

1. Rajah 1 di bawah menunjukkan struktur sejenis sel.  
Diagram 1 below shows the structure of a cell.



Rajah 1 / Diagram 1

Apakah fungsi organel X?  
What is the function of organelle X?

- |   |  |   |   |
|---|--|---|---|
| A | <u>Hasilkan ATP</u><br>Produce ATP                           | B | <u>Menyerap tenaga cahaya</u><br>Absorbed light energy              |
| C | <u>Tapak penjanaaan protein</u><br>Site of protein synthesis | D | <u>Mengkordinasi aktiviti sel</u><br>Coordinate cellular activities |

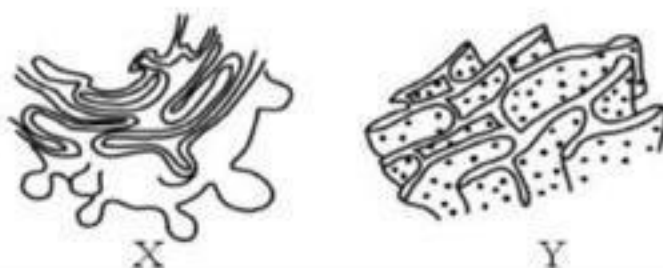
2. Maklumat berikut berkenaan organel Y.  
The following information refers to organelle Y.

- Terdapat dengan banyak pada sel otot serangga dan Burung  
Found in large number in flight muscle cells of insects and birds
- Berfungsi sebagai tapak penjanaaan tenaga (ATP)  
Functions as a site to generate energy(ATP)

Apakah organel Y?  
What is organelle Y?

- A Mitokondrion  
Mitochondrion
- B Jasad Golgi  
Golgi apparatus
- C Ribosom  
Ribosome
- D Nukleus  
Nucleus

3. Rajah 2 di bawah menunjukkan dua organel X dan Y.  
Diagram 2 below shows two organelles X and Y.



Rajah 2 / Diagram 2

Apakah fungsi X dan Y?  
What is the function of X and Y?

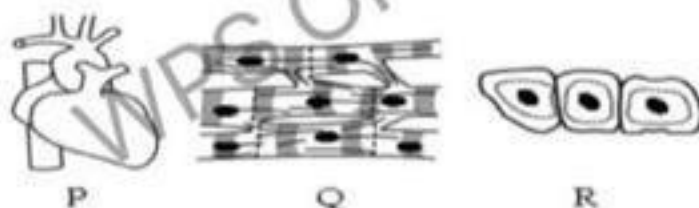
	X	Y
A	<u>Sintesis protein</u> Synthesises proteins	<u>Sintesis lipid</u> Synthesises lipids
B	<u>Mengangkut protein yang telah disintesis</u> Transports synthesised proteins	<u>Pengangkut lipid yang telah disintesis</u> Transports synthesised lipids
C	<u>Mengasingkan karbohidrat</u> Sorts carbohydrates	<u>Mengasingkan protein</u> Sorts synthesised proteins
D	<u>Membungkus protein</u> Packages proteins	<u>Mengangkut protein yang telah disintesis</u> Transports synthesised proteins

4. Manakah antara tisu berikut yang melindungi bahagian luar organisma?

4. Manakah antara tisu berikut yang melindungi bahagian luar organisma?  
*Which of the following tissues protect the outer parts of an organism?*

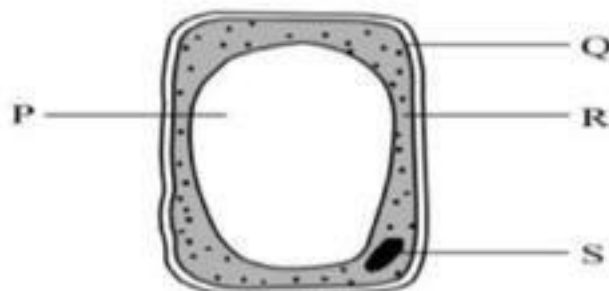
- A Otot  
*Muscle*
- B Epidermis  
*Epidermis*
- C Tisu penghubung  
*Connective tissue*
- D Epithelium  
*Epithelium*

5. Rajah di bawah menunjukkan pelbagai struktur P, Q dan R dalam organisasi.  
*Diagram below shows the different structures P, Q and R in a cell organisation.*



