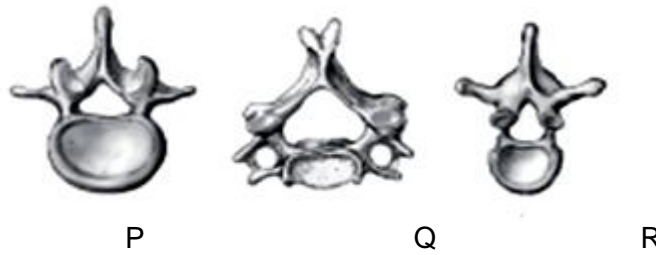


SOALAN OBJEKTIF

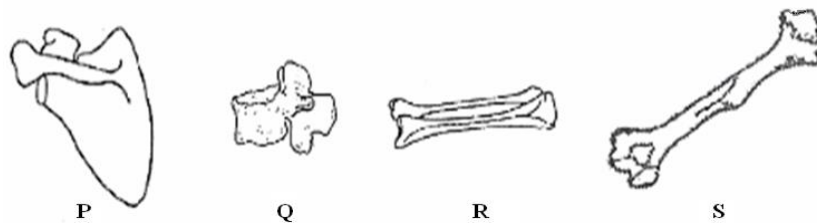
4 P, Q and R in Diagram are three types of vertebrae on the human backbone.  
 P, Q dan R dalam rajah adalah tiga jenis vertebra pada tulang belakang manusia.



Which of the following is the correct sequence of the vertebrae arrangement?  
 Manakah antara berikut merupakan urutan yang betul tentang susunan vertebra ini?

- A Q, R, P
- B P, Q, R
- C Q, P, R
- D R, P, Q

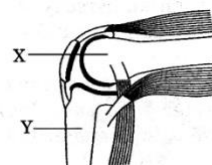
5 Diagram shows the bones of a human  
 Rajah menunjukkan tulang-tulang manusia



Which of the following forms a ball and socket joint?  
 Manakah antara berikut boleh membentuk sendi lesung?

- A P and R  
P dan R
- B Q and R  
Q dan R
- C Q and S  
Q dan S
- D P and S  
P dan S

6 Diagram shows a knee joint.  
 Rajah menunjukkan sendi di lutut.



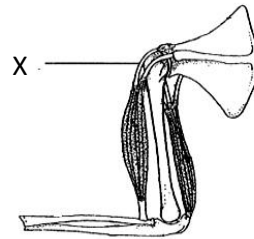
Which of the following tissues joins X to Y?  
 Manakah antara berikut menghubungkan antara X dan Y?

- A Ligament  
Ligamen
- B Tendon
- C Adipose  
Adipos
- D Cartilage

*Tendon*

*Rawan*

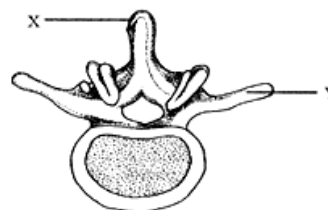
7  
A  
R  
Diagram shows a human arm.  
*Rajah menunjukkan lengan manusia.*



If X was torn off, what happens to the arm?  
*Jika X terkoyak, apakah akan berlaku pada lengan atas?*

- |   |   |   |  |
|---|---|---|--|
| A | The elbow joint loosens up<br><i>Sendi di siku menjadi longgar</i>  | C | The arm cannot be bent<br><i>Tangan tidak boleh dibengkokkan</i>       |
| B | The fingers cannot grip<br><i>Jari-jari tidak boleh menggenggam</i> | D | The lower arm cannot twist<br><i>Lengan bawah tidak boleh dipusing</i> |

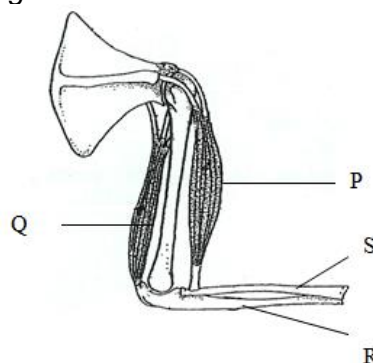
8  
P  
S  
Diagram shows a human lumbar vertebra.  
*Rajah menunjukkan vertebra lumbar manusia*



