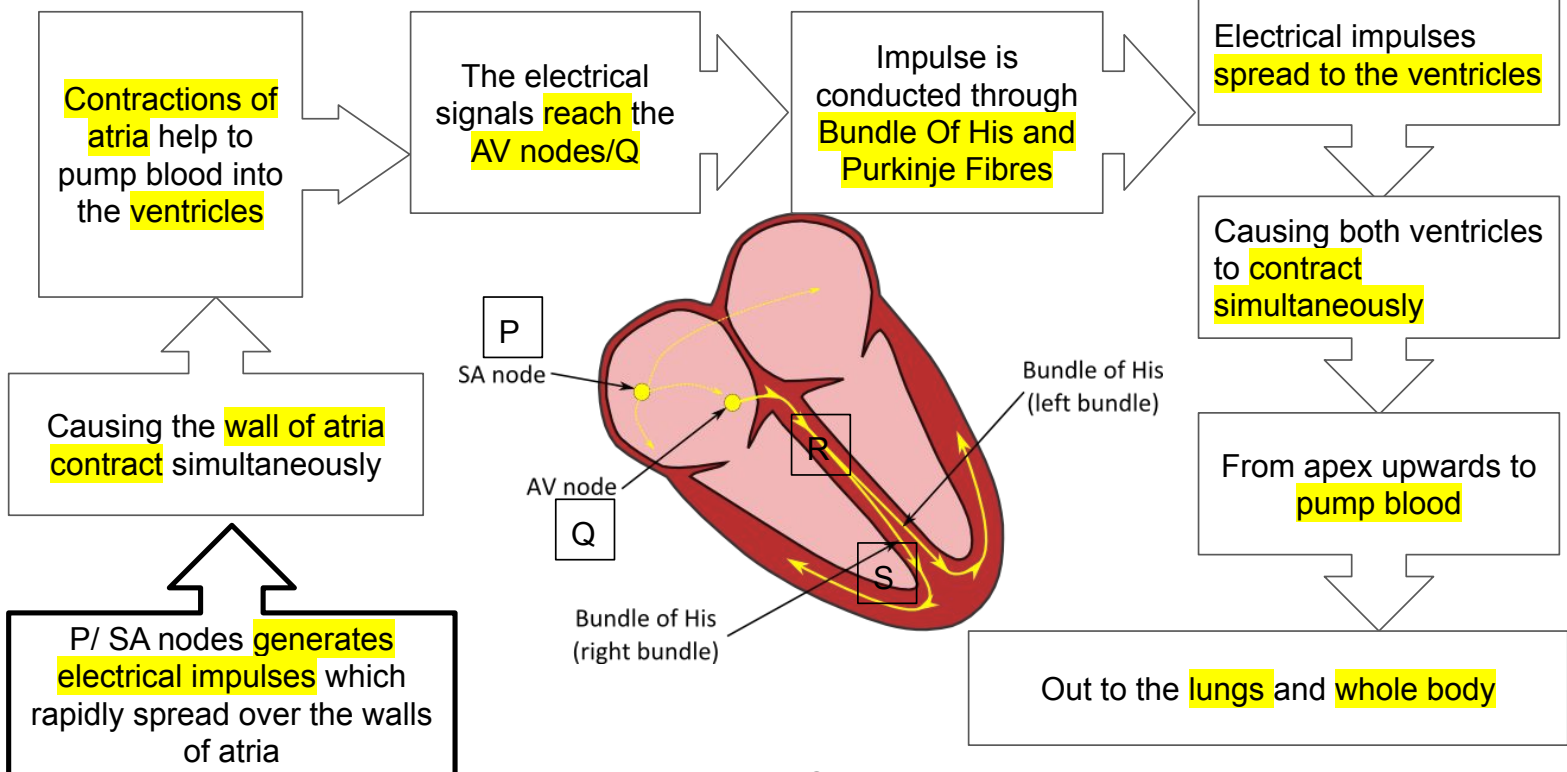


# PERAK 2020

NAYLI AFIQAH

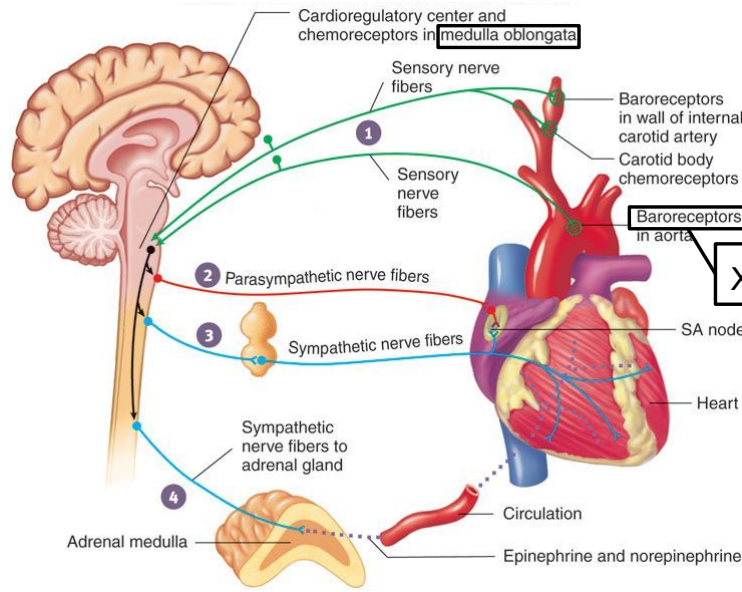
## QUESTION 6

### CONTRACTIONS OF HEART MUSCLES



6 MARKS

**ROLES OF BARORECEPTOR AND MEDULLA OBLONGATA IN REGULATIONS OF BLOOD PRESSURE IN THE BODY**



1 Higher/lower blood pressure detected by **baroreceptor** and

2 Situated in **carotid artery** and **arch of aorta** are **more/less** stimulated