Yang manakah antara berikut adalah aras organisasi sel yang betul?  
*Which of the following is the correct level of cell organization?*

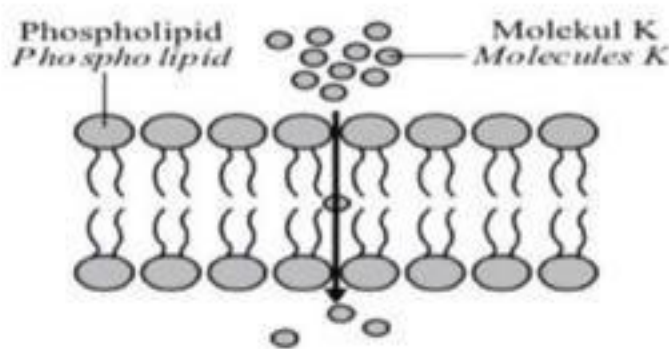
- A  $P \rightarrow Q \rightarrow R$
  - B  $R \rightarrow Q \rightarrow P$
  - C  $P \rightarrow R \rightarrow Q$
  - D  $Q \rightarrow R \rightarrow P$
6. Rajah 3 di bawah menunjukkan keadaan satu sel tumbuhan selepas direndam dalam larutan hipotonik.  
*Diagram 3 below shows the condition of a plant cell after being immersed in a hypotonic solution.*



Rajah 3 / Diagram 3

Yang manakah antara bahagian berlabel P, Q, R dan S menunjukkan bahawa sel ini segah?  
*Which of the part labelled P, Q, R and S shows that the cell is turgid?*

- A P
  - B Q
  - C R
  - D S
7. Rajah 4 di bawah menunjukkan pergerakan molekul K merentasi lapisan fosfolipid.  
*Diagram 4 below shows the movement of molecules K across phospholipid bilayer.*



Rajah 4 / Diagram 4

Namakan molekul K.  
*Name the molecule K.*

- A Glukosa / Glucose
- B Asid amino / Amino acid
- C Asid lemak / Fatty acids
- D Glikoprotein / Glycoprotein



8.



Rajah 5 / Diagram 5

Which process only occur in this organelle?

*Proses yang manakah hanya berlaku dalam organel ini?*

- A. Osmosis / *Osmosis*
- B. Diffusion / *Resapan*
- C. Respiration / *Respirasi*
- D. Photosynthesis / *Fotosintesis*

9. The diagram 6 shows a type of animal tissue.

*Rajah 6 menunjukkan sejenis tisu haiwan.*

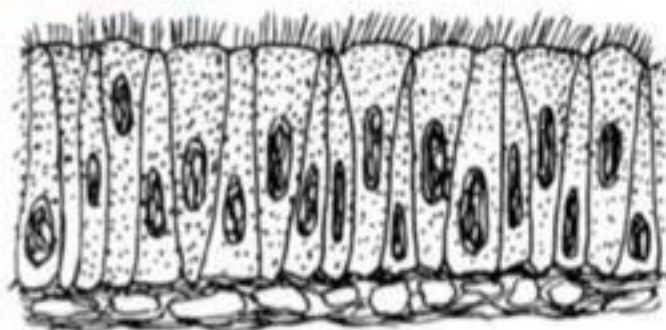


Diagram 6 / Rajah 6

What is the tissue?

*Apakah tisu tersebut?*

- A. Epithelial tissue / *Tisu epitelium*
- B. Connective tissue / *Tisu penghubung*
- C. Smooth muscle tissue / *Tisu otot licin*
- D. Skeletal muscle tissue / *Tisu otot rangka*

10. The diagram 7 shows the process of feeding by *Amoeba* sp.

*Rajah 7 menunjukkan cara makan oleh Amoeba sp.*



Diagram 7 / Rajah 7

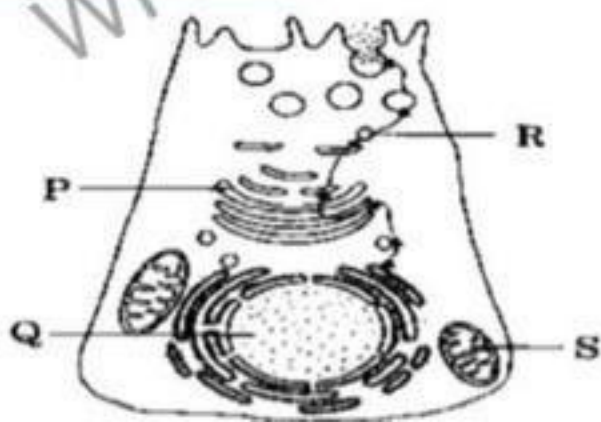
Which organelle is **not** involved in the process shown in the diagram?