What are the function of X and Y?  
*Apakah tugas X dan Y?*

- |   |  |   |   |
|---|--|---|---|
| A | Protection for spinal cord<br><i>Melindungi saraf tunjang</i>            | C | Surfaces for vertebral joints<br><i>Permukaan untuk sendi vertebra</i>          |
| B | Surfaces for muscle attachment<br><i>Permukaan untuk perlekatan otot</i> | D | Surfaces for rib articulation<br><i>Permukaan untuk artikulasi tulang rusuk</i> |

9  
A  
R  
Diagram shows the structure of a human forearm.  
*Rajah menunjukkan struktur lengan manusia.*



What happen to P, Q, R and S in the above condition?  
*Apa berlaku kepada P, Q, R dan S dalam keadaan di atas?*

	<b>P</b>	<b>Q</b>	<b>R</b>	<b>S</b>
A	Relaxes <i>Mengendur</i>	Contracts <i>Mengecut</i>	Pushed downwards <i>Di tolak ke bawah</i>	Pushed downwards <i>Di tolak ke bawah</i>
B	Contracts <i>Mengecut</i>	Relaxes <i>Mengendur</i>	Pushed downwards <i>Di tolak ke bawah</i>	Pushed downwards <i>Di tolak ke bawah</i>
C	Relaxes <i>Mengendur</i>	Contracts <i>Mengecut</i>	Pulled upwards <i>Ditarik ke atas</i>	Pulled upwards <i>Ditarik ke atas</i>
D	Contracts <i>Mengecut</i>	Relaxes <i>Mengendur</i>	Pulled upwards <i>Ditarik ke atas</i>	Pulled upwards <i>Ditarik ke atas</i>

10 A man is complaining of frequent back pains due to an injury.  
 A Which of the following would help reduce his problem?  
 S *Seorang lelaki mengadu kerap sakit belakang akibat kecederaan.*  
 KBAT *Manakah antara berikut dapat membantu mengurangkan masalahnya?*

- |   |   |
|---|---|
| I Eat plenty of protein<br><i>Memakan banyak protein</i>          | III Do vigorous exercise<br><i>Melakukan aktiviti lasak</i>                   |
| II Practice a good posture<br><i>Mengamalkan postur yang baik</i> | IV Avoid carrying heavy objects<br><i>Elakkan mengangkat objek yang berat</i> |
- 
- |                                 |                                   |
|---------------------------------|-----------------------------------|
| A I and II<br><i>I dan II</i>   | C II and IV<br><i>II dan IV</i>   |
| B I and III<br><i>I dan III</i> | D III and IV<br><i>III dan IV</i> |

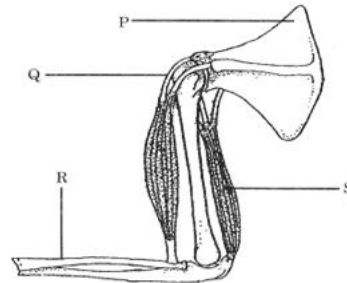
11 Diagram shows the human vertebrae P, Q and R.  
 P *Rajah menunjukkan vertebra manusia P, Q dan R.*  
 T



Which of the following shows the correct locations of P, Q and R?  
*Manakah antara berikut menunjukkan kedudukan yang betul bagi P, Q dan R?*

	<b>P</b>	<b>Q</b>	<b>R</b>
A	Thorax <i>Toraks</i>	Neck <i>Leher</i>	Abdomen <i>Abdomen</i>
B	Neck <i>Leher</i>	Thorax <i>Toraks</i>	Abdomen <i>Abdomen</i>
C	Thorax <i>Toraks</i>	Abdomen <i>Abdomen</i>	Neck <i>Leher</i>
D	Abdomen <i>Abdomen</i>	Neck <i>Leher</i>	Thorax <i>Toraks</i>

