



# MAJLIS PENGETUA SEKOLAH MALAYSIA (MPSM) CAWANGAN KELANTAN

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## MODUL KOLEKSI ITEM PERCUBAAN SPM 2025

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### SAINS KERTAS 1 & 2

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*UNTUK KEGUNAAN PEMERIKSA SAHAJA*

# SKEMA PEMARKAHAN



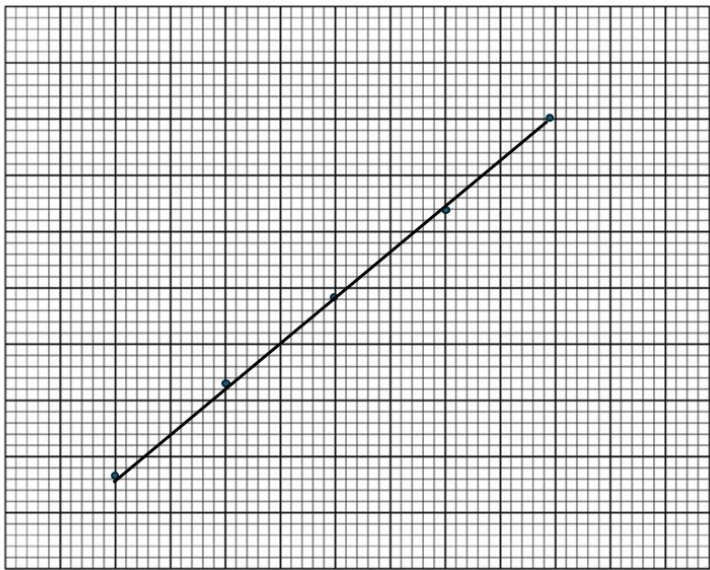
# MODUL KOLEKSI ITEM PEPERIKSAAN PERCUBAAN SPM SAINS TINGKATAN LIMA 2025

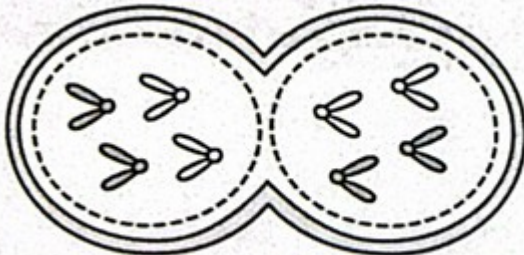
## SKEMA JAWAPAN KERTAS 1 SAINS 1511/1 [40 SOALAN =40 MARKAH]

|    |   |    |   |    |   |    |   |
|----|---|----|---|----|---|----|---|
| 1  | A | 11 | A | 21 | C | 31 | B |
| 2  | C | 12 | C | 22 | A | 32 | C |
| 3  | B | 13 | D | 23 | A | 33 | C |
| 4  | D | 14 | B | 24 | B | 34 | A |
| 5  | C | 15 | D | 25 | D | 35 | B |
| 6  | A | 16 | A | 26 | C | 36 | D |
| 7  | C | 17 | B | 27 | D | 37 | C |
| 8  | D | 18 | D | 28 | D | 38 | B |
| 9  | B | 19 | D | 29 | A | 39 | B |
| 10 | A | 20 | C | 30 | B | 40 | A |

