

Question Number	Answer	Mark
1(a) (i)	B - a chloroplast ;	(1)

Question Number	Answer	Mark
1(a)(ii)	D - stroma ;	(1)

Answer	Additional Guidance
1. double membrane / envelope / eq ;	1. ACCEPT 'double cell membrane'
2. ribosomes ;	2. IGNORE reference to size of ribosome
3. idea that some (internal) membranes folded ;	
4. plasmid (of DNA) / circular DNA / loop of DNA / eq ;	4. NOT just DNA or genetic material – must refer to the type of DNA

eukaryotic cells have membrane bound organelles

OR

prokaryotic cells do not have membrane bound organelles ;

Organelles	Prokaryotic cell	Eukaryotic cell
centrioles	x	✓
flagella	✓	✓
Golgi apparatus	x	✓
ribosomes	✓	✓

1 mark for any two correctly completed boxes ;

Blanks are incorrect
Composite tick and cross are incorrect unless clearly replaced

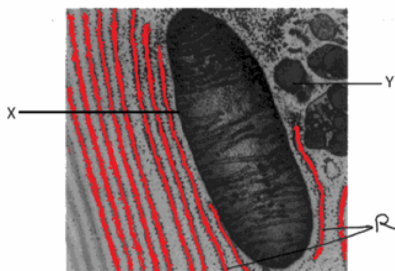
Q2

Answer

C - a mitochondrion ;

Additional Guidance

example of correct response



1. idea that ribosomes synthesise the { polypeptide / protein / eq } ;
2. proteins { move into / transported through / eq } (the rER) ;
3. protein is folded / forms {3-D shape / secondary structure / tertiary structure } ;
4. idea that vesicles (containing the protein) are formed by rER ;

ACCEPT reference to enzyme or a hormone instead of protein for MP1 to MP4

1. **ACCEPT** ribosome as site of translation
2. **ACCEPT** proteins move through cisternae
3. **IGNORE** quaternary
4. **IGNORE** secretory

Answer	Additional Guidance
1. idea that these vesicles move from Golgi (body) to the cell (surface) membrane ; 2. idea that the (secretory) vesicle fuses with cell (surface) membrane ; 3. by exocytosis ;	3. NOT both exocytosis and endocytosis

Q3

Question Number	
1(a)(i)	B mitochondrion

Question Number	
1(a)(ii)	C ribosomes

Question Number	
1(a)(iii)	A chloroplast

Question Number	
1(a)(iv)	A centrioles

Question Number	
1(a)(v)	B chloroplasts, mitochondria and nuclei

Question Number	Acceptable Answers	Additional Guidance
1(b)	1. both consist of {membrane bound sacs / cisternae } ; 2. in both the { cisternae / eq } are interconnected / eq ; 3. rER has (80s) ribosomes and sER does not ;	interconnected cisternae gains mp 1 and 2

Q4

Answer

3(a)(i). The only correct answer is C

A is not correct because the cell membrane, mitochondria, nucleus and ribosomes are all found in both plant and animal cells

B is not correct because the cell membrane, mitochondria, nucleus and ribosomes are all found in both plant and animal cells

D is not correct because the cell wall is found only in plant cells

Answer

3(a)(ii). The only correct answer is A

B is not correct because the cell wall is the only structure found in plant cells but not animal cells

C is not correct because the cell wall is the only structure found in plant cells but not animal cells

D is not correct because the cell wall is the only structure found in plant cells but not animal cells

Answer

3(a)(iii). The only correct answer is A

B is not correct because all of the structures listed are found in both animal and plant cells

C is not correct because all of the structures listed are found in both animal and plant cells

D is not correct because all of the structures listed are found in both animal and plant cells

Answer			Additional guidance
Name of organelle	Structure of organelle	Role of organelle	
centrioles	Any two of: 1. pair of { cylinders / tubes / hollow rods } ; 2. at right angles ; 3. 9 triplets of (micro)tubules ;	formation of spindle fibres	ACCEPT plural word for the names ACCEPT phonetic spellings 1. NOT tubules 2.ACCEPT perpendicular / 90° 3. NOT 9 + 2 3. ACCEPT 9 + 0 Structure: mp1 ACCEPT stack of { flattened sacs / fluid-filled sacs } Role: ACCEPT production of { lipoprotein / glycoprotein / lysosomes } ACCEPT lysosome but NOT lysozyme
mitochondrion ;	1. inner membrane folded to form cristae 2. circular DNA found in the matrix	aerobic respiration	
Golgi apparatus	Any two of: 1. stacks of cisternae / eq ; 2. (cisternae) have curved shape ; 3. vesicles ;	modification of { protein / lipid } / eq ;	
ribosome ;	1. consists of two subunits 2. made of protein and RNA	Translation	
lysosome ;	1. surrounded by a single membrane 2. contains hydrolytic enzymes	destruction of bacteria	