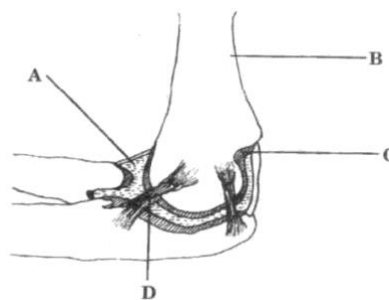
- 12 Figure shows part of human forelimb.  
 P Rajah menunjukkan bahagian lengan manusia.  
 R



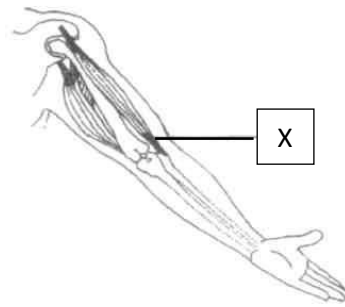
What are P, Q, R and S in above figure?  
 Apakah P, Q, R dan S dalam Rajah di atas?

	P	Q	R	S
A	Ulna <i>Ulna</i>	Ligament <i>Ligamen</i>	Biceps <i>Biceps</i>	Humerus <i>Humerus</i>
B	Scapula <i>Skapula</i>	Ligament <i>Ligamen</i>	Biceps <i>Biceps</i>	Radius <i>Radius</i>
C	Humerus <i>Humerus</i>	Tendon <i>Tendon</i>	Triceps <i>Triceps</i>	Ulna <i>Ulna</i>
D	Scapula <i>Skapula</i>	Tendon <i>Tendon</i>	Triceps <i>Triceps</i>	Radius <i>Radius</i>

- 13 Diagram 1 shows an elbow joint. Which of the following parts labelled A, B, C or D is tough and elastic?  
 P Rajah menunjukkan sendi di siku. Antara bahagian yang berlabel A, B, C dan D, yang manakah kuat dan kenyal?  
 S



- 14 Diagram shows a human arm.  
 A Rajah menunjukkan tangan manusia.  
 R

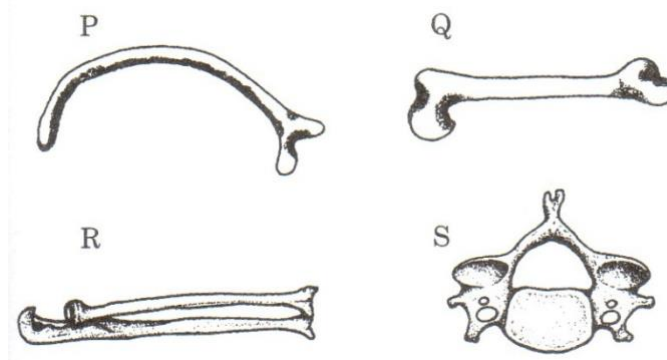


If tendon X was torn off, what happens to the arm?  
 Jika tendon X terkoyak, apa berlaku kepada tangan?

- |   |   |   |  |
|---|---|---|--|
| A | The elbow joint loosens up<br>Sendi di siku menjadi longgar   | C | The arm cannot be bent<br>Tangan tak boleh dibengkokkan          |
| B | The fingers cannot grip<br>Jari-jari tidak boleh mengggenggam | D | The lower arm cannot twist<br>Tangan bawah tak boleh dipusingkan |

15 The diagram shows human bones.  
 Rajah menunjukkan tulang-tulang pada manusia.

ANS

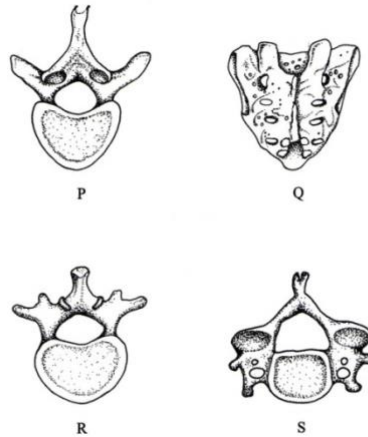


Which bones are part of the axial skeleton?  
 Tulang-tulang manakah menjadi sebahagian dari rangka paksi?