**KERTAS 2 :BAHAGIAN A[ 20 MARKAH]**

2

|    |     |                                                                                                                                                                                                                                                                                                                                       |        |   |
|----|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---|
| 3  | a)  | 1. Masa yang diambil untuk tanda X tidak kelihatan pada kepekatan larutan natrium tiosulfat $0.04 \text{ mol dm}^{-3}$ paling lama.// vice versa<br><i>The time taken for the X mark is no longer visible is the longest at the concentration of sodium thiosulfate solution <math>0.04 \text{ mol dm}^{-3}</math>. // vice versa</i> | 1      | 1 |
|    | b)  | Kepekatan larutan natrium tiosulfat<br><i>Concentration of sodium thiosulphate solution</i>                                                                                                                                                                                                                                           | 1      | 1 |
|    | c)  | <p>Kepekatan natrium tiosulfat (<math>\text{mol dm}^{-3}</math>)<br/><i>Concentration sodium thiosulfate (<math>\text{mol dm}^{-3}</math>)</i></p>  <p>Nota:<br/>1. Semua titik diplotkan dengan betul<br/>2. Graf garis yang lurus</p>            | 1<br>1 | 2 |
|    | d)  | $0.1 \text{ s}^{-1}$                                                                                                                                                                                                                                                                                                                  | 1      | 1 |
|    |     |                                                                                                                                                                                                                                                                                                                                       |        | 5 |
| 4. | (a) | (i) ketinggian paras air ( dalam Tiub Venturi ) / tekanan dalam bendalir<br><i>Water level in a Venturi tube / pressure in a fluid</i>                                                                                                                                                                                                | 1      |   |
|    |     | (ii) mengukur dan merekodkan ketinggian paras air bagi ketiga-tiga tiub Venturi menggunakan <u>pembaris</u> /<br><i>Measure and record the water level in all three Venturi tubes using a ruler.</i>                                                                                                                                  | 1      | 2 |
|    | (b) | Paras air di P2 adalah paling rendah // Paras air di P2 lebih rendah berbanding di P1 dan P3 /<br><i>The water level at P2 is the lowest // The water level at P2 is lower compared to P1 and P3</i>                                                                                                                                  | 1      | 1 |

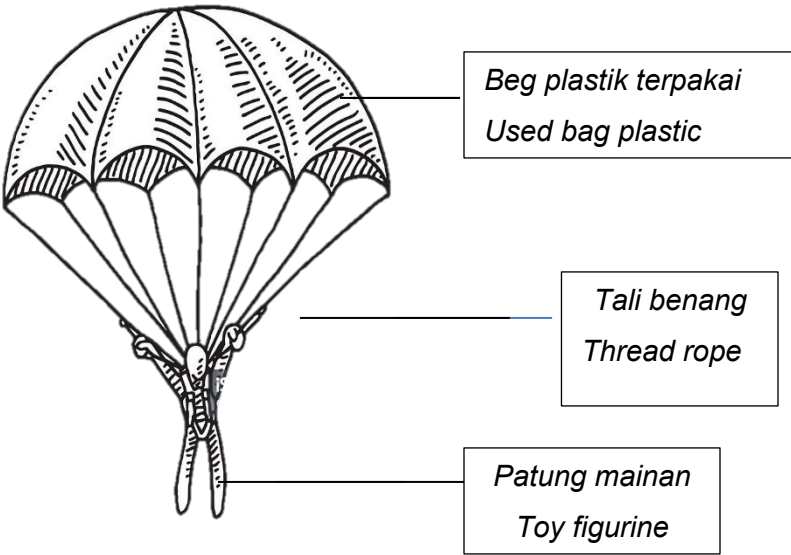
|                               |     |                                                                                                                                                                                                                                                                                                                                               |        |          |
|-------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------|
|                               | (c) | Semakin tinggi halaju air semakin rendah ketinggian paras air<br><i>The higher the water velocity, the lower the water level</i>                                                                                                                                                                                                              | 1      | 1        |
|                               | (d) | Paras air di P1 dan P3 lebih tinggi berbanding di P2.// Paras air di P2 paling rendah /<br><i>The water level at P1 and P3 is higher compared to P2 // Water level at P2 is the lowest.</i>                                                                                                                                                   | 1      | 1        |
|                               |     |                                                                                                                                                                                                                                                                                                                                               |        | <b>5</b> |
| <b>BAHAGIAN B (38 MARKAH)</b> |     |                                                                                                                                                                                                                                                                                                                                               |        |          |
| 5                             | a)  | Mitosis / <i>mitosis</i>                                                                                                                                                                                                                                                                                                                      | 1      | 1        |
|                               | b)  | <ul style="list-style-type: none"> <li>- Menggantikan sel yang mati<br/><i>Replace dead cells</i></li> <li>- Menggantikan sel yang rosak<br/><i>Replace damage cells</i></li> <li>- Pertumbuhan sel<br/><i>Cell growth</i></li> <li>- Pembiakan aseks<br/><i>Asexual reproduction</i></li> </ul> <p>(Mana – mana satu jawapan yang betul)</p> | 1      | 1        |
|                               | c)  |  <p>Nota: 4 kromosom setiap sel (1+1)</p>                                                                                                                                                                                                                   | 1+1    | 2        |
|                               | d)  | <p>1. Pucuk<br/><i>Shoot</i></p> <p>2. Akar<br/><i>Roots</i></p> <p>Nota: Terima mana-mana jawapan sesuai</p>                                                                                                                                                                                                                                 | 1<br>1 | 2        |
|                               |     |                                                                                                                                                                                                                                                                                                                                               |        | <b>6</b> |
| 6.                            | a)  | Kelenjar tanpa duktus yang merembeskan hormon<br><i>Gland without ducts that secretes hormones</i>                                                                                                                                                                                                                                            | 1      | 1        |
|                               | b)  | <p>1. Mengawal kadar metabolisme badan<br/><i>Controlling body metabolic rate</i></p> <p>2. Mengawal pertumbuhan dan perkembangan fizikal dan mental pada kanak-kanak<br/><i>Controlling physical and mental growth and development in children</i></p>                                                                                       | 1<br>1 | 1        |

