YEAR 11 G & H – BIOLOGY (IGCSE)

WEEK 10 (1st Nov to 5th November)

Work sent to students through Class Bio WhatsApp Group/G mail/Google Classroom

Topics 16 : Chromosomes, genes and DNA.

L.O.: Understand that the genome is the entire DNA of an organism and that a gene is a section of a molecule of DNA whose variant forms give rise to variations. Describe the structure of DNA and the stages involved in protein synthesis.

Sunday- 4th period	**Zoom: Understand** that the genome is the entire DNA of an organism and describe the structure of DNA. https://www.youtube.com/watch?v=C1CRrtkWwu0 https://www.youtube.com/watch?v=o_-6JXLYS-k&t=4s Textbook page : 227 - 239 **Resources**: Textbook, Video Links & Power point. **Students able to:** ●**Define** the term genome. ●**Describe** the Watson Crick model of DNA. ●**Understand** the Watson Crick model of DNA as a DNA molecule as two strands coiled to form a double helix,
Monday- 7th period	**Zoom:** Describe the stages of DNA replication. https://www.youtube.com/watch?v=TNKWgcFPHqw Textbook page : 227 - 239 **Resources**: Textbook, Video Links & Power point. **Students able to:**

	●**Identify** the enzyme responsible for unwinding of DNA .●**Describe** the role of DNA polymerase.● **Explain** the steps involved in DNA replication.
Tuesday – 3rd and 4th period	**Zoom:** Describe the stages of protein synthesis including transcription and translation, including the role of mRNA, ribosomes, tRNA, codons and anticodons. https://www.youtube.com/watch?v=Y4_dbSwkZr0 https://www.youtube.com/watch?v=gG7uCskUOrA https://www.youtube.com/watch?v=5bLEDd-PSTQ Textbook page : 227 - 239 **Resources**: Textbook, Video Links & Power point. **Students able to:** ●**Define** triplet code, codon and anti-codon. ●**Differentiate** the structure & role of mRNA, tRNA & rRNA in protein synthesis● **Describe** the stages of transcription & translation in detail.
Wednesday – 5th period	**GC:** Students complete the worksheet on Protein synthesis and turn in their work on GC. **Resources**: Worksheet on Protein synthesis

YEAR 11 A/D/E- BIOLOGY (GCSE)

WEEK 10 (1st November to 5th November)

Work sent to students through Class Bio Whats App Group/G mail/Google Classroom

Topics -SB7e-Control of blood glucose, SB7f-Type 2 diabetes & SB7g-Thermoregulation

L.O – Explain the cause and control of type 1 & type 2 diabetes. Evaluate the correlation between body mass and type 2 diabetes including waist: hip calculations. Explain how thermoregulation takes place, with reference to the function of the skin & with reference to a. shivering b. vasoconstrictionc. c.vasodilation.

Sunday-6th period(girls)	**Zoom session** **Sb7e-Control of blood glucose &Discussion of textbook questions.(page**

	150 to 151) Resources: **https://www.youtube.com/watch?v=jxbbBmbvu7I** **Students able to** ● Define type I Diabetes.●Provide reasons for lack of insulin.●Enlist a **few** ways to reduce blood sugar levels.●Explain the role of insulin injection, sugar depressing tablets or even diet in controlling diabetes type 1.●Interpret graph showing a relationship between physical activity and levels of insulin required.
Monday - 3rd period(girls)	**Zoom session** **Sb7f –Type 2 Diabetes & Discussion of textbook questions.(page 152 to 153)** Resources: https://www.youtube.com/watch?v=JAjZv41iUJU https://www.youtube.com/watch?v=oIdrn7hLbGk **Students able to** ●Recall the key factors related to cause of diabetes 2 .●Suggest few ways to tackle the issue of type2 diabetes●Calculate BMI & sort people into respective groups (normal, underweight, obese & overweight)on basis of BMI.●Analyse and interpret graph showing relationship between obesity and insulin resistance.●Describe the correlation between body mass and type 2 diabetes.●Explain how BMI and waist : hip ratio are related to body mass.
Tuesday-7th & 8thperiod(girls)	**Zoom session** **SB7g-Thermoregulation & Discussion of textbook questions.(page 154 to 155)** **Resource** **https://www.youtube.com/watch?v=WoMPARSQPZw** **Students able to** ●Identify and label major parts of human skin and their physiology. ●Describe the role of major components of skin in thermoregulation●Co relate the role of sweating & urine production when humans are subjected to hot & cold conditions.●Explain the role of the hypothalamus in thermoregulation. ●Explain role of vasoconstriction and vasodilation during winter and summer. ●Define negative feedback mechanism●Describe the effect of hypothermia on human body.
Wednesday-7th period (girls)	**GC** Students to complete the questions text book pages 150 to 153 & turn in their work.