- |   |                    |   |                          |
|---|--------------------|---|--------------------------|
| A | P and S<br>P dan S | C | P, Q and R<br>P, Q dan R |
| B | Q and R<br>Q dan R | D | Q, R and S<br>Q, R dan S |

16 P, Q, R and S in diagram below are vertebrae found along the spine.  
 P, Q, R dan S dalam rajah di bawah adalah vertebra di sepanjang saraf tunjang

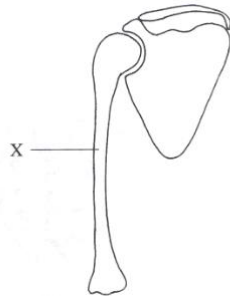
R



Which of the following shows the correct arrangement of the vertebrae in the spine?  
 Manakah antara berikut menunjukkan urutan susunan yang betul bagi vertebra saraf tunjang?

- |   |            |   |            |
|---|------------|---|------------|
| A | R, S, P, Q | C | Q, R, S, P |
| B | P, Q, R, S | D | S, P, R, Q |

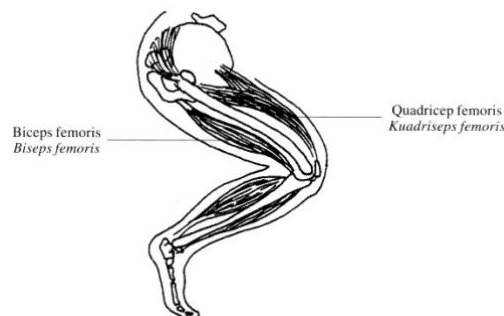
17 Diagram below shows part of the human skeletal system.  
 P Rajah di bawah menunjukkan sebahagian dari sistem rangka manusia  
 R



What is X?  
 Apakah X?

- |   |                    |   |                      |
|---|--------------------|---|----------------------|
| A | Ulna<br>Ulna       | C | Humerus<br>Humerus   |
| B | Scapula<br>Skapula | D | Clavicle<br>Klavikel |

19 Diagram below shows a bending leg.  
 F Rajah di bawah menunjukkan kaki yang dibengkokkan.  
 S



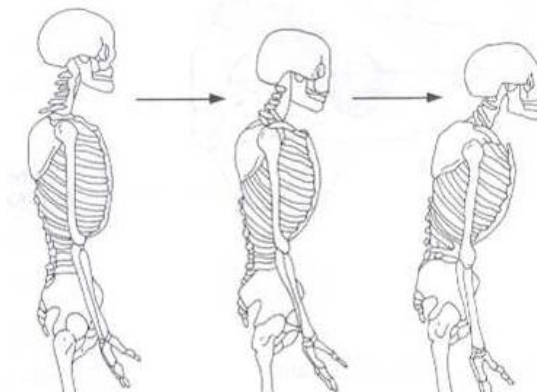
Which of the following muscle actions will straighten the leg?

*Antara tindakan otot berikut, yang manakah menyebabkan kaki diluruskan?*

	Quadriceps femoris <i>Kuadrisep femoris</i>	Biceps femoris <i>Bisep femoris</i>
A.	Contracts <i>Mengecut</i>	Contracts <i>Mengecut</i>
B.	Contracts <i>Mengecut</i>	Relaxes <i>Mengendur</i>
C.	Relaxes <i>Mengendur</i>	Relaxes <i>Mengendur</i>
D.	Relaxes <i>Mengendur</i>	Contracts <i>Mengecut</i>

20 Diagram shows the changes of posture in woman's skeleton as she grow olde due to lack of certain hormones and nutrients.

F  
S *Rajah menunjukkan perubahan postur pada rangka seorang perempuan yang meningkat usia disebabkan oleh kekurangan hormon dan nutrien tertentu.*



What are these hormones and nutrients?