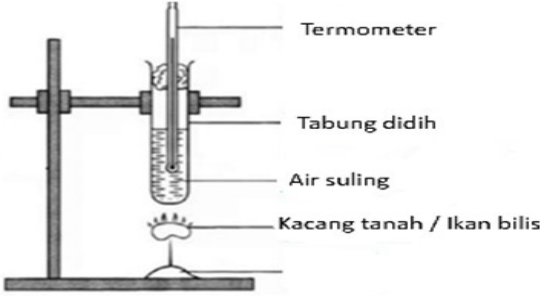
|    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                           |            |
|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------|
|    | c) | <p><b>F:</b> Minum alkohol // Memandu di bawah pengaruh alkohol<br/> <i>Drink alcohol // Driving under the influence of alcohol</i></p> <p><b>E:</b> Melambatkan gerak balas terhadap rangsangan //<br/> Melambatkan penghantaran impuls<br/> <i>Slowing down the response to stimuli/ slowing down the transmission of impulses.</i></p> <p>Nota : F + E</p>                                                                                                                                                                            | 1<br><br>1                | 2          |
|    | d) | <p>Persamaan;<br/> Kedua-duanya menjejaskan koordinasi badan/ menyebabkan ketagihan jika diambil tanpa kawalan<br/> <i>Both impair body coordination/ cause addiction if taken without control.</i></p> <p>Perbezaan :<br/> Penenang menghalang / melambatkan pergerakan impuls manakala halusinogen mengubah laluan impuls.<br/> <i>Difference:</i><br/> <i>Sedatives inhibit/slow down the movement of impulses while hallucinogens alter the path of impulses..</i></p>                                                               | 1<br><br>1                | 2          |
|    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                           | <b>6</b>   |
| 7. | a) | <p>Kitaran Hayat Produk ialah kitaran / peringkat yang bermula daripada sumber sehingga peringkat pelupusan ( sama ada dikitar semula atau dibiarkan mereput.)<br/> <i>Product Life Cycle is the cycle / stage that starts from the source to the disposal stage (either recycled or left to decompose.)</i></p>                                                                                                                                                                                                                         | 1                         | 1          |
|    | b) | <p>(i) Pembuatan / <i>Manufacture</i><br/> (ii) Pengedaran / <i>Distribution</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1<br>1                    | 2          |
|    | c) | <p>(i) F: Botol kaca<br/> <i>Glass bottle</i></p> <p>Alasan:</p> <p>E1: Boleh dikitar semula / boleh guna semula<br/> <i>Recyclable / reusable</i><br/> E2: Kitar hayat lebih Panjang<br/> <i>Longer life cycle</i><br/> E3: Mengurangkan jejak karbon<br/> <i>Reduces carbon footprint</i></p> <p>(ii) 1. Boleh digunakan berulang kali.<br/> <i>Can be reused many times</i><br/> 2. Mengurangkan sisa plastik<br/> <i>Reduces plastic waste</i><br/> 3. Membantu menjaga alam sekitar.<br/> <i>Helps protect the environment.</i></p> | 1<br><br>1<br>1<br>1<br>1 | 2<br><br>1 |
|    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                           | <b>6</b>   |

