© 2009 **माध्यमिक शिक्षा मण्डल, मध्यप्रदेश, भोपाल** मु.उ.पु. 24 पृष्ठ

कार्यालयीन उपयोग के लिए

परीक्षा के नाम की सील: [illegible] परीक्षा

केन्द्र क्रमांक की सील: केन्द्र क्र. 461024

निम्न रिक्तियों की सही प्रविष्टि परीक्षार्थी द्वारा की जाए।

1. विषय कोड 200 परीक्षा का विषय Science

2. परीक्षा का माध्यम English परीक्षा की दिनांक 17-03-09

3. परीक्षार्थी प्रश्न पत्र का पूर्ण कोड नम्बर (सेट A, B, C, या D) अनिवार्यतः भरें — कोड T-1034 सेट A

स्टीकर तीर के निशान से मिलाकर लगायें

4. परीक्षार्थी का अनुक्रमांक (अंग्रेजी अंकों में) 4620076.

5. नीचे दिये गये कालम में ऊपर दिये गये अनुक्रमांक के अंकों को शब्दों में लिखा जाए :- six two zero zero seven six

पर्यवेक्षक/केन्द्राध्यक्ष का प्रमाणीकरण

प्रमाणित किया जाता है कि परीक्षार्थी द्वारा निम्नानुसार पूरक उत्तरपुस्तिका ली गई है :-

क :- संख्या शब्दों में one. अंकों में 1

ख :- परीक्षार्थी की बैठक व्यवस्था कक्ष क्रमांक 15 में है।

ग :- उत्तर पुस्तिका पर प्रश्न-पत्र का कोड नम्बर एवं सेट सही लिखा है।

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हस्ताक्षर (पर्यवेक्षक) ----------

नाम [illegible] पद [illegible]

पता/संस्था [illegible]

परीक्षार्थी द्वारा ली गई सभी पूरक उत्तर पुस्तिकायें, मुख्य उत्तर पुस्तिका के साथ संलग्न हैं।

हस्ताक्षर केन्द्राध्यक्ष

परीक्षार्थी, परीक्षक से अपेक्षा है कि वे पृष्ठ भाग पर दिये गये निर्देशों का यथेष्ट पालन सुनिश्चित करेंगे।

प्रमाणित किया जाता है कि उपरोक्तानुसार संलग्न पूरक उत्तर पुस्तिक चस्पा स्थिति में यथावत् रखते हुए ही उत्तरपुस्तिका का मूल्यांकन किय पुस्तिका के अन्दर के अंक एवं कव्हर पृष्ठ पर दर्शाये अंक एक समान है एवं योग पूर्णतः सही है।

हस्ताक्षर (परीक्षक) [illegible]

परीक्षक क्रमांक 9740/97

हस्ताक्षर (उपमुख्य परीक्षक)

दिनांक .....

हस्ताक्षर (मुख्य परीक्षक)

दिनांक 27/03/09

Smt. S. Sharma

5/4/09

परीक्षार्थी के लिए निर्देश

1. परीक्षार्थी को अपना अनुक्रमांक/विषय/माध्यम/दिनांक एवं प्रश्न–पत्र का कोड (समूह) मुख पृष्ठ पर अंकित करना अनिवार्य है। अन्यत्र कहीं भी नहीं लिखा जाएगा।
2. अनुक्रमांक नीचे दिये गए उदाहरण अनुसार लिखा जाए :–

1	8	2	4	3	9	5	6	8
एक	आठ	दो	चार	तीन	नौ	पाँच	छः	आठ

3. उत्तर पुस्तिका के दोनों ओर पृष्ठों में लिखें। बीच में रिक्त स्थान न छोड़ें। भूल से छूटा/रिक्त स्थान तथा शेष खाली पृष्ठों को क्रास किया जाए।
4. परीक्षार्थी प्रश्न पत्र हल करते समय ही, कव्हर पृष्ठ पर दी गई तालिका में प्रश्न क्रमांक के सम्मुख वाले कालम में उत्तरपुस्तिका का वह पृष्ठ क्रमांक अनिवार्य रूप से अंकित करें जिस पर प्रश्न का उत्तर लिखा गया है। यदि पूरक उत्तरपुस्तिका का उपयोग किया गया हो, तो उस पर 25 से प्रारंभ करते हुए पृष्ठ क्रमांक परीक्षार्थी द्वारा स्वयं डाले जाएँ।