*Apakah hormon dan nutrien ini?*

- |  |  |
|--|--|
| A Progestrone and ferum<br><i>Progestron dan ferum</i>     | C Oestrogen and ferum<br><i>Estrogen dan ferum</i>     |
| B Progestrone and calcium<br><i>Progestron dan kalsium</i> | D Oestrogen and calcium<br><i>Estrogen dan kalsium</i> |

21 Which of the following groups of organisms have exoskeletons?

P  
T *Manakah antara kumpulan haiwan berikut mempunyai rangka luar?*

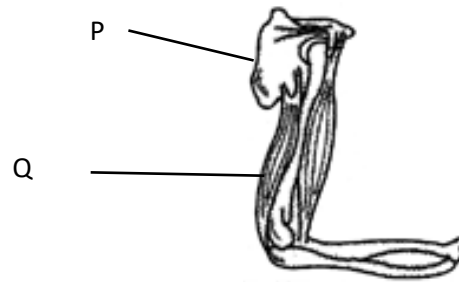
- |   |   |
|---|---|
| A Snail , turtle , beetle<br><i>Siput , penyu , kumbang</i>     | C Bird , cockroach , tortoise<br><i>Burung , lipas , kura-kura</i>          |
| B Grasshopper , crab , prawn<br><i>Belalang , ketam , udang</i> | D Caterpillar , cockle , earthworm<br><i>Beluncas,kerang , cacing tanah</i> |

22 Diagram shows the muscles and bones on the upper arm.

P Which of the following tissue holds the parts labelled P and Q?

R *Rajah menunjukkan otot dan tulang pada lengan.*

*Antara tisu berikut, yang manakah melekatkan bahagian yang berlabel P dan Q?*



- |   |                                       |   |                            |
|---|---------------------------------------|---|----------------------------|
| A | Cartilage<br><i>Rawan</i>             | C | Ligament<br><i>Ligamen</i> |
| B | Skeletal muscle<br><i>Otot rangka</i> | D | Tendon<br><i>Tendon</i>    |

23 Which of the following is true about synovial fluid?  
 P *Manakah antara berikut adalah benar tentang bendalir sinovial?*  
 S

- |   |   |   |   |
|---|---|---|---|
| A | Is a big protein molecule<br><i>Adalah molekul protein yang besar</i> | C | Will help to soften the joint<br><i>Membantu melembutkan sendi</i>            |
| B | Hold the muscle to the bone<br><i>Memegang otot kepada tulang</i>     | D | Act as lubrication at the joint<br><i>Bertindak sebagai pelincir di sendi</i> |

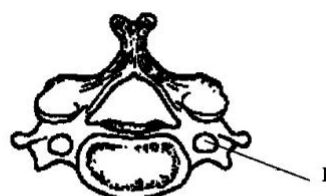
24 What is the problem faced by individual which do not take calcium in his/ her diet?  
 P *Apakah masalah kesihatan yang dialami oleh individu yang tidak mengambil kalsium dalam*  
 R *dietnya?*

- |   |              |   |          |
|---|--------------|---|----------|
| A | Osteoporosis | C | Anaemia  |
| B | Arthritis    | D | Bullemia |

25 Xylem give mechanical support to the woody plants. Why xylem can carry out that function?  
 F *Xilem memberikan sokongan mekanikal kepada tumbuhan berkayu. Mengapa xilem*  
 T *menjalankan tugas tersebut?*

- |   |   |
|---|---|
| A | Xylem tissue is the main part in the root and stem<br><i>Tisu xilem merupakan bahagian utama dalam akar dan batang</i>    |
| B | Xylem form the continuous vessel in the woody plants<br><i>Xilem membentuk saluran berterusan dalam tumbuhan berkayu</i>  |
| C | Xylem's wall undergo continuous thickening by lignin<br><i>Dinding xilem mengalami penebalan berterusan oleh lignin</i>   |
| D | Lumen of the xylem tissue is too small but the wall is thick.<br><i>Lumen xilem sangat kecil tetapi dindingnya tebal.</i> |

26 Diagram shows a typical cervical vertebra.  
 P *Rajah menunjukkan vertebra servik yang tipikal.*  
 R

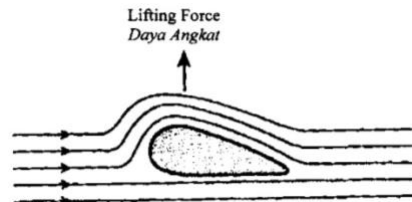




What is P?  
Apakah P?

