Practice Question Set For GCSE
Subject : Biology
Paper-1 Topic: B1 Cell Biology

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Name of the Student:_____
Max. Marks : 18 Marks **Time : 18 Minutes**

Mark Schemes

Q1.

(a) negative feedback (control)

ignore homeostasis

1

(b) A = glucagon
B = insulin

both required in correct order

correct or phonetic spelling only

1

(c) **Indirect marking**

view with (b)

(when blood glucose concentration is high after a meal) insulin / B is secreted (by the pancreas) causing glucose to enter cells

1

(glucose is) converted to glycogen in the liver / muscle (cells for storage)

1

(this causes) blood glucose concentration to return to normal so insulin / B secretion slows / stops / decreases

1

when blood glucose concentration is low glucagon / A is secreted (by the pancreas)

1

(which causes) breakdown of glycogen in the liver (into glucose)

allow (which causes) breakdown of glycogen in the muscle (cells)

1

(this causes) blood glucose concentration to return to normal so glucagon / A secretion slows / stops / decreases

1

(d) FSH causes (several) ova / eggs to mature (in the ovary)

allow singular ovum / egg

allow follicle for ovary

1

(then) LH causes ovulation
or
LH causes release of the ova / eggs

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allow singular ovum / egg

1

so more eggs / ova present therefore higher probability / chance of fertilisation
or
so more eggs / ova present therefore higher probability / chance of sperm fusing with an egg

1

(e) collection of (mature) egg(s) from the ovary
allow follicle for ovary

1

(which are) fertilised (in the laboratory)
*do **not** accept if in fallopian tube*
allow egg and sperm fuse

1

develop into embryo(s) (in the laboratory)
allow develop / divide into small balls of cells (in the laboratory)
*do **not** accept foetus*

1

embryo(s) inserted into uterus / womb

1

(f) any **three** from:

- meiosis for sperm cells **and** mitosis for liver cells
- two cell divisions to form sperm **and** one cell division to form liver (cells)
- four genetically different sperm cells **and** two genetically identical liver cells
  *allow four genetically different cells formed from meiosis **and** two genetically identical cells formed from mitosis*
- sperm cells have 23 chromosomes **and** liver cells have 46 chromosomes
  *allow sperm cells have 23 chromosomes **and** liver cells have 23 pairs of chromosomes*
  allow haploid (sperm) and diploid (liver cells)
  ignore reproduction
  *max **2** marks if reference to sperm cells dividing*

3

[18]

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