

ଆଜେଇ ହୋଇଛି ଦକ୍ଷ ଓଡ଼ିଆ ଓଡ଼ିଶାର ହେଲା ଜୟ ।

ଓଡ଼ିଶା ପାଇଛି ଦେଶରେ ବ୍ରିଟୀଯ ସର୍ବାଧିକ ପଦକ ।

ରାଷ୍ଟ୍ରୀୟ ପ୍ରତିଯୋଗିତାରେ ଓଡ଼ିଶାର ୨୧ ଜଣ ପ୍ରତିଯୋଗୀ ଜଣିଆ
ଫିଲ୍ସ ୨୦୧୮ ରେ ହାସଲ କରିଛନ୍ତି ୪ ସ୍ଵର୍ଣ୍ଣ, ୯ ରୌପ୍ୟ, ୨ ବ୍ରୋଞ୍ଜ ପଦକ
ଆଉ ୨ ମେତାଲିଅନ୍ସ ଅପ୍ ଏକ୍ସଲ୍‌ଲେନ୍ସ । ବିଜେତାମାନେ ରୁଷିଆର କାଜାନ୍
୦୧ରେ ୨୦୧୯ ରେ ଅନୁଷ୍ଠାତ ହେବାକୁ ଥିବା କୌଶଳ ବିକାଶ ଦୁନିଆର ଅଳିମ୍ପିକ
“ଆଲର୍ଡ ଫିଲ୍ସ” ରେ ଭାରତର ପ୍ରତିନିଧିତ୍ୱ କରିବା ପାଇଁ ପ୍ରତିଦ୍ୱାନ୍ତିତା କରିବେ ।

ଏହିମାନଙ୍କ ମଧ୍ୟରୁ ଦୁଇଜଣ ଚାମିଅନ୍ ଆଲର୍ଡ ଫିଲ୍ସ ୨୦୧୯ ର ପ୍ରାରମ୍ଭିକ
ପର୍ଯ୍ୟାୟରେ ରୁଷିଆ ୦୧ରେ ଅନୁଷ୍ଠାତ ଆଲର୍ଡ ଫିଲ୍ସ ହାଇଚେକ୍ ୨୦୧୮
ପ୍ରତିଯୋଗିତାରେ ଅଶ ଗ୍ରହଣ କରି ବ୍ରୋଞ୍ଜ ପଦକ ବିଜୟୀ ହୋଇଛନ୍ତି ।

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

ଏହି ଅବସରରେ, ମାନ୍ୟବର ମୁଖ୍ୟମନ୍ତ୍ରୀ, ସରକାରୀ ପଲିଟେକ୍ନିକ୍‌ରେ ସଦ୍ୟ
ନିଯୁକ୍ତ ପାଇଥିବା ୨୧ ଜଣ ଅଧ୍ୟାପକଙ୍କୁ ସାଗତ ଜଣାଇବେ ।

ଦିନାଙ୍କ : ୨୮ ଡିସେମ୍ବର ୨୦୧୮ /ସମୟ : ଅପରାହ୍ନ ୫.୩୦

ସ୍ଥାନ : ଜୟଦେବ ଭବନ, ଭୁବନେଶ୍ୱର

ଆସନ୍ତୁ ଓଡ଼ିଶାର ବିଜେତାମାନଙ୍କ ଶୁଭ ମନୀଷ, ସଫଳତାର ଉତ୍ସବ ପାଇବା ।





Exam Mate



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 ?
 - (a) Why does menstruation occur ?
 - (b) 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.

- 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 ?

- (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.

- 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

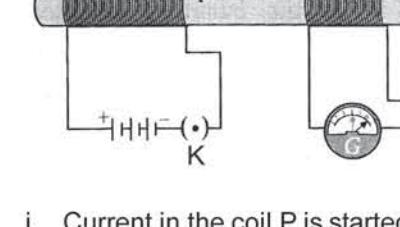
- (a) Which atom is bigger, Na or Mg ? Why ?
 - (b) Identify the most (i) metallic and (ii) non-metallic element in Period 3.
 - (c) Which is more non-metallic, S or Cl ?
 - (d) Which has higher atomic mass, Al or Cl ?
- Give reasons for your choice.
- (a) State the relation between object distance, 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.

- (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.

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

SECTION-B

- 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 ?
- What would you observe when you put some aluminium pieces in copper sulphate solution ?
- Four students connect 4 cells of 1.5 V each to get a battery of voltage 6 V. Draw all possible arrangement of cells.
- 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]
- List the various steps of observing a slide under the microscope.
- Differentiate between binary fission and multiple fission.

For Answers visit: www.dharitri.com

ବାହାଘରର ୫ମାସ ପରେ ହାତ ଛାଡ଼ିଲେ ସ୍ଥାମୀ

ନ୍ୟାୟ ପାଇଁ ଥାନାର ପ୍ରାରମ୍ଭ ହେଲେ ସ୍ତ୍ରୀ

କଞ୍ଚାରପୁର, ୭୩୧୯ (ଓ.ଏ.ଏ.)

