Symposium Class 10 Sc Lesson – How do organisms reproduce?

Speaker 1
Good morning friends, We welcome you all in our symposium. Our topic is "How do organisms reproduce?" The topic will be covered by ……., ……., ……, …… and…….. Reproduction is essential for continuity of living organisms. It involves creation of a DNA copy along with the formation of additional cellular apparatus during cell division. Reproduction is of two types – Asexual and sexual. Some plants like Rose and Banana are proliferated by vegetative propagation. Now …….. will discuss about asexual and sexual reproduction in brief.

Speaker 2. There are examples of asexual reproduction where new generation arises from a single cell or single individual as in fission, fragmentation, regeneration, budding, spore formation. Sexual reproduction involves two individuals to produce off spring. Variation occurs due to DNA copying mechanism and sexual reproduction in flowering plants involve transfer of pollen grains from anther to stigma during pollination. Gametes fertilize to form zygote. In human beings changes occur at the time of puberty, beard and moustache in boys and growth in breast region in girls apart from other changes. These changes indicate sexual maturation and biological preparedness for reproduction. Sexual reproduction takes place by fusion of both male and female gametes resulting in the formation of zygote which gives rise to an offspring. Awareness regarding family planning and sex related communicable diseases (STDs) help individual to maintain normal reproductive health. Now …….. will discuss two aspects, firstly about the importance of DNA copying in reproduction and secondly as to why sexual reproduction is considered an advantageous over asexual reproduction.

Speaker 3 DNA is the genetic material present in the cells of all organisms. The genetic information from, generation to generation is carried by DNA .It is therefore possible for the organism to produce organism of its own type due to DNA copying only. For the inheritance of traits of the parent, DNA copying is a must. DNA copying also brings about variation ,which forms the basis for the origin of new species. Sexual reproduction is considered as advantageous compared to asexual reproduction. In sexual reproduction a large number of variations appear in the daughter organism constituting a population. This is made possible by the appearance of many new gene combinations which are contributed by the two parents. Sexual reproduction also speeds up the rate of appearance of new variations which is not possible in asexual reproduction. Now …… will discuss about the advantages of

vegetative propagation and the changes observed in flower after fertilization. .

Speaker 4 - vegetative propagation is much easier, low cost, quicker method compared to sexual reproduction. plants which produce non viable seeds or too few seeds or have lost the ability to produce seeds can be made to reproduce vegetatively to produce daughter organisms. Plants produced vegetatively are genetically similar to the parent plant and show all the characteristics of the parent. After fertilization in flowers the ovary ripens and develops into fruit. Ovules develop into seeds. Petals and sepals wither and drop and stigma, style and stamens dry up and fall off. Now I hand over ……. Who will discuss about Placenta in human beings and its significance.

Speaker 5 - Placenta is a disc like mass of nutritive tissue which develops on the inner wall of uterus where the fertilized egg is implanted. Placenta performs the following functions: (1) It provides all the nutrients such as glucose, proteins, minerals and vitamins to the foetus. (2) It provides antibodies through the mother's blood to the foetus. These antibodies provide immunity to the child after birth against a number of diseases. (3) Placenta also meets the oxygen requirement of the foetus and removes carbon dioxide and other metabolic waste generated in the body of the foetus. These metabolic wastes are ultimately removed and excreted by mother's excretory system. With this we come to an end of our presentation. Thank You.