



奧冠教育中心

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Hong Kong International
Science Olympiad

香港國際科學競賽初賽 2019 - 2020 (香港賽區)

HONG KONG INTERNATIONAL SCIENCE OLYMPIAD

HEAT ROUND 2019 - 2020 (HONG KONG REGION)

小學四年級 Primary 4

時限: 60 分鐘

Time allowed: 60 minutes

模擬試題

Mock Paper

考生須知:

Instructions to Contestants:

1. 本卷包括 試題 乙份, 試題紙不可取走。
Each contestant should have ONE Question-Answer Book which CANNOT be taken away.
2. 本卷共 4 個範疇, 每範疇有 5 題, 共 20 題, 答對得 2 分, 空題得 0 分, 答錯倒扣 1 分。
There are 4 exam areas and 5 questions in each exam area. There are a total of 20 questions in this Question-Answer Book. Two points for correct answers. No points for incorrect answers. **ONE penalty point will be deducted for incorrect answers.**
3. 請將答案寫在 答題紙 上。
All answers should be written on ANSWER SHEET.
4. 比賽期間, 小學組不得使用計算工具, 中學組可以使用計算工具。
During the contest, NO calculators can be used for PRIMARY GROUP but calculators can be used for SECONDARY GROUP.
5. 本卷中所有圖形不一定依比例繪成。
All figures in the paper are not necessarily drawn to scale.
6. 比賽完畢時, 本試題會被收回。
This Question-Answer Book will be collected at the end of the contest.

本試題不可取走。

請將答案寫在

答題紙

 上。

All answers should be written on the ANSWER SHEET.

THIS Question-Answer Book CANNOT BE TAKEN AWAY.

未得監考官同意，切勿翻閱試題，否則參賽者將有可能被取消資格。

DO NOT turn over this Question-Answer Book without approval of the examiner.

Otherwise, contestant may be DISQUALIFIED.

請將答案寫在 **答題紙** 上。

All answers should be written on the ANSWER SHEET.

選擇題 (第 1 至 20 題) (答對得 2 分, 空題得 0 分, 答錯倒扣 1 分)

Multiple Choice Questions (1st ~20th) (Two points for correct answers. No points for incorrect answers. **ONE penalty point will be deducted for incorrect answers.**)

Physics

物理

1. What main energy is the electrical energy of a light bulb transferred to when the light bulb is on?
當燈泡亮起時, 燈泡的電能轉換到什麼主要能量?

A	B	C	D	E
Electrical energy	Kinetic energy	Chemical energy	Thermal energy	Light energy
電能	動能	化學能	熱能	光能

2. Why will a wooden block on a table slow down and stop if Peter pushes it?
為什麼彼得推動桌子上的木塊後, 它會減速並停止?

A	B	C	D	E
Friction exists between the block and the table	There is no force for the block to support the motion	Gravitational force exists between the block and the table	Peter does not have enough power	The block does not have wheels
木塊和桌子之間有摩擦力	沒有力給木塊繼續運動	木塊和桌子之間有萬有引力	彼得沒有足夠力量	木塊沒有車輪

3. Why do we always observe lightning before hearing the thunder?
為什麼我們總是先看到閃電後聽到打雷?

A	B	C	D	E
Lighting always happens first	Lighting always happens at lower places	The speed of light is faster than that of sound	We are more sensitive on image	Light energy released is stronger than sound energy released
閃電總是先發生	閃電總是發生在較低處	光速比音速快	我們對影像更敏感	釋出的光能比聲能大

請將答案寫在 **答題紙** 上。

All answers should be written on the ANSWER SHEET.

4. Why can ships travel on the sea?

為什麼船能在海上行走？

A	B	C	D	E
They are light	They are heavy	They aren't affected by gravitational force	They have higher density than water	They have lower density than water
船很輕	船很重	船不受萬有引力影響	船比水有更高密度	船比水有更低密度

5. What kind of glasses should a short-sighted person wear?

甚麼種類的鏡片才適合近視的人戴？

A	B	C	D	E
Convex mirror	Plane mirror	Concave mirror	Convex lens	Concave lens
凸面鏡	平面鏡	凹面鏡	凸透鏡	凹透鏡

請將答案寫在 **答題紙** 上。

All answers should be written on the ANSWER SHEET.

