



eduresourceza.com

EXAM PREPARATION: PAPER 2**SECTION A: TYPICAL EXAM QUESTIONS – 35 Minutes ONLY****Question 1: 7 marks 5 minutes***(Taken from DoE Additional Exemplar 2008 Paper 2)*

Give the correct biological term for each of the following descriptions. Write only the term next to the question number.

- 1.1. Chemicals used to kill insects
- 1.2. The method used to determine the age of fossils
- 1.3. The simultaneous elimination of large numbers of species on a worldwide scale
- 1.4. The term used to indicate the variety of living organisms on earth
- 1.5. The release of harmful substances into the environment
- 1.6. Development that meets the needs of the present without compromising the ability of future generations to meet their own needs
- 1.7. Carbon-based minerals such as oil and coal which release heat energy during combustion

(7)

Question 2: 6 marks 5 minutes*(Taken from DoE Additional Exemplar 2008 Paper 2)*

Study the table below showing the amount of medical waste produced by three provinces over a number of years.

YEAR	AMOUNT OF MEDICAL WASTE (TONNES)				
	1995	1997	1999	2001	2003
Province A	357	398	410	426	450
Province B	283	290	300	312	330
Province C	230	240	245	270	290

- 2.1. Which province has shown the most rapid increase in the amount of medical waste produced? (1)
- 2.2. What was the percentage increase of medical waste produced by the province named in QUESTION 2.1 over the period 1995 to 2003? Show ALL workings. (3)
- 2.3. Give TWO negative effects of dumping medical waste. (2)

[6]

Question 3: 12 marks 10 minutes*(Taken from DoE Additional Exemplar 2008 Paper 2)*

Study the table below showing fishing limits for two types of fish (1 and 2) in two different countries.

TYPES OF FISH	COUNTRY A	COUNTRY B
Fish 1	56 700	205 720
Fish 2	106 360	833 200

- 3.1. State what information is needed to set the fishing limit for each of the two countries? (2)
- 3.2. Why is the quota for fish 2 higher than that of fish 1? (2)
- 3.3. The limits for both types of fish could be different in a few years' time. Give a reason for this. (2)
- 3.4. Explain THREE management strategies by which each country could try to keep within its fishing limits. (6)
- [12]**

Question 4: 6 marks 5 minutes*(Taken from DoE Additional Exemplar 2008 Paper 2)*

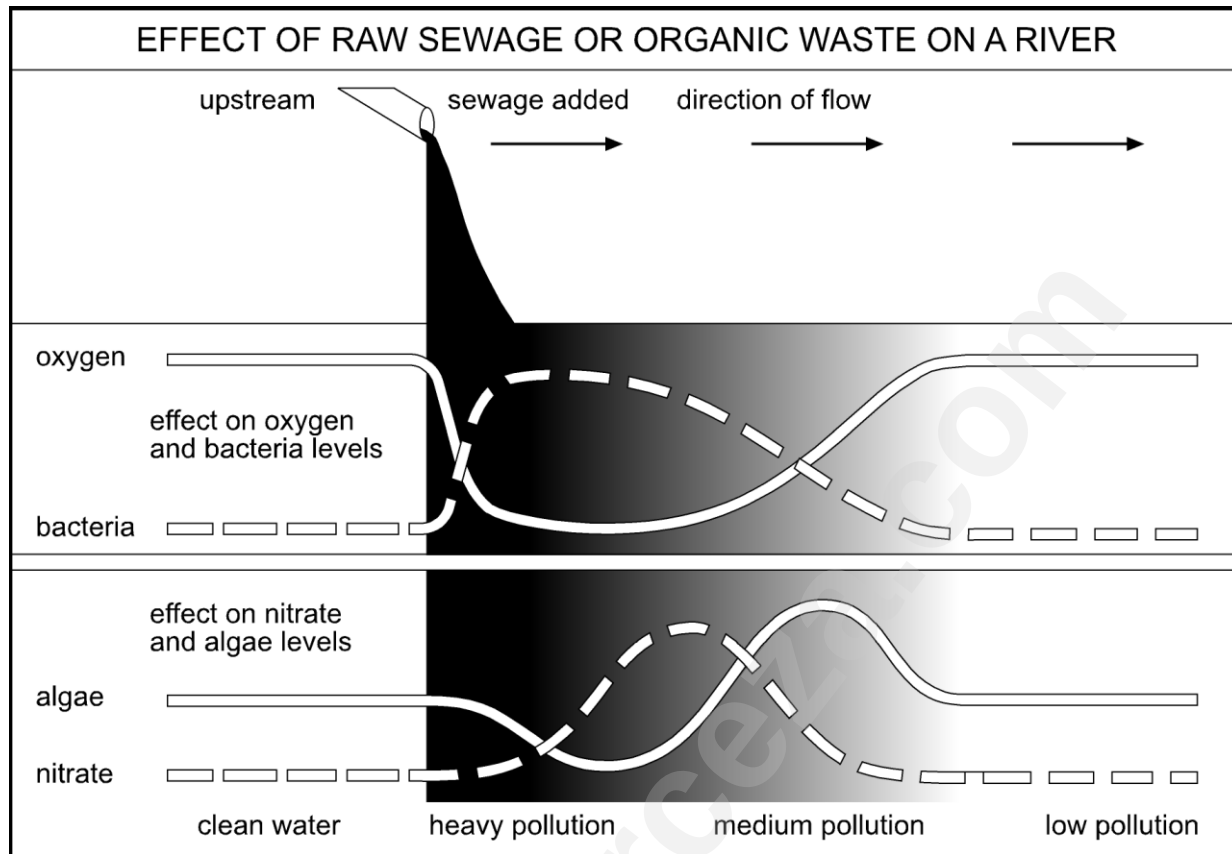
Explain how scientists have used each of the following as evidence for evolution:

- 4.1. An appendix is present in the alimentary canal of humans (3)
- 4.2. Gills slits are present at one stage in the development of the human embryo (3)
- [6]**

Question 5: 10 marks 10 minutes*(Taken from St Mary's DSG July 2009 Paper 2)*

The graph overleaf shows the effect of dumping raw sewerage into a river.

- 5.1 The levels of which **TWO** substances increase rapidly after sewage is added? (2)
- 5.2 Why is there a rapid decrease in the level of oxygen in the water when sewage is added? (3)
- 5.3 What effect is the sharp drop in oxygen levels going to have on the ecosystem of the river? (2)
- 5.4 Why do the algal numbers decrease when the sewerage is added? (1)
- 5.5 Give the scientific name of the bacterium that is present in human faeces that is a good indicator of the level of sewerage in water. (1)
- 5.6 When the algal numbers recover after the initial decline, why do numbers then exceed the normal population level of algae in the river? (1)
- [10]**



SECTION B: SOLUTIONS AND HINTS TO SESSION 39

Question 1:

- | | |
|--------|--------|
| 1.1. C | 1.6. D |
| 1.2. D | 1.7. C |
| 1.3. C | 1.8. D |
| 1.4. A | 1.9. B |
| 1.5. C | 1.10 A |

(10)

Question 2:

- | | |
|-----|-----|
| 2.1 | J ✓ |
| 2.2 | H ✓ |
| 2.3 | F ✓ |
| 2.4 | A ✓ |
| 2.5 | C ✓ |
| 2.6 | B ✓ |

(6)

Question 3

- 3.1 - Outbreeding increases variability ✓ of alleles in the gene pool
 - making the population more resistant to disease ✓ - and breeding disorders ✓ any (2)
- 3.2 Desirable alleles can be selected and passed on to successive generations ✓ (1)

Question 4

- 4.1. Permian ✓ period (1)
- 4.2 - The number of reptile species decreased ✓✓
 - The number of mammal species increased ✓✓

OR

- In the beginning of the Cretaceous period the number of reptile species was large ✓
 - but towards the end of the Cretaceous period the number of reptile species decreased ✓

OR

- In the beginning of the Cretaceous period the number of mammal species was very small ✓
 but towards the end of the Cretaceous period the number of mammal species started to increase ✓ (4)

- 4.3 Reptiles ✓, birds ✓ and mammals ✓ (3)

- 4.4 Birds are more closely related to reptiles ✓
 They share a immediate ✓/more recent common ancestor ✓ (3)

Question 5

- 5.1. **Any TWO relevant points from the following:**

- Lack of infrastructure / lack of municipal sewage connection ✓
- Inexpensive/ cheap / costs little ✓
- Long distances for sewerage pipes to travel ✓ (2)

- 5.2. Decomposed by bacteria ✓/decomposition by maggots living at the bottom of the pit. ✓ (2)

- 5.3. a) bucket system ✓ (1)
 b) flush toilets ✓ (1)

- 5.4 Approximately 47% ✓ (1)