- |   |                                    |   |   |
|---|------------------------------------|---|---|
| A | Centrum<br><i>Sentrum</i>          | C | Neural canal<br><i>Salur saraf</i>                      |
| B | Neural spine<br><i>Spina saraf</i> | D | Vertebra arterial canal<br><i>Salur vertebra arteri</i> |

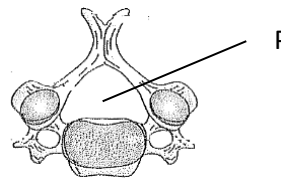
27 Diagram shows the shape of an aerofoil.  
Rajah menunjukkan bentuk aerofoil



Which part of the bird has this shape?  
Bahagian burung yang manakah mempunyai bentuk seperti di atas?

- |   |                       |   |                      |
|---|-----------------------|---|----------------------|
| A | Head<br><i>Kepala</i> | C | Wing<br><i>Sayap</i> |
| B | Body<br><i>Badan</i>  | D | Tail<br><i>Ekor</i>  |

28 Diagram shows a human cervical vertebra.  
Rajah menunjukkan struktur vertebra servik manusia.

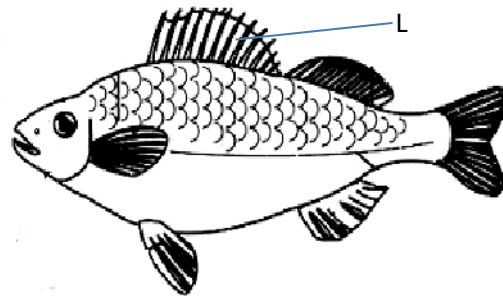


Which of the following is the function of the part labelled P?  
Antara berikut yang manakah fungsi bagi bahagian berlabel P?

Mengatahui

- |   |   |   |  |
|---|---|---|--|
| A | Enclosed the spinal cord<br><i>Melindungi saraf tunjang</i> | C | For muscle attachment<br><i>Untuk pelekatan otot</i> |
| B | Protect blood vessels<br><i>Melindungi salur darah</i>      | D | Absorbed pressure<br><i>Menyerap tekanan</i>         |

31 Diagram shows a fish.  
Rajah menunjukkan seekor ikan.



What is fin L?  
Apakah sirip L?

- |                              |                                  |
|------------------------------|----------------------------------|
| A Caudal fin<br>Sirip ekor   | C Dorsal fin<br>Sirip dorsal     |
| B Pelvic fin<br>Sirip pelvis | D Pectoral fin<br>Sirip pektoral |

32 A patient has artificial joints fitted in his knee.  
A R KBAT Which of the following disease is suffered by the patient?  
Lutut seorang pesakit dipasang dengan sendi buatan.  
Antara yang berikut, penyakit manakah yang dialami oleh pesakit tersebut ?

- |                                 |   |
|---------------------------------|---|
| A. Gout<br>Gout                 | B. Arthritis<br>Artritis                |
| C. Osteoporosis<br>Osteoporosis | D. Muscular dystrophy<br>Distrofi otot. |

34 P T Diagram 21 shows four human vertebrae K, L, M and N along the vertebral column.  
Rajah 28 menunjukkan empat vertebra manusia K, L, M dan N disepanjang turus vertebra.



K



L



M



N

What is the correct sequence of the vertebrae starting from the base of the skull?  
Apakah urutan vertebra yang betul bermula daripada dasar tengkorak ?

- |               |               |
|---------------|---------------|
| A. K, M, L, N | B. L, M, K, N |
| C. M, L, N, K | D. N, L, M, K |