରୁଷିଆ ଠାରେ ଅନୁଷ୍ଠାନିକ ଖାଲିର୍ଡ ଡିଲ୍ସ ହାଇଚେକ ୨୦୧୮ ପ୍ରତିଯୋଗିତାରେ ଅଶ୍ଵ ଗ୍ରହଣ କରି ବ୍ରୋଞ୍ଜ ପଦକ ବିଜୟୀ ହୋଇଛନ୍ତି ।

ଉଲ୍ଲେଖନୀୟ କୁଶଳତା ନିମନ୍ତେ, ସେମାନଙ୍କୁ ଅଭିନନ୍ଦିତ କରିବେ ଆମର ମାନ୍ୟବର ମୁଖ୍ୟମନ୍ତ୍ରୀ, ଶ୍ରୀ ନବୀନ ପଞ୍ଜନାୟକ ।

ଏହି ଅବସରରେ, ମାନ୍ୟବର ମୁଖ୍ୟମନ୍ତ୍ରୀ, ସରକାରୀ ପଲିଟେକ୍ନିକ୍‌ରେ ସଦ୍ୟ ନିମ୍ନୁଳ୍କ ପାଇଥିବା ୧୧୭ ଜଣ ଅଧ୍ୟାପକଙ୍କୁ ସାଗତ ଜଣାଇବେ ।

ଦିନାଙ୍କ : ୨୮ ଡିସେମ୍ବର ୨୦୧୮ /ସମୟ : ଅପରାହ୍ନ ୫.୩୦

ସ୍ଥାନ : ଜୟଦେବ ଭବନ, ଭୁବନେଶ୍ୱର

ଆସନ୍ତୁ ଓଡ଼ିଶାର ବିଜେତାମାନଙ୍କ ଶୁଭ ମନାସି, ସଫଳତାର ଉତ୍ସବ ପାଇବା ।



14028/13/0010/1819



ଜନ୍ମଦିନର ଶୁଭେଳା

ନାମ:
ବୟବସା:
ଜନ୍ମ ତାରିଖ:



ଆଶୀ ପରିବାର
ଦେବି ପରିବାର
କାନ୍ତି ପରିବାର

ସର୍ବତାଳୀ: ଏହି ଶୁଭନ ବ୍ୟବହାର କରି ସ୍ଵର୍ଗମ୍ଭାବରେ ଜୀବନରେ ଶୁଭକାରୀ ପରମାପ୍ରାପ୍ତ ହେବାର କୁନ୍ତଳି ପ୍ରାଣର ଜୀବନର ଦିନ ପୂର୍ବତ୍ତୁ ଜୀବନରେ ଶୁଭକାରୀ ହେବାର ପରମାପ୍ରାପ୍ତ ହେବାର କାରଣରେ କରିବାର ଆବଶ୍ୟକ।

1st Birthday Wish



Saiswastik Patra
Sonepur

ମହାପ୍ରଭୁ ଶ୍ରୀଜଗନ୍ଧା ତୋର ଚଲାପଥ
କୁମୁଦିତ କରନ୍ତୁ। ଶୁଭେଳା ସବୁ: ବାପା,
ମାମା, ଦାଦା, ଖୁବୀ, ଅଭି, ଆକା, ବନ୍ଦୁ
ଓ ପରିବାରରେ।

ଧ-୧୦୭୯୩



(ଶାମ)

ତିରାଗ ମହାପାତ୍ର

କୁନ୍ତଳ ଅବସରପାତ୍ର ପ୍ରଭୁ ଶ୍ରୀଜଗନ୍ଧା
କୁମୁଦିତ କରନ୍ତୁ ଏବଂ
ଶୁଭେଳା ସବୁ:

କେବେବ୍ୟା, କେବେବ୍ୟା, ଦାଦା,
ଖୁବୀ, ଭାଇ, ଉତ୍ତରୀ।

ଧ-୧୦୭୯୩

ରାଯି ବିବୋଧରେ (ପ୍ରଥମ ସୁର୍ବୀରୁ...)

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କୁମୁଦାଶ ହାଲକେଟ୍ କରିବାରୁ

ପରିବାର କରିବାରୁ ଏବଂ

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ଧ-୧୦୭୯୩

ରାଯି ବିବୋଧରେ (ପ୍ରଥମ ସୁର୍ବ



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

FOR ANSWERS VISIT : www.dharitri.com

MOCK TEST PAPER # 4

CLASS-X (SCIENCE)

Time Allowed : 3 hours**Maximum Marks: 80****GENERAL INSTRUCTIONS**

- The question paper comprises two sections, A and B. You are to attempt both the section.**
- All questions are compulsory. However, an internal choice will be provided in two questions of 3 marks each and one question of 5 marks.**
- Question numbers 1 to 2 in Section A are one-mark questions. These are to be answered in one word or in one sentence.**
- Question numbers 3 to 5 in Section A are two marks questions. These are to be answered in about 30 words each.**
- Question numbers 6 to 15 in Section A are three marks questions. These are to be answered in about 50 words each.**
- Questions number 16 to 21 in Section A are five marks questions. These are to be answered in about 70 words**
- Question numbers 22 to 27 in Section B are two marks questions based on practical skills. These are to be answered in brief.**