परीक्षक के लिए निर्देश

1. केवल उन्हीं उत्तरपुस्तिकाओं का मूल्यांकन करें जिन पर होलो क्राफ्ट स्टीकर चस्पा है।
2. उत्तरपुस्तिका का मूल्यांकन होलो क्राफ्ट स्टीकर को चस्पा स्थिति में यथावत् रखते हुए ही किया जाये।
3. बिना होलो क्राफ्ट स्टीकर वाली तथा फटे हुए होलो क्राफ्ट स्टीकर वाली सभी उत्तरपुस्तिकाऐं मूल्यांकन हेतु परीक्षा नियंत्रक, माध्यमिक शिक्षा मण्डल, मध्यप्रदेश, भोपाल को व्यक्तिशः रूप से भेजी जाये।

मूल्यांकन केन्द्र के लिए निर्देश

1. **O.M.R. SHEET** पर प्राप्तांक की प्रविष्टि करने हेतु केवल वही उत्तरपुस्तिकाएँ प्राप्त करें, जिनका मूल्यांकन होलो क्राफ्ट स्टीकर को चस्पा स्थिति में यथावत् रखते हुए ही किया गया है। यदि होलो क्राफ्ट स्टीकर फटा हुआ पाया जाता है तो ऐसी उत्तरपुस्तिकाऐं मूल्यांकन केन्द्र अधिकारी को पृथक से सौपी जाएँ। ऐसे प्रकरणों के प्राप्तांकों की प्रविष्टि **O.M.R. SHEET** में नहीं की जाए। मूल्यांकन केन्द्र अधिकारी ऐसी उत्तरपुस्तिकाऐं पुनः मूल्यांकन के लिये परीक्षा नियंत्रक, माध्यमिक शिक्षा मण्डल, मध्यप्रदेश, भोपाल को व्यक्तिशः रूप से सौपेंगे।
2. उत्तरपुस्तिका के मुख्य पृष्ठ में अंकों एवं शब्दों में अंकित प्राप्तांकों को मिलान कर **O.M.R. SHEET** में अंकों की सटीक प्रविष्टि करें।
3. **O.M.R. SHEET** पर प्रमाणीकरण कर हस्ताक्षर करें।

योग पूर्व पृष्ठ

Section-A

Q 1.

(a) Fill in the blanks:

i) The radius of earth core is 3400 km.

ii) The gases were compressed and highly condensed is called protostar

iii) The first planet of jovian group is Jupiter

iv) Number of natural satellites of saturn is 8

v) Hydrogen and helium are in the nucleus of the sun.

पृष्ठ के अंकों का योग

योग

Q. 1

(B) Match the following pairs

i)	Nutrophil	Blood corpuscle
ii)	Liquid metal	Mercury
iii)	Fibriogen	Blood clotting
iv)	Liver	Formation of Urea
v)	Pituitary	Master gland.

Q. 2.

(A) Choose the correct alternative:

i) When incident ray travelling from rarer medium to denser medium it travels ___ its perpendicular.

Ans. toward

ii) The (S.I.) International unit of electric power is:

Ans. Watt

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iii) Pitcher plant is a type of:
Ans Insectivorous

iv) Metal which store in kerosene is
Ans Sodium

v) Respiration is:
Ans Oxidation

Q:2.
(B) Write the answer in one word:

Ans i) One example of slow chemical reaction is rusting of iron

ii) The pH value of pure water is 7

Ans iii) Name the colour band series of spectrum through prism.
Ans The colour band series is:

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Violet
Indigo
Blue
Green
Yellow
Orange
Red.

Ans V) The difference between any two electric potential is called potential difference

Section-'B'

Q 3. Write the factors effecting the rate of chemical reaction

Ans. The rate of chemical reaction is defined as the concentration of reactant and products per unit time. The factors effecting the rate of chemical reaction are;

1. Concentration of reactants
2. Temprature
3. Pressure
4. Catalyst.

1. **Concentration of reactants**

Rate of reaction increases depends on the concentration of reactants

2. **Temperature.**

Rate of reaction increases with increase in temperature. On increasing temperature kinetic energy increases and more and more reactants react to form products.