|    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |   |
|----|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---|
| 8. | a)  | 1. Kos rendah / murah<br><i>Low cost / cheap</i><br>2. Mesra alam<br><i>Environmentally friendly</i><br>3. Tidak perlu disental<br><i>Need not scrub</i><br><br>Nota: Terima mana-mana jawapan yang sesuai                                                                                                                                                                                                                                                     | 1<br><br>1<br><br>1 | 2 |
|    | b)  | Sektor pengurusan sisa dan air sisa<br><i>Waste and wastewater management sector</i>                                                                                                                                                                                                                                                                                                                                                                           | 1                   | 1 |
|    | c)  | Digunakan untuk mencuci<br><i>Use to clean</i>                                                                                                                                                                                                                                                                                                                                                                                                                 | 1                   | 1 |
|    | d)  | (i) Laktobasilus sp.<br><i>Lactobacillus sp.</i><br>(ii) Membantu mengekalkan kesihatan usus<br><i>Help to maintain the health of intestines</i>                                                                                                                                                                                                                                                                                                               | 1<br>1              | 2 |
|    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     | 6 |
| 9. | (a) | (i) Q                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1                   | 1 |
|    |     | (ii) Minyak masak / kosmetik / lilin / sabun<br><i>Cooking oil / cosmetics / candles / soap</i><br><br><i>Terima jawapan yang sesuai</i>                                                                                                                                                                                                                                                                                                                       | 1                   | 1 |
|    | b)  | Pilihan / <i>Choice</i> : Minyak masak Jenama Q.<br>Penerangan / <i>Explanation</i> :<br>1. Kandungan lemak tepu lebih rendah berbanding (jenama) P<br><i>Lower saturated fat content than (brand) P</i><br><br>2. Kandungan lemak tak tepu lebih tinggi berbanding (jenama) P.<br><i>Higher unsaturated fat content than (brand) P</i><br><br><i>*mana-mana satu / either one</i><br><u>NOTA:</u><br><i>*Pilihan – 1m</i><br><i>Penerangan – 1m</i>           | 1<br><br>1          | 2 |
|    | (c) | 1. Tuangkan campuran minyak sawit dan larutan natrium hidroksida ke dalam bikar.<br><i>Pour the palm oil mixture and sodium hydroxide solution into the beaker</i><br><br>2. Didihkan/Panaskan campuran dan kacau selama 5 minit.<br><i>Boil/Heat the mixture and stir for 5 minutes.</i><br><br>3. Tambahkan natrium klorida ke dalam campuran dan panaskan selama 5 minit lagi.<br><i>Add sodium chloride to the mixture and heat for another 5 minutes.</i> | 1<br><br>1<br><br>1 | 3 |
|    |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     | 7 |