3 Nerve Impulse sent to **cardiovascular centre** in **medulla oblongata**

6 Blood pressure returns to **normal**

5 To heart result in **weaker/ stronger** contractions of cardiac muscle/heart beat rate/vasodilation, vasoconstriction

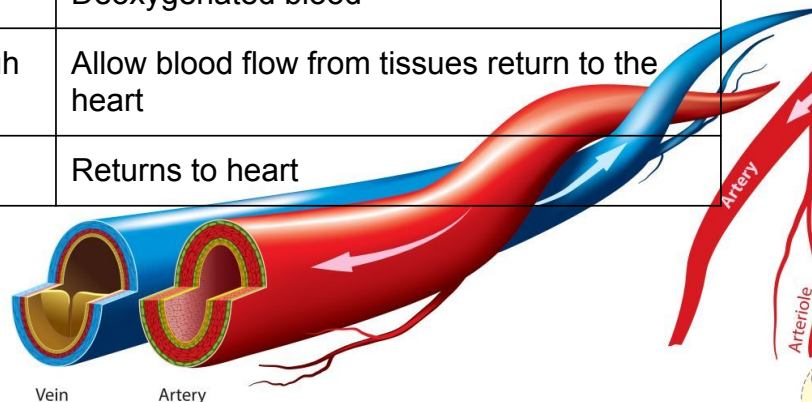
4 Send nerve impulse to the **effectors** via **parasympathetic nerves**