3. **Pressure**

Rate of reaction increases with increasing pressure (when all the reactants are in gaseous form)

4. **Catalyst**

Positive catalyst increases the rate of reaction while negative catalyst decr-

eases the rate of reaction.

Q.4 Describe 'Photosyntesis' with equation.=

Ans **Photosyntesis**

The process by which plants prepare their food in the presence of carbondioxide, water, sunlight and chlorophyll is called photosynthesis. Photosynthesis is a metabolic process. In this process carbon-di-oxide and water combine together in the presence of sunlight and chlorophyll and carbohydrate and oxygen are released as a co-product.

In photosynthesis process -

$$6CO_2 + 12H_2O \longrightarrow C_6H_{12}O_6 + 6O_2 + 6H_2O$$

Photosynthesis is a-.

i) Metabollic process.

ii) It takes place oxidation of O_2

iii) It takes place reduction of CO_2

Q.5 Write the difference between Artery and vein.

Ans.

Artery	Vein
1. The walls of artery is thick and Elastic.	1. The walls of vein is thin and colapssable.
2. Lumen of artery is narrow	2. Lumen of vein as wide.
3. Due to the carry of oxygenated blood their colours has become red.	3. Due to the carry of deoxygenated blood their colour has became blue.
4. Valves are absent in artery	4. Valves are present in vein.
5. No change in	5. There is change

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पृष्ठ के अंकों का योग

the volume of artery.	in the volume of vein.
6. Blood flow intermittently with much pressure in artery.	6. Blood flows slowly and with a uniform spud in veins

Q6. What are hydrocarbons? Write the name and formula of any four hydrocarbons.

Ans. The compounds which contains hydrogen and carbon are called hydrocarbons. In other words compounds of hydrogen and carbon are called hydrocarbons.

Examples of hydrocarbons are :-

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पृष्ठ के अंकों का योग

Name	Formula.
methane	CH_4
Ethane	C_2H_6
Propane	C_3H_8
Butane	C_4H_{10}.

Q7. What do you mean by Polymers? Write any three polymers and their chemical formulae.

Ans ~~Polymers are the long chain of molecules is made for from the~~

Polymers are the long chain consisting of small units called monomers. The moironers unite together to form the polymers

Examples of polymers

1) Polythene is a polymer obtained by the monomer ethene. The chemical formula is $(-CH_2-CH_2)_n$. It is formed by follow-

ng reactions

$$n(CH_2 = CH_2) \xrightarrow[1000 - 2000\ Atp.]{400 - 500\ ^\circ C.} (-CH_2 - CH_2)_n$$

ii). Poly venyl chloride is the polymer of venyl chlorite. It is generally known as P.V.C.

iii) Teflon is the another example of polymers.

Q8 Explain the 'Green House Effect'.

Ans A house made of grass for growing delicate plants is known as green house The temperature inside the green house is warmer than outside temperature. The happening of such effect is called as green House effect

Methane, CFC, Nitrogen oxide and car-

ton-dioxide are the main green house gases. This gases accumulate in the atmosphere due to excessive consumption of forest, deforestation etc. This gases accumulate in the atmosphere and forms a layer of gases. This layer works like woolen blanket. It is transperant and so it allows the light to pass through it. When the low density waves reaches the green house, it become high density waves and green house does not allow it to pass out side. The temperature in green house shoots up. This is called green house effect.

Q 9. What do you mean by medicinal plants? Write any four seasonal plants and

their medicinal importance.

Ans. The plants which provides medicines are called as medicinal plants.

Four seasonal plants are:-

1. Tulsi / Basil.

Leaves of this plant are used for curing cough and cold and stomachache. It is used for curing paralysis and joint pain. It is also used for curing teeth and skin diseases.

2. Haldi

It is underground stem of rhizome used for making medicines. It is aromatic, stimulent and antiseptic in nature so, it is used to cure many diseases.

योग

3. Arandi (Castor)

It is used as fragrasive. Oil is used for massage of body.