|     |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |   |
|-----|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---|
| 10. | (a) | <p>Daya graviti Bumi<br/><i>Earth's gravitational force</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1                    | 1 |
|     | (b) | <p>1. Terjun udara (sebelum payung terjun dibuka) //<br/><i>Sky diving (before the parachute is open)</i></p> <p>2. Aktiviti terjun udara dalaman<br/><i>Indoor sky diving</i></p> <p>3. Pelepasan kapal angkasa dari Stesen Angkasa Lepas Antarabangsa (ISS)<br/><i>The departure of space craft from the International Space Station (ISS)</i></p> <p>Nota : Pilih mana-mana 1 jawapan sesuai<br/><i>Choose any one suitable answer</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1<br>1<br>1          | 1 |
|     | (c) | <p>Persamaan:<br/>Kedua-dua pergerakan dipengaruhi oleh daya gravity<br/><i>Similarity: both movements are influenced by the force of gravity.</i></p> <p>Perbezaan / <i>Difference:</i></p> <p>1. Pergerakan dalam silinder A tidak dipengaruhi oleh rintangan udara manakala pergerakan dalam Silinder B dipengaruhi oleh rintangan udara.<br/><i>Movement in cylinder A is not affected by air resistance, whereas movement in cylinder B is affected by air resistance</i></p> <p>2. Halaju objek dalam silinder A tidak dipengaruhi oleh jisim objek manakala halaju objek dalam silinder B dipengaruhi oleh jisim objek.<br/><i>Velocity of an object in cylinder A is not affected by the object's mass, whereas the velocity in cylinder B is influenced by the object's mass</i></p> <p>3. Objek dalam silinder A mengalami jatuh bebas manakala objek dalam silinder B mengalami bukan jatuh bebas<br/><i>The object in cylinder A experiences free fall while the object in cylinder B experiences non-free fall.</i></p> <p>Nota : 1 persamaan dan 1 perbezaan<br/><i>Note: 1 similarity and 1 difference.</i></p> | 1<br><br>1<br>1<br>1 | 2 |



|                        |                                                                                                                                                                                                                                                                                                                                     |                   |   |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---|
| (d)                    |  <p>Lakaran – 1 markah<br/>Sketch – 1 mark<br/>Label ketiga-tiga bahan yang diberikan – 1 markah<br/>Label the three given substances – 1 mark</p>                                                                                                | 2                 | 3 |
|                        | <p>Tali benang yang sama panjang, kecil dan kuat akan meningkatkan kestabilan dan mengurangkan kelajuan jatuh<br/>A tread rope of the same length that is thin and strong will increase stability and reduce the falling speed</p>                                                                                                  | 1                 |   |
|                        |                                                                                                                                                                                                                                                                                                                                     |                   | 7 |
| BAHAGIAN C (22 MARKAH) |                                                                                                                                                                                                                                                                                                                                     |                   |   |
| 11.                    | <p>a)</p> <p>1. Adakah kacang tanah mempunyai nilai kalori yang lebih tinggi berbanding ikan bilis? / sebaliknya<br/>Do peanuts have a higher calorie value compared to anchovies? / vice versa</p> <p>2.Sampel makanan manakah yang mempunyai nilai kalori paling tinggi?<br/>Which food sample has the highest calorie value?</p> | <p>1</p> <p>1</p> | 1 |
|                        | <p>b)</p> <p>1. Kacang tanah mempunyai nilai kalori yang lebih tinggi berbanding ikan bilis<br/>Which food sample has the highest calorie value?</p> <p>2.Ikan bilis mempunyai nilai kalori yang lebih rendah berbanding kacang tanah<br/>Anchovies have a lower calorie value compared to peanuts.</p>                             | <p>1</p> <p>1</p> | 1 |

