

MPVM GANGA GURUKULAM
HOLIDAY HOMEWORK (2025-26)
CLASS XII B
SUBJECT - BIOLOGY

DO THIS ASSIGNMENT IN A4 SHEET:

1. Draw diagrams of the following.
 - (a) T.S. of mature anther
 - (b) Stages of microspore maturing into a pollen grain
 - (c) Mature embryo sac
 - (d) Anatropous ovule
 - (e) Stages in embryo development in a dicot and monocot
 - (f) Multicarpellary syncarpous ovary and multicarpellary apocarpous ovary
 - (g) Longitudinal Section of flower showing growth of pollen tube
 - (h) Enlarged view of an egg apparatus showing entry of pollen tube into a synergid
 - (i) Discharge of male gametes into a synergid and movements of sperms, one into the egg and the other into the central cell.
 - (j) Structure of seeds - dicot seed, monocot seed (maize), castor seed onion seed
 - (k) False fruits of apple and strawberry
 - (l) Fertilised embryosac showing zygote and primary endosperm nucleus (PEN)
 - (m) Dicot embryo
 - (n) L.S. of an embryo of grass
 - (o) Diagrammatic sectional view of a seminiferous tubule (enlarged)
 - (p) Human foetus within the uterus
 - (q) Ovum surrounded by few sperms
2. Give reason:
 - (a) Testes are situated outside the abdominal cavity within a pouch called scrotum.
 - (b) Amniocentesis is banned in our country..
 - (c) Endosperm development precedes embryo development.
3. Answer the following questions:
 - (a) A Papaya plant has a staminate flower. What does it mean?
 - (b) How are pollen stored in a pollen bank?
 - (c) Continued self pollination lead to inbreeding depression. List four devices to discourage self pollination
 - (d) What are the contrivances that favour cross pollination?
 - (e) What are the reproductive events in human?
 - (f) What are wall layers of anther from outside? Write its functions also.
 - (g) Describe a range of animals as pollination agents
 - (h) What is colostrum? Why is it important for new born babies?.
 - (i) What do you mean by stem cells? Where are these found in blastocyst?
 - (j) What is placenta? Write its functions.
 - (k) What is pollen-pistil interaction? Explain

- (l) Which technique is used in crossing different species often genera to produce commercially 'Superior varieties'? What are the steps for it.
- (m) What is apomixis? What are the various ways of development of apomictic seeds? What are their advantages?
4. Explain with diagrams:
- (a) Microsporogenesis and megasporogenesis in plants.
 - (b) Spermatogenesis and oogenesis in human (schematic diagrams)
 - (c) Development of human embryo from zygote till implantation.
 - (d) Structure of human sperm
 - (e) Mechanism of parturition
 - (f) Double fertilisation in plants
 - (g) Stages of menstrual cycle
 - (h) Fertilisation events in humans.
 - (i) Various hormones during pregnancy and embryonic - its source of secretion and its influence.
5. Differentiate:
- (a) Albuminous and non/ex-albuminous seeds
 - (b) Perisperm and pericarp
 - (c) True fruits and False fruits
 - (d) Syngamy and fertilisation
 - (e) Vivipary and ovipary
 - (f) Menarche and menopause
6. Start working on Investigatory project discussed in class.
7. Complete your practical records as per instruction in the class

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