4 MARKS

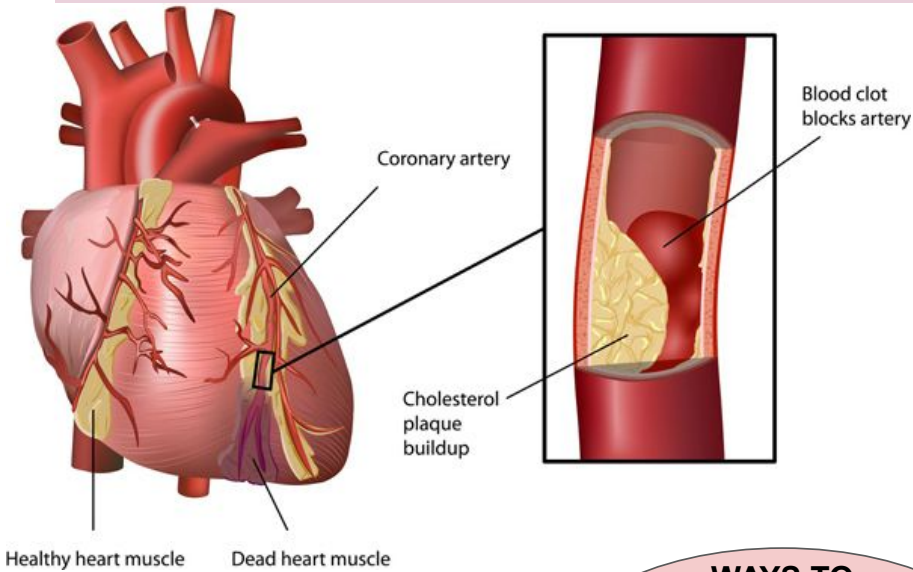
**DIFFERENCE BETWEEN ARTERY AND VEIN**

CHARACTERISTICS	ARTERY	VEIN
WALL	Thick, muscular,elastic	Thin, less muscular, less elastic
LUMEN	small	large
VALVE	No valve	Has valve (prevent backflow)
BLOOD PRESSURE	high	Very low
BLOOD	Oxygenated blood	Deoxygenated blood
FUNCTION	To transport blood quickly at high pressure from heart to tissues	Allow blood flow from tissues return to the heart
DIRECTION	Away from heart	Returns to heart

5 MARKS



## DEPOSITIONS OF CHOLESTEROL AT CORONARY ARTERY



### HEALTH PROBLEM

- Coronary artery blocked by deposition of cholesterol
- Narrowing the blood vessels and cause **atherosclerosis**
- High blood pressure/ hypertension
- **decrease** the **supply of oxygen** to the heart muscle
- **Rate of cellular respiration decreases**
- **Less** energy for contraction of muscle
- **Lack of energy**
- **Pumping of heart less** efficient
- Will cause heart attack, myocardial infarction, chest pain, strokes

### LIFESTYLE

- Diets rich in fat/glucose
- Lack of exercise
- smoking

### WAYS TO OVERCOME

- Sufficient fat and glucose intake
- Exercise regularly
- Stop smoking

5 MARKS

## QUESTION 7

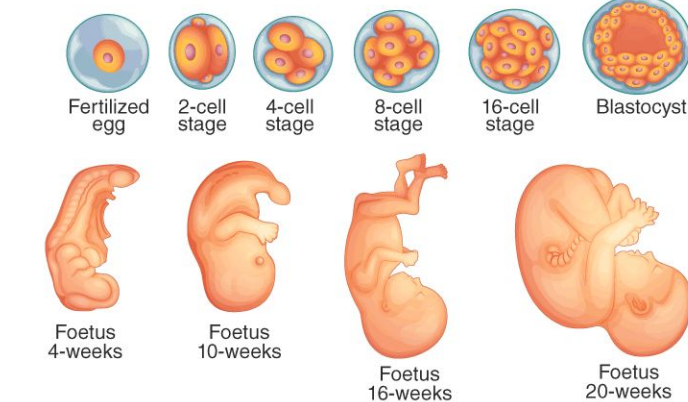
### EARLY DEVELOPMENT OF ZYGOTE

6 MARKS

The nucleus of ovum **fertilise** with the nucleus of sperm to form **zygote diploid**

Zygote **divides by mitosis** to form 2 cell, 4 cell, 8 cell, 16 cell, 32 cell, more cell divisions takes place as zygote move to Fallopian tube

the embryo is moved along the fallopian tube by the **help of cilia and receiving nutrients** from glands along the fallopian tube



eventually produce a **solid ball** of cells called **morula**

growing mass of hundreds of cells form a **hollow ball** called **blastocyst**

blastocyst form **projections like villus** at one of it surface

it then developed to an **embryo** after 8 weeks

**implantation** occur

the villus **sinks** onto the endometrium wall (embryo tissue and endometrium wall)

## HOW CONTRACEPTIVE PILLS CAN PREVENT PREGNANCY?

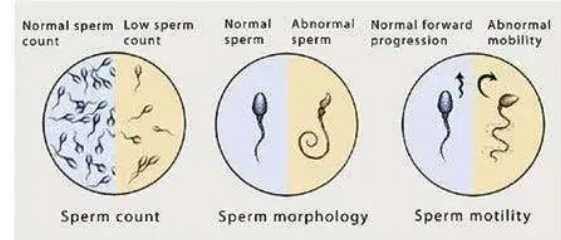
- Contains two hormone **oestrogen** and **progesterone**
- It stimulate the brain to **stop producing FSH and LH** as FSH level drop when progesterone level is high
- Without LH and FSH, **no ovum will be released** and prevent ovulation
- So **no ovum will be fertilised** by sperm
- Pill also causes the fluid at cervix to **thicken** so it's hard for sperm to penetrate



