



EXAM PAPERS PRACTICE

Boost your performance and confidence with these topic-based exam questions

Practice questions created by actual examiners and assessment experts

Detailed mark scheme

Suitable for all boards

Designed to test your ability and thoroughly prepare you

Level: IGCSE Oxford AQA Biology (9201)

Subject: Biology

Topic: IGCSE AQA Biology

Type: Mark Schemes

2002



1583

To be used by all students preparing for IGCSE Oxford AQA Biology (9201)
Students of other Boards may also find this useful

Biology

IGCSE AQA

Key skills



Mark schemes

1. (a) any **two** from:
- regular hand washing
 - **or**
use hand sanitiser / alcohol gel
 - cover nose / mouth when coughing / sneezing
allow wear a face mask
 - put used tissues (straight) in the bin
 - don't kiss uninfected people
allow isolate patient from others
 - **or**
don't share cutlery / cups / drinks with uninfected people
 - clean / disinfect / sterilise surfaces regularly
ignore responses referring to infected people
- 2
- (b) any **three** from:
- stimulate (mouse) lymphocytes to produce antibody
for marking points 1 and 2 lymphocyte must be used at least once
 - combine (mouse) lymphocyte with tumour cell
 - **or**
(create a) hybridoma
 - clone (hybridoma) cell
 - (hybridoma) divides rapidly **and** produces the antibody
- 3
- (c) any **two** from:
- (monoclonal) antibody binds to virus **or** antibody binds to antigen on surface of virus
 - (monoclonal) antibody is complementary (in shape) / specific to antigen (on surface of virus)
 - white blood cells / phagocytes kill / engulf the virus(es)
- 2



(d) as a control
or
to see / compare the effects of the treatment (vs. no treatment)

1

(e) $(4.8 + 10.4) \div 2 \div 100 \times 1500$
or
 $(4.8 \div 100 \times 750) + (10.4 \div 100 \times 750)$

1

114

an answer of 114 scores 2 marks
allow 228 for 1 mark

1

(f) (supports the conclusion because)
over double the number / % of patients (in the trial) were hospitalised with the
placebo (compared to MAB) 1

(does not support the conclusion because)

no information on patients not hospitalised / still unwell at home

or

other factors may have affected those admitted to hospital

allow correct named factor e.g. age / gender / other illness

or

don't know if it was a double blind trial

1

[12]



2. (a) **A** 1
- (b) any **one** from:
• identify / locate specific molecules / other hormones
• locate blood clots
• diagnose / treat some cancers 1
- (c) (as) urine passes through reaction zone 1
- HCG hormone binds to the mobile HCG antibody (in the reaction zone) 1
- (passes up the stick) HCG hormone binds to the immobilised HCG antibodies in the results zone 1
- (the other) antibodies which do not attach to HCG 1
- bind to antibodies in control zone 1
- blue dye appears in both control and results zones (to show positive result) 1
- EXAM PAPERS PRACTICE [8]
3. (a) (mouthpiece) has pierced / entered the phloem
or
(the aphid) has been feeding from the phloem 1
- (b) yellow leaves due to lack of chlorophyll
ignore 'chloroplasts'
ignore magnesium is needed to make chlorophyll 1
- (therefore) less / no light absorbed (by chlorophyll) 1
- (therefore) lower rate of / no photosynthesis
do not allow 'energy is produced by photosynthesis'



(therefore) plant makes less / no sugar / glucose

1

(therefore) plant converts less / no sugar / glucose into protein (for growth, so growth is stunted)

1

allow less glucose / sugar converted into cellulose (cell wall)

allow less energy for protein synthesis

1

(c) inject the protein / it into a mouse

1

combine lymphocytes with tumour / cancer cells to make hybridoma (cells)

ignore white blood cells

allow T or B lymphocytes

ignore tumour unqualified

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1

find a hybridoma which makes a monoclonal antibody specific to PVY

1

(the scientist) clones (the hybridoma) to produce many cells (to make the antibody)

*do **not** allow cloning of original stem cells*

allow many rounds of cloning / mitosis

1

[10]