**B1 Rev Pack 7 markscheme**

**M1.**(a)     mitosis

*extra box ticked negates mark*

**1**

(b)     cell division is uncontrolled

*extra box ticked negates mark*

**1**

(c)     any **one** from:

•        smoking / tar

•        alcohol

•        carcinogens

*allow named chemical*

•        viruses (living in cells)

•        (ionising) radiation

*accept UV / X-rays / gamma waves*

**1**

(d)     bar plotted at 78%

*ignore width of bar*

**1**

(e)     testicular

*extra box ticked negates mark*

**1**

(f)     prostate

*extra box ticked negates mark*

**1**

(g)     any **two** from:

•        improved treatment / drugs

•        earlier diagnosis

•        more cancer screening

•        improved patient knowledge (of risk factors)

*allow improved patient diet / lifestyle*

**2**

**[8]**

**M2.**(a)     (i)      (as a result of) uncontrolled / abnormal growth / division of cells

*ignore mutation*

*allow cells dividing with no contact inhibition*

**1**

(ii)     benign tumours do not invade / spread to other tissues / do not form secondary tumours

*accept converse for malignant*

*accept benign tumours do not metastasise*

**1**

(b)     via the blood / circulatory system

*accept via lymphatic system*

**1**

(c)     (i)      incidence is increasing

**1**

more rapidly (over the years)

*ignore figures*

**1**

difference between rich and poor areas is getting less

**or**

the incidence is rising fastest in people from poor areas

*accept converse for people from rich areas*

**1**

(ii)     risk factor is UV from sunlight

*ignore ionising radiation*

**1**

more UK citizens going abroad or taking holidays in the Sun

**or**

poorer people can afford holidays in the Sun

**or**

more poorer people are taking holidays in the Sun

**1**

**[8]**

**M3.**(a)     cells can break off

*allow cells invade other tissues*

**1**

travel in blood

*accept travel in lymph (fluid)*

**1**

(b)     

**1**

85.4 (%)

*allow 85.4 (%) with no working shown for* ***2*** *marks)*

**1**

(c)     any **two** from:

•        similar survival rates for diagnosis in 1961

•        survival rate (for diagnosis in 2011) is 1.5 times greater for prostate cancer  
compared to bowel cancer

•        (survival rates) have improved for both cancers

•        (survival rate) for prostate cancer has improved more

*accept survival rate for bowel cancer has increased 2.4 times* ***but*** *for prostate cancer 3.4 / 3.36 times*

**2**

plus **two** from:

•        earlier diagnosis

•        improved screening programmes

•        improved drugs

•        difference in level of aggression of cancers

•        difference in ease of removing tumours

*reason must be correctly linked to comparison*

**2**

**[8]**

**M4.**(a)     (i)      64

**1**

(ii)     36

*allow e.c.f from (i) i.e. 100 − answer given in (a)(i)*

**1**

(iii)    any **one** from:

•        only considers 16-year-olds

*ignore lack of evidence*

*allow does not refer to all ages*

•        only about some / 5 countries

*allow does not refer to all countries.*

**1**

(b)     the more exercise done the healthier a person is

*allow the more exercise done the higher the health rating*

*allow the less exercise done the lower the health rating*

**1**

(c)     having a high cholesterol level

**1**

(d)     (i)      antibodies

**1**

(ii)     antibiotics

**1**

**[7]**

**5**a)    any **two** from:

•        arthritis

*allow damaged joints*

•        diabetes

*accept high blood sugar*

•        high blood pressure

•        strokes

*allow blocked blood vessels / thrombosis*

•        allow breathing difficulties

*ignore cancer*

*ignore high cholesterol*

**2**

(b)     (i)      any **two** from:

*to gain marks there must be a comparison*

*ignore comparison at single age*

•        lower number of women deaths up to age of 75-80

•        higher number of women deaths after 80

*ignore women die older****or****men die younger*

•        men’s peak higher

•        men’s peak at an earlier age

•        men’s death start earlier than women

•        more men than women die of heart disease

**2**

(ii)     any **two** from:

•        men smoke more (cigarettes)

•        more men smoke

•        men under more stress

•        men less active

•        more men overweight / eat more / less diet conscious **or** different fat distribution

*ignore reference to body size*

•        genetic factors

•        men might have lower metabolic rate

*ignore references to hormones*

•        men less likely to visit doctor even though they have symptoms

**2**

     6     higher BMIs due to increase in mass / weight (relative to height) / obesity

**1**

obesity / being overweight / being fat is a (significant) risk factor for Type 2 diabetes

*allow causes Type 2 diabetes*

**1**

7      any **three** from:

•        related to described change in diet eg fast foods

•        and less exercise

•        which increases the chance of obesity / increases BMI

•        increased awareness has helped to slow the increase

**3**