|     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                 |           |
|-----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------|
|     | c) | i) Jisim air // jisim sampel makanan<br><i>Water mass // food sample mass</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                               | 1         |
|     |    | ii) Jenis sampel makanan // kacang tanah dan ikan bilis<br><i>Types of food samples // peanuts and anchovies</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1                               | 1         |
|     | d) |  <p>Lukisan berlabel ( termometer + tabung didih + air suling) – 1 markah</p> <p>Label kacang tanah dan ikan bilis - 1 markah</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1<br>1                          | 2         |
|     | e) | <p>1. Kacang tanah menunjukkan perubahan suhu air yang lebih tinggi berbanding ikan bilis<br/><i>Peanuts show a higher water temperature change compared to anchovies.</i></p> <p>2. Suhu akhir air bagi kacang tanah lebih tinggi berbanding suhu akhir air bagi ikan bilis.<br/><i>The final water temperature for peanuts is higher than the final water temperature for anchovies.</i></p>                                                                                                                                                                                                                                                                                            | 1<br>1                          | 1         |
|     | f) | <p>1. Melabel jenis sampel makanan pada paksi-X/<br/><i>Labeling the types of food samples on the X-axis</i></p> <p>2. Melabel nilai kalori makanan pada paksi-Y<br/><i>Label the calorie value of the food on the Y-axis</i></p> <p>3. Melukis carta palang dengan tepat<br/><i>Drawing a bar chart accurately</i></p>                                                                                                                                                                                                                                                                                                                                                                   | 1<br>1<br>1                     | 3         |
|     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                 | <b>10</b> |
| 12. | a) | <p>1. Aloe vera ( lidah buaya )- lendiran disapu pada kulit untuk mengurangkan kesakitan kulit akibat selaran matahari atau terkena benda panas.<br/><i>Aloe vera (lidah buaya) – the gel is applied to the skin to reduce pain from sunburn or contact with hot objects.</i></p> <p>2. Ginseng- untuk memelihara kesihatan badan<br/><i>Ginseng – used to maintain overall health</i></p> <p>3. Halia -melegakan bengkak dan sengal-sengal pada badan serta menghilangkan angin dalam badan.<br/><i>Ginger (halia) – relieves swelling and body aches, and helps alleviate internal gas</i></p> <p>4. Pokok bunga raya- melegakan sakit kepala dan merawat masalah keguguran rambut.</p> | 1 + 1<br><br>1 + 1<br><br>1 + 1 | 2         |