4. Sauf

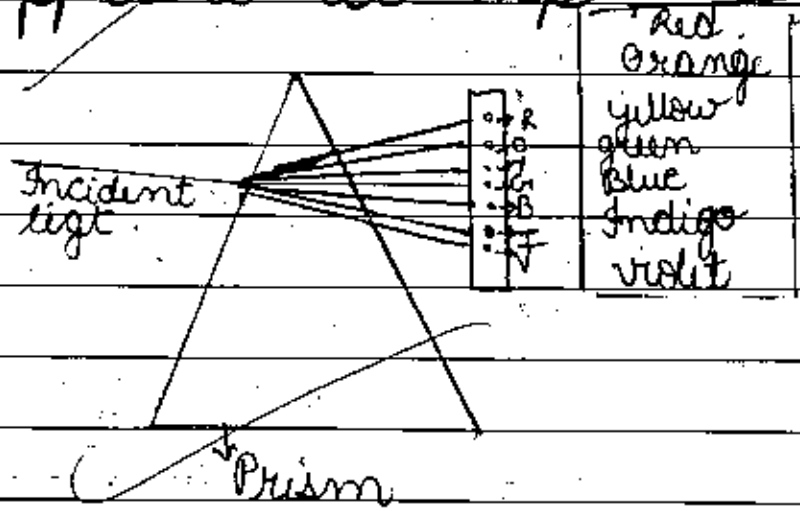
It is culmulative and stimulant. Boil water ars of sauf is used for curing stomach diseases and cough and cold.

Q10. What is spectrum? Explain the colours of spectrum obtained by prism

Ans The spliting of white light into seven colours is called ~~sp~~ dispersion. When a beam of white light passes through a glass prism, it splits into corresponding seven colours. This is called spectrum of light. The order of colours in spectrum is —

1. Violet
2. India
3. Blue
4. Green
5. Yellow
6. Orange
7. Red

In the spectrum of light violet colour experience maximum daivation so it appears at the bottom and red colour experiences minimum deviation so it appears at top



Spectrum of light

Q.11. Write characteristic features of an 'ideal fuel'.

Ans. A fuel is called to be ideal fuel because of some characters of its idealism. Following are the main characteristics features of an 'ideal fuel':

1. It should have proper ignition temperature.
2. It should have high calorific value.
3. The amount of non-combustible material should be very low.
4. No smoke or residue should be left after its combustion.
5. It should be burned in a controlled manner.
6. It should be easy to store and transport.
7. It should be easily available.

Q.12 What do you mean by chromosome? Explain with labelled diagram.

Ans. Chromosomes are the filamentous linkage carrying the linear sequence of genes in ~~which the combination is almost similar. Follow-~~ ing an ordered manner ~~which~~ they are responsible for their characteristic property of genes. Following are the main ~~comp~~ parts of a chromosomes;

1. Pellicle
2. Matrix
3. Chromatid
4. Chromomere
5. Centromere
6. Satellite.

Functions of chromosomes

1. Chromosomes are responsible for protein metabolism.
2. Chromosomes are the

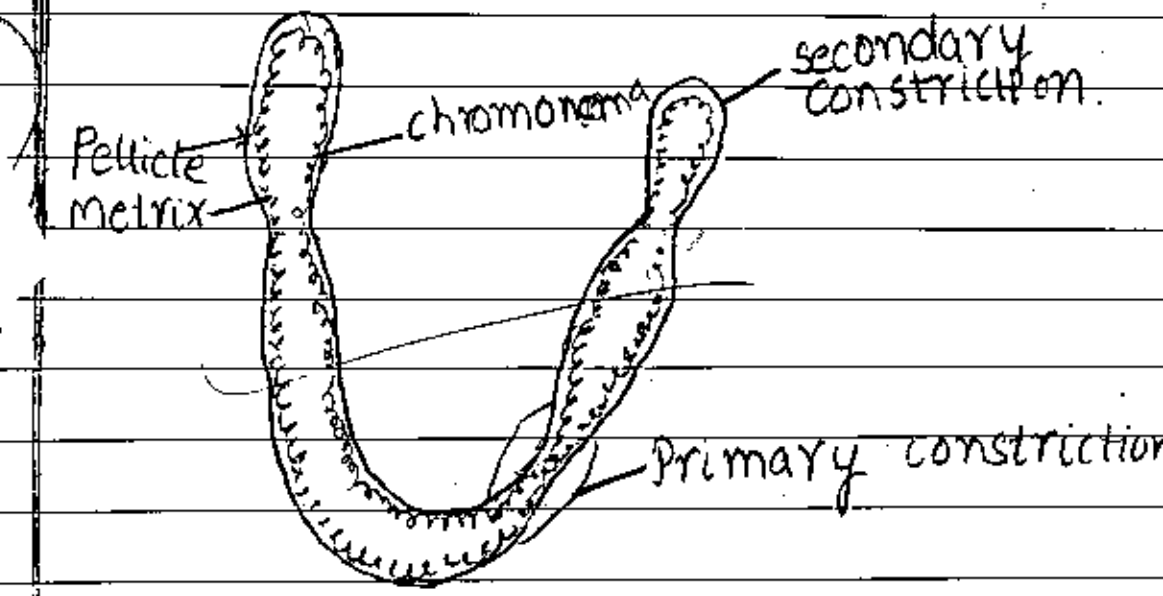
carriers of genes.