*Organel yang manakah tidak terlibat dalam proses yang ditunjukkan di dalam rajah?*

- A. Lysosome / *Lisosom*
- B. Pseudopodia / *Pseudopodia*
- C. Food vacuole / *Vakuol makanan*
- D. Contractile vacuole / *Vakuol mengecut*

11. Figure 8 below shows the structure of an animal cell.

*Rajah 8 dibawah menunjukkan struktur sel haiwan.*



17. Which organelle is involved in the formation of spindle fibres?

Organel manakah yang terlibat dalam pembentukan gentian gelendong?

- A. Nucleus / Nukleus
- B. Ribosome / Ribosom
- C. Lysosome / Lisosom
- D. Centriole / Sentriol

18. What is protoplasm?

Apakah protoplasma?

- A. Structure consists of nucleus  
Struktur yang terdiri daripada nukleus
- B. Structure consists of cytoplasm  
Struktur yang terdiri daripada sitoplasma
- C. Structure consists of nucleus and cytoplasm  
Struktur yang terdiri daripada nukleus dan sitoplasma
- D. Structure consists of all organel dalam sel  
Struktur yang terdiri daripada semua organel di dalam sel

19. Diagram 11 shows the main structure of a plasma membrane.

Rajah 11 menunjukkan struktur utama membran plasma.

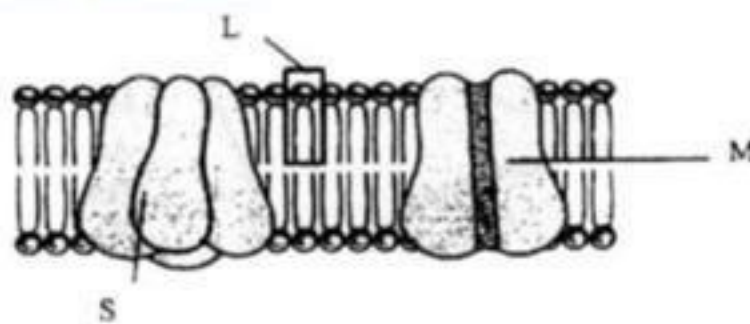


Diagram 11 / Rajah 11

What are L, M, and S?

Apakah L, M, dan S?

	L	M	S
A	<u>Phosfolipid</u> <u>Fosfolipid</u>	<u>Carrier protein</u> <u>Protein pembawa</u>	<u>Pore protein</u> <u>Protein liang</u>
B	<u>Phosfolipid bilayer</u> <u>Dwi lapisan fosfolipid</u>	<u>Pore protein</u> <u>Protein liang</u>	<u>Carrier protein</u> <u>Protein pembawa</u>
C	<u>Phosfolipid</u> <u>Fosfolipid</u>	<u>Pore protein</u> <u>Protein liang</u>	<u>Carrier protein</u> <u>Protein pembawa</u>
D	<u>Phosfolipid bilayer</u> <u>Dwi lapisan fosfolipid</u>	<u>Carrier protein</u> <u>Protein pembawa</u>	<u>Pore protein</u> <u>Protein liang</u>

20. Diagram 12 shows the structure of a plasma membrane.

Rajah 12 menunjukkan struktur membran plasma.

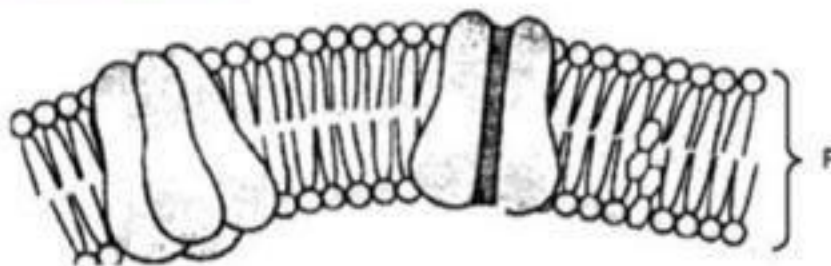


Diagram 12 / Rajah 12

Which of the following molecules can pass through P?