4 MARKS

## EFFECT OF SMOKING ON MAN'S FERTILITY LEVEL AND WAYS TO OVERCOME

- Man who smoke will **lower his fertility** compared to one who does not smoke
- Lower **production** of sperm
- Abnormal **movement** of sperm
- Abnormal **morphology** of sperm
- ❖ Quit smoking
- ❖ Use artificial insemination
- ❖ Sperm bank



4 MARKS

## COMPARISONS BETWEEN IDENTICAL AND NON IDENTICAL TWINS

6 MARKS

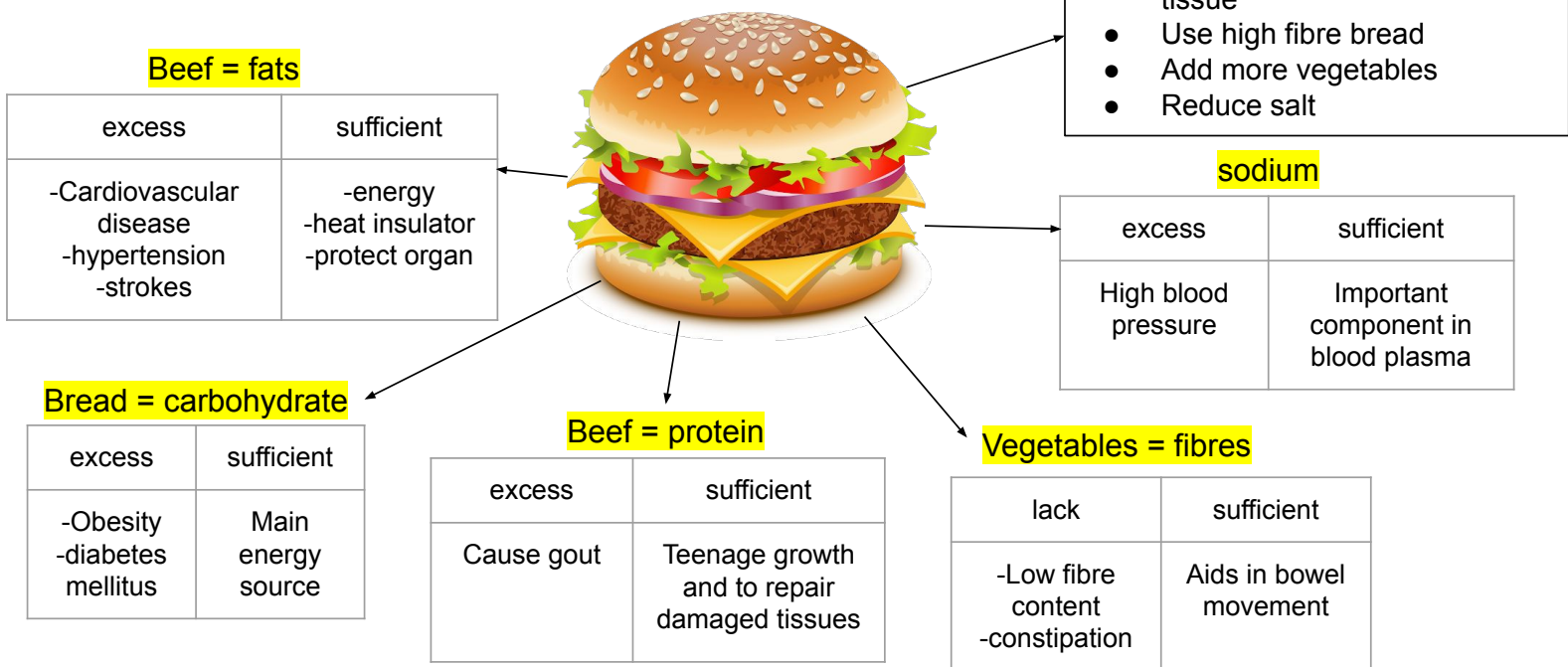
S

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• <b>Embryos formed</b> are the result of fertilisation between an ovum and a sperm</li> <li>• Both grow by <b>mitosis</b></li> <li>• Mother <b>blood is separated</b> from foetus blood</li> </ul> | <ul style="list-style-type: none"> <li>• Development of foetus occur in <b>uterus</b></li> <li>• Both need <b>placenta</b></li> <li>• Both has <b>umbilical cord</b></li> <li>• Both receive <b>oxygen</b> from mother blood</li> </ul> |
|--|---|