3 They are responsible for gene recombination and gene mutation

4 Some chromosomes like sex chromosomes determines the sex of an individual.

5. Chromosomes causes hereditary variation.

6 They are the carriers of hereditary materials



Chromosome

पृष्ठ के अंकों का योग

Q.13. What precautions will you have while using electricity?

Ans The electric currents which come to our home has a potential difference of 220V. If this electric current enters our body, it will cause shock.

Following precautions should be taken while using electricity.

1. All the electrical appliances in domestic circuit should be fitted with earth connections.
2. All the appliances like wire, sockets, holders, plugs etc. used in domestic circuit should be of quality, quantity standard.
3. The electrical appliances with like geyser, AC, cooler etc. should be tied with

पृष्ठ के अंकों का योग

wires, sockets carrying current of 15 A.

4. Do not touch electrical appliances with wet hands

There should be fuse in domestic circuit which

5. is High quality fuse should be used in domestic circuit

6. On working with appliances like electric mixer, electric iron etc rubber gloves must be put in hands and we should stand on a wooden board

7. Electricity should be used reasonably That is unnecessary waste of electricity should be avoided

8. Tie all the wires of electrical electricity with a insulating tap to avoid shock

9. High quality appliances

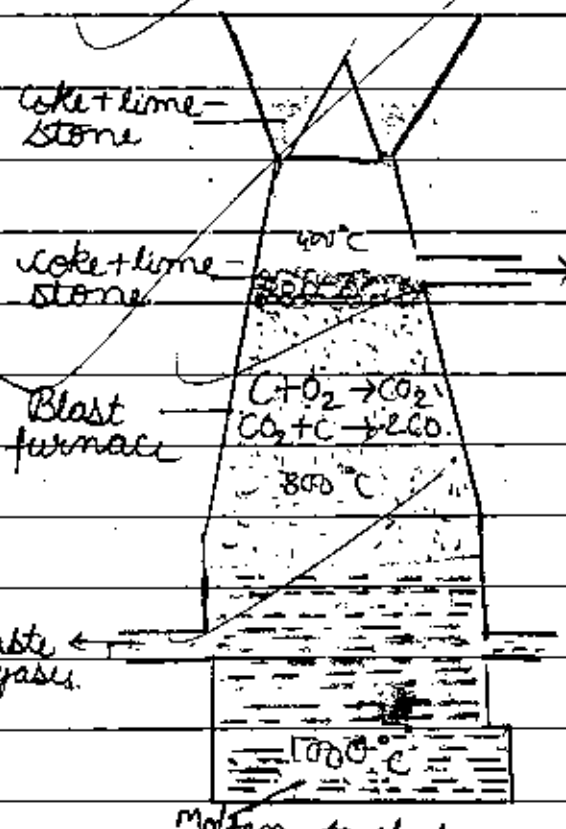
+ ☐ =

पृष्ठ 22 के अंक

and appliances based on modern lines should be used in electric circuit

Q.14. Explain the extraction of iron under the following heads.

i) Labelled diagram.
ii) Steps of reaction.
iii) Equation of reaction



The Blast Furnace

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पृष्ठ 23 के

Iron is mainly extracted from its ore hametatite. The different steps involved in the extraction of iron from hametite are;

1. Concentration of ore
2. ~~Calcination~~ Roasting
3. Smelting

Concentration of ore

In this process ore is ~~concentrated into~~ crushed into small pieces by gravity separation method (hydrollic washing.