|  |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                        |   |
|--|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|---|
|  |    | <p><i>Hibiscus plant (pokok bunga raya) – soothes headaches and treats hair loss problems.</i></p> <p>5. Kuinina- kulit pokok digunakan untuk membuat ubat penyakit malaria.</p> <p><i>Quinine – the bark of the tree is used to make medicine for treating malaria</i></p> <p>Nota :<br/>1 contoh 1 kegunaan<br/><i>One example, one use</i><br/>Mana-mana jawapan lain yang sesuai<br/><i>Any other suitable answers.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>1+1</p> <p>1+1</p>                                  |   |
|  | b) | <p>1. Akupunktur - jarum steril dimasukkan ke dalam titik-titik tertentu pada kulit, dimasukkan secara perlahan dan lembut untuk melegakan kesakitan.</p> <p><i>Acupuncture – sterile needles are inserted into specific points on the skin, gently and slowly, to relieve pain.</i></p> <p>2. Kiropraktik- menggunakan kemahiran ahli kiropraktik untuk membetulkan semula kedudukan tulang menggunakan tangan. Untuk merawat sakit belakang dan leher, sakit sendi, sakit kepala dan kecederaan sukan</p> <p><i>Chiropractic – using the skills of a chiropractor to realign bone positions with the hands. It treats back and neck pain, joint pain, headaches, and sports injuries.</i></p> <p>3. Urutan tradisional- kaedah untuk memanipulasi tisu lembut badan menggunakan tangan. Dapat melegakan kesakitan, keresahan, keletihan, ketegangan otot dan masalah urat saraf.</p> <p><i>Traditional massage – a method to manipulate the body's soft tissues using the hands. It can relieve pain, anxiety, fatigue, muscle tension, and nerve-related issues.</i></p> <p>4. Homeopati- ubat yang diberikan menguatkan keupayaan tubuh melawan penyakit.</p> <p><i>Homeopathy – the medicine given strengthens the body's ability to fight disease</i></p> <p>5. Terapi herba- menggunakan bahagian tumbuhan yang memiliki khasiat untuk merawat penyakit, tiada kesan sampingan, tidak mengandungi dadah.</p> <p><i>Herbal therapy – using parts of plants that possess beneficial properties to treat diseases; no side effects; does not contain drugs.</i></p> <p>Nota:<br/>1 contoh 1 ciri<br/><i>One example, 1 characteristics.</i></p> | <p>1+1</p> <p>1+1</p> <p>1+1</p> <p>1+1</p> <p>1+1</p> | 2 |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                      |                                              |   |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------|---|
| c) | <p>Persamaan / similarity</p> <p><i>Kedua-duanya bertujuan untuk menjaga dan memulihkan kesihatan serta menyembuhkan penyakit</i><br/> <i>Both aim to preserve and restore health as well as cure diseases</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                      | 1                                            | 4 |
|    | Perubatan tradisional<br><i>Traditional medicine</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Perubatan Moden<br><i>Modern medicine</i>                                            |                                              |   |
|    | Kos rawatan yang rendah<br><i>Low treatment cost</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Kos rawatan yang mahal<br><i>High treatment cost</i>                                 | 1                                            |   |
|    | Menggunakan bahan semula jadi daripada tumbuhan dan haiwan<br><i>Treatment using natural substances from plants and animals</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Rawatan menggunakan ubat-ubatan sintetik<br><i>Treatment uses synthetic medicine</i> | 1                                            |   |
|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                      | 1                                            |   |
|    | Keberkesanan rawatannya lebih perlahan dan memakan masa<br><i>Effectiveness of the treatment is slow and takes time</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Rawatannya lebih berkesan dan lebih cepat<br><i>Treatment is effective and fast</i>  | 1                                            |   |
|    | Pembuktian keberkesanan secara pengalaman<br><i>Effectiveness proven by experience</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Pembuktian keberkesanan secara klinikal.<br><i>Clinically trusted</i>                | 1                                            |   |
|    | <p>Wajar<br/><i>Justified</i></p> <p>Alasan:<br/>Reason:</p> <ol style="list-style-type: none"> <li>Membantu memulihkan penyakit dan mengekalkan kesihatan<br/><i>Helps in recovering from illness and maintaining health</i></li> <li>Menjamin tumbesaran yang normal<br/><i>Ensures normal growth</i></li> <li>Meningkatkan daya pencegahan penyakit<br/><i>Boosts disease prevention</i></li> <li>Menjadi keperluan untuk menjamin kesihatan akibat gaya hidup masyarakat kini yang sentiasa sibuk<br/><i>Becomes necessary to ensure health due to today's busy lifestyle</i></li> <li>Menjadi pelengkap kepada amalan pemakanan yang tidak seimbang.<br/><i>Acts as a supplement to balance out unhealthy eating habits</i></li> </ol> |                                                                                      | <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> | 4 |