IDENTICAL TWINS	DIFFERENCES	FRATERNAL TWINS
<ul style="list-style-type: none"> <li>• <b>One ovum</b> fertilised by <b>one sperm</b></li> <li>• The zygote splits into <b>two separate embryo</b></li> <li>• The division is complete</li> </ul>	FERTILISATION	<ul style="list-style-type: none"> <li>• <b>Two ova</b> released at the same time during menstrual cycle and <b>each is fertilised by sperm</b></li> <li>• <b>Two zygotes</b> are formed and develop into <b>two separate embryo</b></li> </ul>
same	GENETIC CONSTITUTION	Do not share
One placenta , each one umbilical cord	PLACENTAS	Each embryo has its own placenta and umbilical cord
Same sex	SEX	May be same or different
Share same physical characteristics	PHYSICAL CHARACTERISTICS	Do not share same physical characteristics

**QUESTION 8**

**EFFECTS OF DIET TO HEALTH**



10 MARKS

**EVALUATION ON PRACTICE OF PLANTING CHRYSANTHEMUM PLANS IN GREENHOUSE**

**HOW?**

- Lamps provide **maximum** light intensity
- For maximum capture of **light energy**
- By **chlorophyll** during light reaction

**WHY?**

- For **photolysis** of water
- Which occur in **grana**
- To produce hydrogen ion and hydroxyl ion
- **Hydrogen atom** will be used in dark reaction



**HOW?**

- **Dark reaction** occurs in **stroma**
- It does not require light energy
- As it involved in **fixation** of carbon dioxide (**reduction**)
- To form **glucose**

**WHY?**

- Glucose molecules will **combine** to form starch, lipid and protein

10 MARKS

**QUESTION 9**

**EXPLAIN CHANGES + IMPACT ON ECOSYSTEM AND ECONOMY**

- CHANGES**
- Replacement of lake
  - Plants floating as factor
  - Prevent light to reach bottom of lake
  - Submerged plant cannot undergo photosynthesis and die
  - The lake started to dry
  - It is not suitable for plants and aquatic organism to live

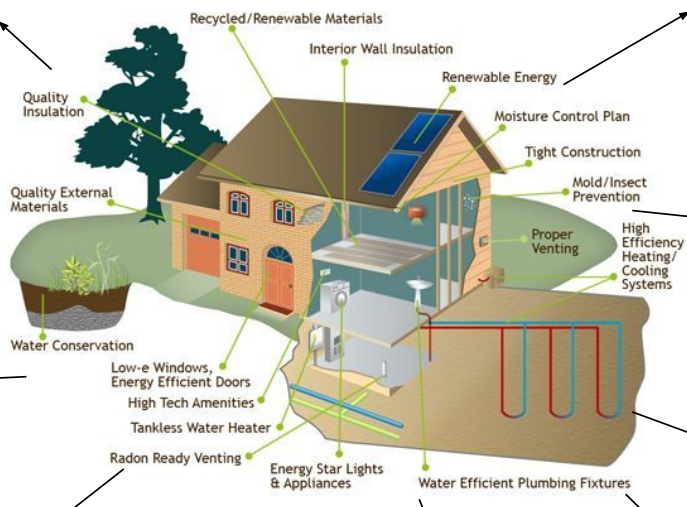


- IMPACT ON ECOSYSTEM**
- Aquatic organism die
  - Lake ecosystem change to land ecosystem
  - Aquatic food chain is disrupted
  - Land food chain is formed
  - Extinction of flora and fauna

- IMPACT ON ECONOMY**
- Less eco-tourism as no lake
  - More eco-tourism as has forest
  - Fishing activity turn to agriculture
  - Forest resources such as herb, medicine, wood
  - No water catchment areas

10 MARKS

**GO GREEN HOUSE !!!!!**



**EFFICIENT ENERGY**  
To maximise total energy usage

**STRATEGIC CONSTRUCTION AND ORIENTATION**  
So does not facing sunlight

**CHOOSE RIGHT MATERIAL**  
Use sustainable wood to prevent CO2 emission from cement

**PROPER VENTILATION**  
Install more windows to prevent heat and as natural airing and light

**USE SHINY WALL PAINT**  
To prevent heat absorption

**BUILD VERTICAL GARDEN**  
Plant absorbs CO2, cooler house, more oxygen

**INSTALL SOLAR PANEL**  
To save electricity and earth

**BUILD WATER CATCHMENT AREA**  
To save water

**COMPOSED FERTILISER AREA**  
to reduce domestic waste and to encourage 3R

10 MARKS