ବିଜ୍ଞାବପୂର କ୍ଲିନିକ ଟିଶୀ ପଞ୍ଜାବ ଅଞ୍ଚଳର କେନ୍ଦ୍ରିକା ଦିଲିତ ମହିଳାଙ୍କ ତାଙ୍କ ସ୍ଥାମୀ ପ୍ରତାରିତ କରିଥିବା ନେଇ ରୁକ୍ଷବାର ଥାନାରେ ଅଭିଯୋଗ ହେଲାଛି। ଅଭିଯୋଗକୁ ଭିତ୍ତି କରି ପୋଲିସ ଅଭିଯୋଗକଣଙ୍କରେ ଶାଶ୍ଵତ ଘର ଲୋକଙ୍କୁ ପରେ ଉଚ୍ଚତା କରୁଥିବା ଜଣାପଡ଼ିଛି।

ଅଭିଯୋଗ ପ୍ରତାରିତ, ସମ୍ପୂର୍ଣ୍ଣ ମହିଳା ଓ ସ୍ଥାମୀ ପଦ୍ଧତିରେ ପଞ୍ଜାବ ମହିଳାଙ୍କ ଗ୍ରାମର ରାଜେଶ ଦାସଙ୍କ ଦ୍ୱାରା ରାଜୀବ (୨୨) ଜାରି ମଧ୍ୟରେ ୨ ବର୍ଷ ତରୁ ପ୍ରେମ ସମ୍ପର୍କ ଗଢ଼ି ହିଥିଥିଲା। ପ୍ରାଥମିକ ଘର ଉଚ୍ଚତା କରି ହୋଇ ନଥିଲେ । ତେବେ ବାହାଘରର ପାଇଁ ପର୍କିନ ନୋଟାରାରେ ନାମ ପଞ୍ଜାବକୁ କରିବା ପରେ ଉତ୍ତରେ ଘର ଅପର୍କ୍ସରେ ଘର ଛାଡ଼ି ଦିଲୀ ପଳାଇଥିଲେ । ସେଠାରେ ରାଜାବ ଏକ କପଡ଼ା କାଖାନାରେ କାମ କରୁଥିବା ବେଳେ ସେମାନେ ଘର ଭଢ଼ା ନେଇ ସ୍ଥାମୀଙ୍କ ଭାବେ ରହୁଥିଲେ । କିମ୍ବିଦିନ ପରେ ରାଜାବ ଦିଲାରେ ରୁକ୍ଷବାର ଖବରପାଇ ପରିବାର ଲୋକେ ତାଙ୍କ ସହ ଫୋନରେ ଯୋଗାଯୋଗ କରିଥିଲେ । ଏଥୁବେ ବୋଲୁଛୁ ନେଇ ଘରକୁ ଆସିବାକୁ କରିଥିଲେ । ତେବେ ରୁକ୍ଷବାର ସନ୍ଧାରେ ସେମାନେ କପାଏ ଛାଡ଼ିବା ପରେ ତାଙ୍କ ଛାଡ଼ିଦେବ ରାଜାବ ତାଙ୍କ ପରିବାର ଲୋକଙ୍କ ସହ ସେଠାରୁ ପଳାଇଥିଲେ ବୋଲି ସଫ୍ରାନ୍ସ ମହିଳା ଅଭିଯୋଗ ପଡ଼ିବେ ଉତ୍ତରେ ଉତ୍ତରେ କରିଛି । ଏ ନେଇ ସମ୍ପୂର୍ଣ୍ଣ ମହିଳା ଥାନାରେ ଅଭିଯୋଗ କରିବା ପରେ ପୋଲିସ ରାଜୀବଙ୍କ ପରିବାର ଲୋକଙ୍କୁ ଏ ସମ୍ପର୍କରେ ପରିବାର ଉଚ୍ଚତା କରୁଥିବା ଥାନାଧିକାରୀ ସୁତ୍ତିତ୍ତିବିର୍କ୍ୟ ଦାସ କରିଛି ।

ପ୍ରକ୍ରିଯାରେ ଝୋଡ଼ୁଅଣ ମହିଳାଙ୍କ ମୃଦୁୟ

କଞ୍ଚାରପୁର, ୭୩୧୯ (ଓ.ଏ.ଏ.)

କଞ୍ଚାରପୁର-କଟକ ଜିଲ୍ଲା, ଜାତୀୟ ରାଜ୍ୟପଥ ବର୍ତ୍ତନା ଥାନା ଅଧୀନ ବନ୍ଦାଳେ ଅନୁପ୍ରଦ୍ୟ ଭାବା ସମ୍ମାନରେ ରୁକ୍ଷବାର ବିଳମ୍ବିତ ରାତିରେ ଏକ ତ୍ରିକ ଧଳାରେ ଜଳନ୍ତି ମହିଳାଙ୍କ ମୃଦୁୟ ଘଟିଛି । ସେ ହେଲେ ଖାତ୍ରମୁଣ୍ଡ ଦେଉସର ଅଞ୍ଚଳର ପ୍ରମିଳା ଦେବୀ (୪୮) । ସେ ଏକ ଘରୋର ବସରେ ଭୂମେସରୁ ରାତ୍ରି ପ୍ରମିଳା ଘରରେ ପାଖରେ ରଖୁଥିବା ବେଳେ ପ୍ରମିଳା ରାତ୍ରୀ ପାର ହେଉଥିଲେ । ଏହି ସମୟରେ ଦୁତଗତିରେ ଆସୁଥିବା ଏକ ତ୍ରିକ ତାଙ୍କ ଧାତ୍ରୀ କେବଳ ପଳାଇଥିଲା । ଘରଶାସ୍ତ୍ରରେ ପ୍ରମିଳାଙ୍କ ମୃଦୁୟ ଘଟିଥିଲା । ପୋଲିସ ଘରଶାସ୍ତ୍ରରେ ପହଞ୍ଚିବା ବର୍ଷା ଅନ୍ତରେ ରକ୍ଷଣା ସହ ମୃଦୁ ଦେହ କରିଥିଲା । ରୁକ୍ଷବାର ସବବ୍ଲେଟ ପରେ ପ୍ରମିଳାଙ୍କ ମୃଦୁୟ ଦେହକୁ ତାଙ୍କ ଭାଜିଙ୍କୁ ହସ୍ତାନ୍ତ୍ରର କରାଯାଇଛି ।



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