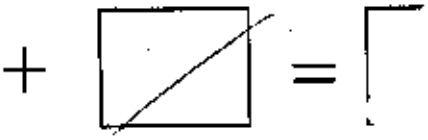
~~Calcination~~ Roasting

The concentrated ore is heated in the absence of air. So, ~~it~~ ~~process~~ all the water in the ore is extracted from it.

Smelting

In smelting ore is

पृष्ठ के अंकों का योग



पृष्ठ 24 के अंक

concentrated with calculated quantity of coke and limestone. Jet of hot compressed air is then blowned into this solution.

In blast furnace following reaction takes place;

1. Formation of carbon mono-oxide.

$C + O_2 \longrightarrow CO_2$

coke oxygen carbon di-oxide

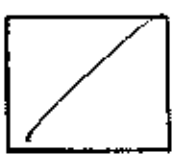
$CO_2 + C \longrightarrow 2CO$

carbon-di oxide — coke — carbon mono-oxide

2. Reduction of haematite

$Fe_2O_3 + 3CO \xrightarrow[950°C]{\Delta} 2Fe + 3CO_2$

Haema-tite — carbon mono-oxide — Iron — carbon-dioxide



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(1)

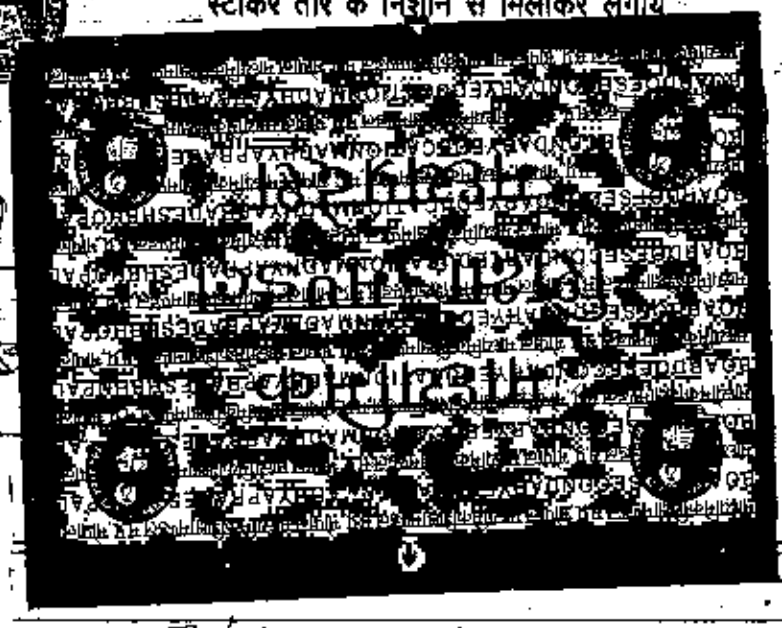
2009

हाई स्कूल परीक्षा
माध्यमिक शिक्षा मण्डल, मध्यप्रदेश, भोपाल

पूरक उ.पु. 4 पृष्ठ

1. केन्द्र की सील
2. पर्यवेक्षक के हस्ताक्षर व दिनांक
3. केन्द्राध्यक्ष के हस्ताक्षर की सील
4. केन्द्र क्रमांक
6. परीक्षा का नाम
7. विषय Science 8. माध्यम Engli
8. दिनांक 17-03-09

परीक्षक के लिये
स्टीकर तीर के निशान से मिलाकर लगायें



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The iron obtained by this process is called wrought iron.

For extracting iron the temperature of blast furnace should be at least 1000°C. In this way iron is extracted from haematite.

Q.2 (B)

Q.iv) Which apparatus is used to see Astronomical lobes?

Ans Astronomical telescope is used to see astronomical lobes.

पृष्ठ 2 के अंक = कुल अंक

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पृष्ठ के अंकों का योग

योग पूर्व पृष्ठ + पृष्ठ 3 के अंक = कुल अंक

BSEMP

पृष्ठ के अंकों का योग

(4)

योग पूर्व पृष्ठ + पृष्ठ 4 के अंक = कुल अंक

BSEMP

योग