Biology
生物

6. What is the biggest mammal?

最大的哺乳動物是什麼?

A	B	C	D	E
Blue whale	Octopus	Sea horse	Bear	Fly
藍鯨	章魚	海馬	熊	蒼蠅

7. Which animal below is molluska?

以下哪種動物是軟體動物?

A	B	C	D	E
Frog	Octopus	Sea horse	Bear	Fly
青蛙	章魚	海馬	熊	蒼蠅

8. Which organ of human below is not a part of respiratory system?

以下哪個人體器官不屬於呼吸系統的一部份?

A	B	C	D	E
Lungs	Mouth	Eye	Ear	Heart
肺	口	眼睛	耳朵	心臟

9. Which group of animals is mainly oviparous animal?

哪種動物類別主要是卵生動物?

A	B	C	D	E
Pig	Cow	Human being	Bear	Chicken
豬	牛	人類	熊	雞

10. Which group of animal do frogs belong to?

青蛙屬於以下哪種動物類別?

A	B	C	D	E
Amphibian	Bird	Mammal	Reptile	Fish
兩棲類動物	鳥類	哺乳類動物	爬行類動物	魚類

請將答案寫在 **答題紙** 上。

All answers should be written on the ANSWER SHEET.

Chemistry

化學

11. Which substance below is liquid in room temperature?

下列哪項在室溫下是液體?

A	B	C	D	E
Sugar	Toothpaste	Toy car	Blood	Chlorine
糖	牙膏	玩具車	血	氯氣

12. Which element below is the hardest?

下列哪種元素是最硬的?

A	B	C	D	E
Boron	Iodine	Titanium	Bromine	Diamond
硼	碘	鈦	溴	鑽石

13. What is the pH value of general toothpaste?

一般牙膏的酸鹼性值是多少?

A	B	C	D	E
1.0	3.0	4.0	8.0	12.0

14. There is only one renewable carbon source which can be converted into regular solid, liquid and gas form. What is that fuel?

下列是一種唯一可再生的碳源，且可轉化成常規的固態、液態或氣態的燃料的是什麼?

A	B	C	D	E
Biomass energy	Natural gas	Ocean Energy	Coke	Coal
生物質能	天然氣	海洋能	焦炭	煤

15. Which of the following liquid samples does not contain impurities?

下列哪種液體樣本不含雜質?

A	B	C	D	E
Tap water	Soft drink	Swimming pool water	Distilled water	Fresh fruit juice
自來水	汽水	泳池水	蒸餾水	新鮮果汁

請將答案寫在 **答題紙** 上。

All answers should be written on the ANSWER SHEET.

Integrated Science

綜合科學

16. Which type of vitamin can be absorbed by sunbathe?

常曬太陽可以吸收哪一種維他命?

A	B	C	D	E
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17. What is the largest Ocean in the world?

世界上最大的海洋是什麼?

A	B	C	D	E
The Atlantic Ocean	The Pacific Ocean	The Indian Ocean	The Southern Ocean	The Arctic Ocean
大西洋	太平洋	印度洋	南大洋	北冰洋

18. Who is the inventor of battery?

電池的發明人是誰?

A	B	C	D	E
Thomas Edison	Stephen Hawking	Galileo Galilei	Alfred Nobel	Alessandro Volta
愛迪生	霍金	伽利略	諾貝爾	伏特

19. Which substance below is the heaviest if they are the same size?

如果以下物品都是同樣大小，哪項物品會是最重?

A	B	C	D	E
Carbon dioxide	Ink	Apple	Iron nail	Thread
二氧化碳	墨水	蘋果	鐵釘	線

20. What is the smallest and the coldest star?

最小最冷的行星是什麼?

A	B	C	D	E
Earth	Pluto	Moon	Mars	Mercury
地球	冥王星	月球	火星	水星

請將答案寫在

答題紙

 上。

All answers should be written on the ANSWER SHEET.

~ End of Paper ~