Manakah antara molekul berikut dapat merentasi P?

- |   |  |   |                                    |
|---|--|---|------------------------------------|
| A | <u>Amino Acid</u><br><u>Amino Asid</u> | C | <u>Glycogen</u><br><u>Glikogen</u> |
| B | <u>Water</u><br><u>Air</u>             | D | <u>Starch</u><br><u>Kanji</u>      |



11. Figure 8 below shows the structure of an animal cell.  
*Rajah 8 dibawah menunjukkan struktur sel haiwan.*

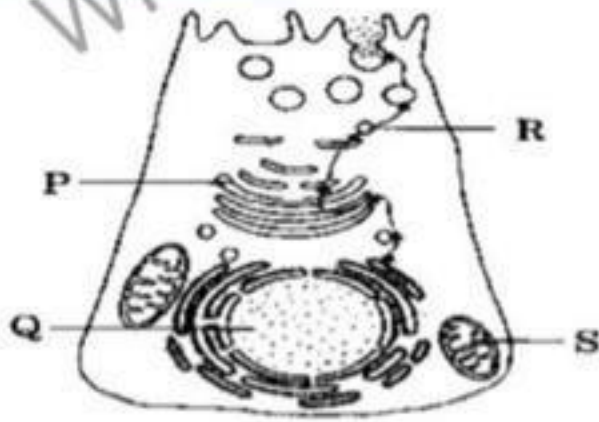


Diagram 8 / Rajah 8

Choose the correct matching.  
*Pilih padanan yang betul.*

	Organelle <i>Organel</i>	Function <i>Fungsi</i>
A	P	Modify protein <i>Mengubahsuai protein</i>
B	Q	Site of cellular respiration <i>Tapak respirasi sel</i>
C	R	Store water and mineral salts <i>Menyimpan air dan garam mineral</i>
D	S	Synthesis protein <i>Sintesis protein</i>

12. Figure 7 shows the structure of a plant cell.  
*Rajah 7 menunjukkan struktur sel tumbuhan.*

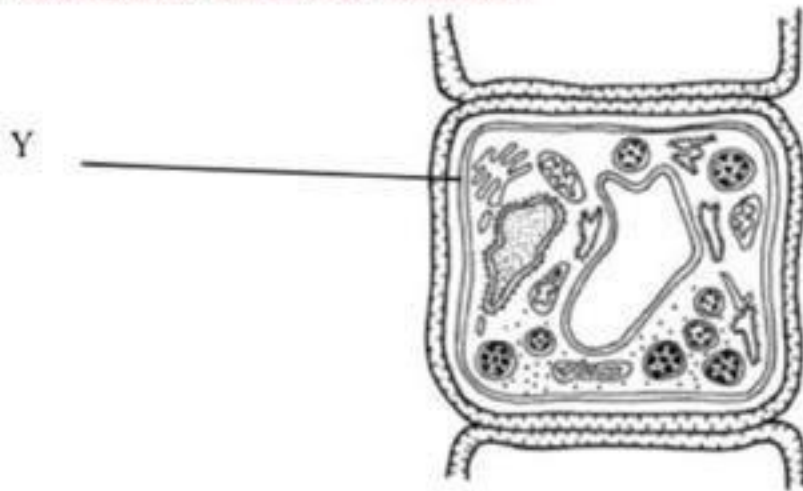


Diagram 9 / Rajah 9

Which one of the following is true about Y?  
*Manakah antara yang berikut benar tentang Y?*

- A. Semipermeable / *Separa telap*
- B. Elastic / *Kenyal*
- C. Fully permeable / *Telap sepenuhnya*
- D. Flexible / *Fleksibel*

13. The figure 10 shows different human cells and organs.  
*Rajah 10 menunjukkan sel dan organ manusia yang berbeza.*



Diagram 10 / Rajah 10

Which system do these cells and organs belong to?  
*Sistem yang manakah sel dan organ tersebut terdapat?*

W	X	Y	Z
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13. The figure 10 shows different human cells and organs.  
*Rajah 10 menunjukkan sel dan organ manusia yang berbeza.*