YEAR 11 B/C/F - BIOLOGY (GCSE)

WEEK 10 (1st November to 5th November)

Work sent to students through Class Bio Whats App Group/G mail/Google Classroom

Topic - SB7c-The menstrual cycle & **SB7d-**Hormones & the menstrual cycle.

L.O –Explain how hormonal contraception influences the menstrual cycle and prevents pregnancy . Evaluate the use of hormones in Assisted Reproductive Technology (ART) including IVF and clomifene therapy and other birth control methods

Sunday- 8th period(boys)	**Zoom session :7c-Menstrual cycle &7d-Hormones and menstrual cycle – Text book pg.146-149** **Resources:** **https://www.youtube.com/watch?v=iXswGsfeHJg&t=20s** https://www.youtube.com/watch?v=5rsdXadNj-E**https://www.youtube.com/watch?v=0adWZZhrN-Y** **https://www.youtube.com/watch?v=d4IyKTC6l5s** **Students able to** ●Identify that there is a sequence in the fluctuation of hormone level during the four phases of the menstrual cycle ●Predict the changes in the level of hormones, ovary & uterine wall if a woman is pregnant ●Describe negative feedback mechanism involved in menstrual cycle. ●Explain the use of IVF & clomifene therapy ●Compare Hormonal method to barrier method in controlling pregnancy

SB7e-Control of blood glucose & SB7f-Type 2 diabetes

L.O - Explain the cause and control of type 1 & type 2 diabetes. Evaluate the correlation between body mass and type 2 diabetes including waist: hip calculations.

Core Practical :Investigate the effects of antibiotics on microbial cultures

Tuesday -5th period (boys)	**Zoom session** **Sb7e-Control of blood glucose &Discussion of textbook**

	questions.(page 150 to 151) Resources: **https://www.youtube.com/watch?v=jxbbBmbvu7I** **Students able to** ● Define type I Diabetes.●Provide reasons for lack of insulin.●Enlist a **few** ways to reduce blood sugar levels.●Explain the role of insulin injection, sugar depressing tablets or even diet in controlling diabetes type 1.●Interpret graph showing a relationship between physical activity and levels of insulin required.
Wednesday-6th period (boys)	**Zoom session** **Sb7f –Type 2 Diabetes & Discussion of textbook questions.(page 152 to 153)** Resources: https://www.youtube.com/watch?v=JAjZv41iUJU https://www.youtube.com/watch?v=oIdrn7hLbGk **Students able to** ●Recall the key factors related to cause of diabetes 2 .●Suggest few ways to tackle the issue of type2 diabetes●Calculate BMI & sort people into respective groups (normal , underweight, obese & overweight)on basis of BMI.●Analyse and interpret graph showing relationship between obesity and insulin resistance.●Describe the correlation between body mass and type 2 diabetes.●Explain how BMI and waist : hip ratio are related to body mass.
Thursday – 5 th period (boys)	**Zoom session** **Discussion of core practical-** Investigating the effect of antibiotics. and exam style question Text book page 118 related to core practical **Students able to** ●Plan experiment to investigate the effect of antibiotics on growth of bacteria.● Identify controlled, independent & dependent variables for the experiment planned ●Describe how each variable can be controlled● Predict the effect of antibiotics on growth of bacteria
Thursday – 6 th period (boys)	**GC** Students to complete the questions text book pages 146 to 149 & turn in their work