



奧冠教育中心

OLYMPIAD CHAMPION EDUCATION CENTRE

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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)

小學五年級 Primary 5

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. When the spring is compressed, what type of energy will the kinetic energy of the spring be transferred to?

當彈簧被壓扁時，彈弓的動能轉換到什麼能量？

A	B	C	D	E
Electrical energy	Heat energy	Chemical energy	Wind energy	Potential energy
電能	熱能	化學能	風能	勢能

2. John jumps straight on a travelling bus. Amy sees John outside the bus. From the perspective of Amy, which direction does John jump towards?

約翰在一輛正在行駛的巴士上垂直跳，小美在車外看到約翰，問從小美的角度，約翰往什麼方向跳？

A	B	C	D	E
Forward	Straight upward	Backward	Uncertain	None of the above
前方	垂直往上	後方	不確定	以上皆不是

3. There is a mirror that is bigger than Amy. When she stands in front of the mirror, what should the proportion of the image to her be?

現在有一面比小美大的平面鏡，問當她站在該鏡子面前時，影像和她的比例是多少？

A	B	C	D	E
The image is bigger than her	The image is smaller than her	They are in same size	There are no image reflected in the mirror	Uncertain
影像比她大	影像比她小	影像和她的大小沒有分別	鏡子裏沒有影像	不確定

請將答案寫在 **答題紙** 上。

All answers should be written on the ANSWER SHEET.

4. Why can balloons fly on the sky?

為什麼氣球能飛起來？

A	B	C	D	E
They are light	They are heavy	They do not be affected by gravitational force	The gas inside the balloon has higher density than air	The gas inside the balloon has lower density than air
氣球很輕	氣球很重	氣球不受萬有引力影響	氣球裏的氣體比空氣密度更高	氣球裏的氣體比空氣密度更低

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

什麼種類的鏡片才適合遠視的人戴？

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. Which animal classes does Tadpole belong to?

蝌蚪屬於哪一類動物？

A	B	C	D	E
Fish	Amphibians	Reptiles	Birds	Mammals
魚類	兩棲類	爬蟲類	鳥類	哺乳類

7. Which muscles on human will not fatigue?

人類有什麼肌肉是不會感到疲倦的？

A	B	C	D	E
Leg muscles	Heart muscles	Eye muscles	Biceps	Triceps
腿部肌肉	心臟肌肉	眼部肌肉	二頭肌	三頭肌

8. Which organ of humans below is not a part of digestive system?

以下哪個人體器官不屬於人體的消化系統？

A	B	C	D	E
Kidney	Mouth	Stomach	Liver	Small intestine
腎	口	胃	肝	小腸

9. What environment benefits the growth of bacteria?

什麼地方有利細菌生長？

A	B	C	D	E
Desert	Snowy mountain	Volcano	Polar region	Tropical forest
沙漠	雪山	火山	極地	熱帶雨林

10. Which of the following food contains vitamin C?

以下哪種食物內含有維他命 C？

A	B	C	D	E
Carrot	Spinach	Rice	Kiwifruit	All of the above
紅蘿蔔	菠菜	米飯	奇異果	以上皆是

請將答案寫在 **答題紙** 上。

All answers should be written on the ANSWER SHEET.

Chemistry

化學

11. What is the lowest temperature of ice?

冰的最低溫度是多少？

A	B	C	D	E
100°C	100°F	274°C	0°C	infinitely large
100°C	100°F	274°C	0°C	無限大

12. Which element below is in gas state at room temperature?

下列哪種元素在室溫下是氣態？

A	B	C	D	E
Hydrogen	Carbon	Titanium	Sodium	Lead
氫	碳	鈦	鈉	鉛

13. Which three elements are necessary for starting a fire?

哪三種東西在生火時是必須有的？

A	B	C	D	E
Air, heat and fuel	Carbon dioxide, heat and wood	Oxygen, heat and wind	Oxygen, heat and fuel	Carbon dioxide, heat and wind
空氣、熱力和燃料	二氧化碳、熱力和木材	氧氣、熱力和風	氧氣、熱力和燃料	二氧化碳、熱力和風

14. Which metal is usually used to make beverage cans?

以下哪種金屬通常被用來造飲品罐？

A	B	C	D	E
Copper	Aluminium	Gold	Lithium	Platinum
銅	鋁	金	鋰	鉑

15. Which of the following gases can perform the function of sterilization?

下列哪種氣體有消毒的效果？

A	B	C	D	E
Helium	Chlorine	Hydrogen	Carbon dioxide	All of the above

請將答案寫在 **答題紙** 上。

All answers should be written on the ANSWER SHEET.

氫	氯	氫	二氧化碳	以上皆是
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Integrated Science

綜合科學

16. What is the percentage of oxygen in the air?

空氣中大概有百分之幾是氧氣？

A	B	C	D	E
21%	25%	50%	66%	100%

17. Why does apple change its colour after cutting and putting it on the table for a few minutes?

為甚麼當被切開的蘋果被放在桌子上幾分鐘後，果肉會變成黃色？

A	B	C	D	E
Because the apple is contaminated by bacteria so the colour changes	Because the apple is exposed to the oxygen in the air and it oxidizes	Because the apple becomes old so the colour changes	Because apple is brown in colour originally	Because the cell is damaged by the knife so the brown pigments in the air can get inside the cell and the colour changes
因為蘋果被細菌感染了，令其顏色改變	因為蘋果接觸到空氣中的氧氣，所以被氧化	因為蘋果變得不新鮮，所以顏色產生變化	因為蘋果本來就是黃色的	因為蘋果被刀子破壞了其組織，令空氣中的黃色素可以進入細胞中，所以顏色產生變化

18. Who was the first human to step on the moon?

誰是第一個踏足月球的人類？

A	B	C	D	E
Stephen Hawking	Neil Armstrong	Galileo Galilei	Yang Liwei	Albert Einstein
霍金	岩士唐	伽利略	楊利偉	愛因斯坦

請將答案寫在 **答題紙** 上。

All answers should be written on the ANSWER SHEET.

19. When there is a fire, why should we try to stay low and move near the ground?

為甚麼在火警中，我們應該盡量貼近地面行動？

A	B	C	D	E
Because hotter gases will raise so the smoke will be in a higher position and there will be less smoke near the ground	Because we will be able to run faster if we stay lower and near the ground	Because there might be lots of things on the ground. Therefore, we can see them better when we stay low.	Because the fire will spread upward	Because it is cooler near the ground
因為熱空氣會上升，所以濃煙會在較上的位置，而較貼近地面的地方較少煙霧	因為身體在較貼近地面時能跑得更快	因為地面有雜物，所以要貼近地面看清楚	因為火會往上燒	因為地面比較涼

20. Why should we fully cook the food before eating them?

為何我們應煮熟食物才進食它們？

A	B	C	D	E
To make the food taste better	To make the food contain more nutrients	To make the food become warmer and provide more energy for the body	To kill the bacteria and other microorganisms that is inside the food	Not necessary to cook the food fully.
令食物更好吃	令食物更有營養	令食物變得更熱，提供更多能量給人體	令食物中的細菌和微生物死去	沒有必要去煮熟它們

請將答案寫在

答題紙

 上。

All answers should be written on the ANSWER SHEET.