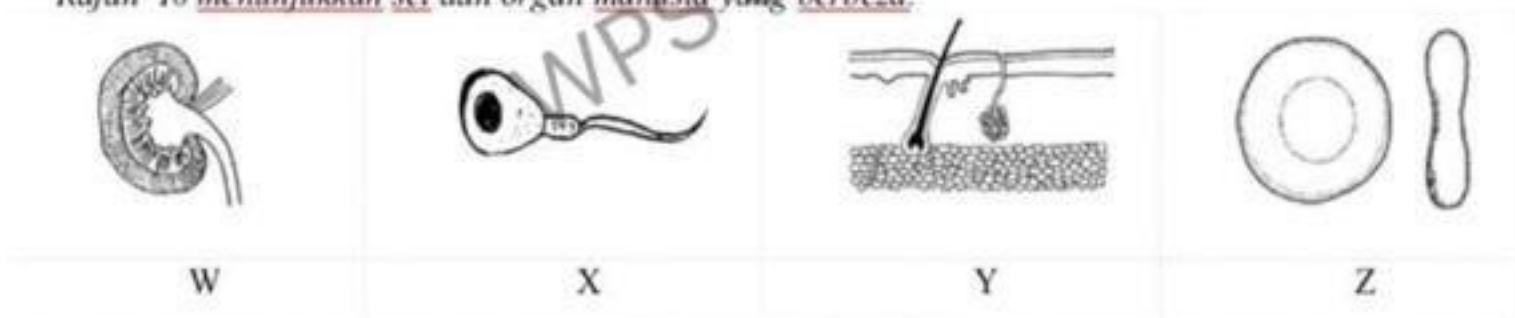


Diagram 10 / Rajah 10

Which system do these cells and organs belong to?

*Sistem yang manakah sel dan organ tersebut terdapat?*

	W	X	Y	Z
A	Endocrine system <i>Sistem endokrin</i>	Respiratory system <i>Sistem respirasi</i>	Digestive system <i>Sistem pencernaan</i>	Integumentary system <i>Sistem integumen</i>
B	Excretory system <i>Sistem perkumuhan</i>	Reproductive system <i>Sistem pembiakan</i>	Integumentary system <i>Sistem integumen</i>	Blood circulatory system <i>Sistem peredaran darah</i>
C	Digestive system <i>Sistem pencernaan</i>	Endocrine system <i>Sistem endokrin</i>	Nervous system <i>Sistem saraf</i>	Respiratory system <i>Sistem respirasi</i>
D	Integumentary system <i>Sistem integumen</i>	Reproductive system <i>Sistem pembiakan</i>	Muscular system <i>Sistem rangka</i>	Blood circulatory system <i>Sistem peredaran darah</i>

14. The following statements are about an organelle of a cell.

*Pernyataan berikut adalah berkaitan dengan organel satu sel.*

- Exist freely in the cytoplasm or attached to the rough endoplasmic reticulum.  
*Terdapat di dalam sitoplasma secara bebas atau melekat pada jalinan endoplasma kasar.*
- Site of protein synthesis  
*Tapak sintesis protein.*

What is the organelle?

*Apakah organel tersebut?*

- A. Vacuole / *Vakuol*
- B. Nucleus / *Nukleus*
- C. Ribosome / *Ribosom*
- D. Golgi body / *Jasad Golgi*

15. Which of the following cells forms the basic tissues in plants?

*Antara sel berikut, yang manakah membentuk tisu asas dalam tumbuhan?*

- A. Guard cell / *Sel pengawal*
- B. Xylem cell / *Sel xilem*
- C. Epidermal cell / *Sel epidermis*
- D. Parenchyma cell / *Sel parenkima*

16. Which organ consists of cells which have the highest density of rough endoplasmic reticulum?

*Organ manakah yang mengandungi sel-sel yang mempunyai kepadatan retikulum endoplasma kasar yang paling tinggi?*

- A. Stomach / *Perut*
- B. Heart / *Jantung*
- C. Brain / *Otak*
- D. Kidney / *Ginjal*

17. Which organelle is involved in the formation of spindle fibres?

*Organel manakah yang terlibat dalam pembentukan gentian gelendong?*

- A. Nucleus / *Nukleus*