SECTION-A

- Why does carbon become stable after sharing four electrons ? What type of bond is formed by sharing of electrons ?
- Name any two non-renewable resources.
- An element X is placed in the 3rd period and 2nd group of the Modern Periodic Table.
 - Write electronic configuration of the element X.
 - Write the balanced equation of the reaction when this element burns in the presence of air.
- When iron rod is kept dipped in copper sulphate solution for sometime, a brown coating is formed on the iron rod. What change will be observed in the colour of the solution ? Also write the reactions involved.
- State the expression for lateral magnification of a concave in terms of object distance and image distance.
- Write the chemical formula of each of the following.
 - Plaster of Paris
 - Gypsum
- How can plaster of Paris be converted into gypsum ?
- List any one use of plaster of Paris.
- Write chemical equations for the reaction of ethanoic acid with
 - sodium
 - potassium
 - soda lime

OR

- A compound X has molecular formula, C_3H_6 . One mole of X reacts with one mole of bromine to yield a compound Y. Deduce the structures of X and Y.
- What prevents the entry of food into trachea while swallowing ?
 - Why rate of breathing is faster in aquatic animals as compared to terrestrial animals ?
 - Why does menstruation occur ?
 - Why some plants are propagated only by vegetative methods ?

OR

- How is the sex of the offspring determined in the zygote ? Explain.
- What is fission ? What are the different types of fission ? Explain them with the help of diagrams.
 - When does an electric short-circuit occur ?
 - If electrical energy costs ₹ 3 per unit, what is the total cost of leaving 4 light bulb, rated at 100W each, switched on for 8 hours ?
 - Draw the pattern of magnetic field lines of a current carrying solenoid. What does the pattern of field lines inside the solenoid indicate ? Write one application of magnetic field of current carrying solenoid.
 - Explain why:
 - It is difficult to burn a piece of wood fresh from a tree.
 - Pouring dry sand over the fire extinguishes it.
 - It is difficult to use hydrogen as a source of energy.
 - Charcoal is considered a better fuel than wood.

15. Nitin went to Goa on a holiday recently with his family. There were lots of tourists in the beach. The beach was very dirty with plastic, paper, waste food, mineral water bottle, etc. through here and there. Nitin thought that something should be done to save the beach

- What values are shown by Nitin ?
- What can Nitin do to save the beach from becoming a dumping ground ?
- How can government help in keeping the beach clean ?

16. (a) State the chemical properties on which the following uses of baking soda are based:
- as an antacid
 - as a soda-acid fire extinguisher
 - to make bread or cake soft and spongy.

- (b) How washing soda is obtained from baking soda ? Write balanced chemical equation.

17. The elements of the third period of the periodic table are given below.

Group→	1	2	13	14	15	16	17
Period (3)→	Na	Mg	Al	Si	P	S	Cl

- Which atom is bigger, Na or Mg ? Why ?
- Identify the most (i) metallic and (ii) non-metallic element in Period 3.
- Which is more non-metallic, S or Cl ?
- Which has higher atomic mass, Al or Cl ?

Give reasons for your choice.

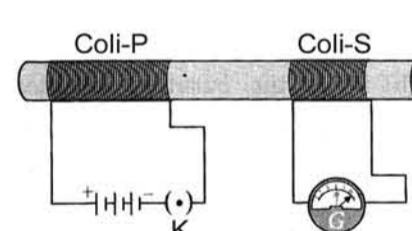
18. (a) State the relation between object distance, image distance and focal length of a spherical mirror.
- (b) A concave mirror of focal length 15 cm form an image of an object kept at a distance of 10 cm from the mirror. Find the position, nature and size of the image formed by it.
- (c) Draw a ray diagram to show the image formed by a concave mirror when an object is placed between pole and focus of the mirror.

OR

- What do you mean by linear magnification produced by mirrors ? The power of a lens is +2.5 D. What kind of lens is it and what is its focal length ?

Draw a ray diagram of an image when an object is placed on the principal axis of a convex lens between focus and optical centre.

19. (a) Define electromagnetic induction.
- (b) Two coils P and S are wound over the same iron core. Coil P is connected to battery and key and the coil S is connected to galvanometer. Write your observations when:



- Current in the coil P is started by closing the key.
- Current continues to flow in coil P.
- Current in coil P is stopped by removing the key.

Explain the reason for such observation.

20. (a) Draw a diagram of human 'alimentary canal' and label oesophagus, liver, gall bladder and duodenum on this diagram.
- (b) What is the function of liver in the human body ?

21. (a) Explain human male reproductive system with the help of a diagram.
- (b) 'Regeneration cannot be regarded as reproduction'. Why ?

SECTION-B

22. A solution 'X' gives orange colour when a drop of universal indicator is added to it. On the other hand, another solution 'Y' gives bluish-green colour when a drop of universal indicator is added to it.

What are the types of solutions 'X' and 'Y' and what type of pH would they have ?

23. What would you observe when you put some aluminium pieces in copper sulphate solution ?
24. Four students connect 4 cells of 1.5 V each to get a battery of voltage 6 V. Draw all possible arrangement of cells.

25. When light from free space bends towards normal, on hitting a surface, then what should be its refractive index (μ) ? Is it $\mu > 1$, $\mu < 1$ or $\mu = \frac{1}{2}$? [Justify your answer]

26. List the various steps of observing a slide under the microscope.

27. Differentiate between binary fission and multiple fission.

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