|     |    |                                                                                                                                                                                                                                                                     |   |    |
|-----|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----|
|     |    | ATAU / OR                                                                                                                                                                                                                                                           |   |    |
|     |    | Tidak Wajar<br><i>Unjustified</i>                                                                                                                                                                                                                                   | 1 |    |
|     |    | 1. Terdapat produk kesihatan yang menggunakan bahan terlarang seperti merkuri dan tidak berdaftar dengan KKM<br><i>There are health products that use prohibited ingredients such as mercury and are not registered with the Ministry of Health Malaysia (KKM).</i> | 1 | 4  |
|     |    | 2. Memberi kesan yang membahayakan kesihatan dalam jangka masa panjang<br><i>They pose harmful health effects in the long term.</i>                                                                                                                                 | 1 |    |
|     |    | 3. Berlaku penipuan kualiti tidak seperti yang diiklankan kerana menggunakan bahan-bahan yang tidak berkualiti / produk tiruan.<br><i>There is deception in quality not as advertise because they use substandard ingredients or counterfeit products.</i>          | 1 |    |
|     |    |                                                                                                                                                                                                                                                                     |   | 12 |
| 13. | a) | (i) Objek yang mengelilingi planet / bintang<br><i>Objects that orbit planets / stars</i>                                                                                                                                                                           | 1 |    |
|     |    | Contoh satelit / <i>Example of satellite:</i>                                                                                                                                                                                                                       |   |    |
|     |    | 1. Bulan / moon                                                                                                                                                                                                                                                     | 1 | 2  |
|     |    | 2. Bintang / star                                                                                                                                                                                                                                                   |   |    |
|     |    | 3. MEASAT                                                                                                                                                                                                                                                           |   |    |
|     |    | 4. RAZAKSAT                                                                                                                                                                                                                                                         |   |    |
|     |    | 5. TIONGSAT                                                                                                                                                                                                                                                         |   |    |
|     |    | Nota:<br>• <i>Terima mana-mana satu / either one</i>                                                                                                                                                                                                                |   |    |
|     |    | (ii) Satelit C                                                                                                                                                                                                                                                      | 1 |    |
|     |    | Penerangan / <i>Explanation:</i>                                                                                                                                                                                                                                    |   |    |
|     |    | 1. Orbit satelit C paling rendah, maka halajunya paling tinggi.<br><i>The orbit of satellite C is the lowest, so its velocity is the highest.</i>                                                                                                                   | 1 | 2  |
|     |    | 2. Daya tarikan graviti terhadap satelit C paling kuat kerana ketinggiannya paling rendah.<br><i>The gravitational pull-on satellite C is the strongest because of its lowest altitude.</i>                                                                         | 1 |    |
|     |    | Nota : 1 pilihan 1 penerangan<br>**Dependent                                                                                                                                                                                                                        |   |    |

|  |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                              |    |
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|  | b) | <p>F1: Navigasi kenderaan / <i>Vehicle navigation</i></p> <p>E1: Mendapatkan arah perjalanan / laluan terpantas<br/><i>Get directions / fastest route</i></p> <p>F2: Mengesan lokasi / <i>Track location</i></p> <p>E2: Lokasi semasa pengguna / perkhidmatan penghantaran / keselamatan<br/><i>Current location of the user / service delivery / security</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>1</p> <p>1</p> <p>1</p> <p>1</p>          | 4  |
|  | c) | <p>Persamaan / <i>Similarities</i>:</p> <ol style="list-style-type: none"> <li>Kedua-duanya membawa satelit / kapal angkasa ke angkasa lepas<br/><i>Both carry satellites / spacecraft into space</i></li> <li>Kedua-duanya menggunakan roket / bahan api.<br/><i>Both use rockets / firepower.</i></li> </ol> <p>Perbezaan / <i>Differences</i>:</p> <ol style="list-style-type: none"> <li>ELV boleh digunakan sekali sahaja, RLV boleh digunakan berulang kali.<br/><i>ELV can only be used once, RLV can be used repeatedly.</i></li> <li>ELV kos pembinaan murah, RLV kos pembinaan mahal.<br/><i>ELV construction costs are cheap, RLV construction costs are expensive.</i></li> <li>ELV kos pelancaran mahal, RLV kos pelancaran rendah.<br/><i>ELV expensive launch costs, RLV low launch costs.</i></li> <li>ELV menambah sampah angkasa, RLV tidak menambah sampah angkasa.<br/><i>ELV add space junk, RLV do not add space junk.</i></li> <li>ELV reka bentuk ringkas, RLV reka bentuk kompleks.<br/><i>ELV simple design, RLV complex design.</i></li> </ol> <p><i>*mana-mana 2 persamaan dan 2 perbezaan</i><br/><i>Atau</i><br/><i>*mana-mana 1 persamaan dan 3 perbezaan</i></p> | <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> | 4  |
|  |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                              | 12 |