



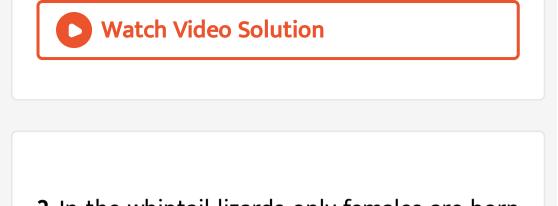
BIOLOGY

BOOKS - TRUEMAN'S BIOLOGY (ENGLISH)

REPRODUCTION



1. The turkey usually produces female for several generations. How is this possible ?



2. In the whiptail lizards only females are born generation after generation. There are no males. How is this possible ?



3. In the given figure of a fruit, label the part which is protective in function and that which

is responsible for producing new plants .





4. After a successful in vitro fertilization , the fertilized egg begins to divide. Where is this egg transferred before it reaches the 8-cell stage and what is this technique named ?

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5. Name the organization which developed the

'Saheli'

6. Name the stage at which zona pellucida

envelop disintegrates



7. How does colostrum provide protection

against diseases to new born babies ?

8. Why do internodal segments of sugarcane

fail to propagate vegetatively even when they

are in contact with damp soil ?



9. How can pollen grains of wheat and rice which tend to lose viability within 30 minutes of their release be made available months later for bredding programmes ?

10. Mention two events that are inhibited by the intake of oral contraceptive pills to prevent pregnancy in humans.

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11. Why are non-albuminous (exalbuminous)

seeds so called ?

12. Name the part of flower that contributes to fruit formation in strawberry and guava respectively

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13. A bilobed, dithecous anther has 100microspore mother cells permicrosporangium. How many male

gametophytes this anther can produce ?

14. An anther with malfunctioning tapetum often fails to produce viable male gametophytes. Give one reason

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15. Mention a characteristic feature and a

function of zoospores in some algae.

16. Pea flower produce assured seed sets. Give

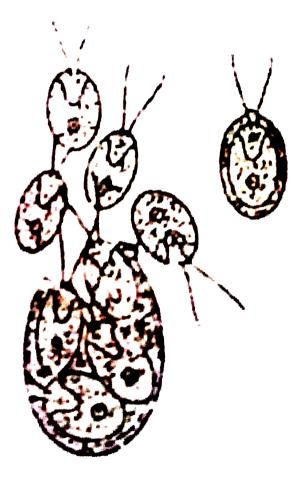
a reason

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17. Identify the reproductive structure of the Figure shown and name the orgainsm they are being released from

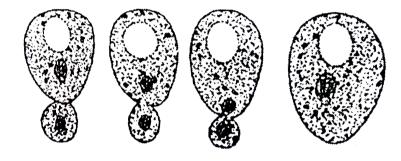
18. Why do the pollen grains of Vallisneria have

a mucilaginous covering ?





19. Name the organism and the mode of reproduction represented in the diagram given below .





20. Why do corn cobs have long tassels ?

21. Mention the function of trophoblast in

human embryo

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22. Mention two inherent characteristics of Amoeba and yeast that enable them to reproduce asexually

23. Although potato tuber is an underground plant part, it is considered as a stem.Give two reason .

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24. Can an unfertilised , apomictic embryo sac give rise to a diploid embryo ? If yes, then how

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?

25. Is pollination and fertilisation necessary in

apomixis ? Give reason

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26. Reproductive health refers only to healthy

reproductive functions. Comment

27. Cucurbits and papaya plants bear staminate and pistillate flowers. Mention the categories they are put under separately on the basis of the type of flowers they bear.



28. Mention the differences between

spermiogenesis and spermiation.



29. The following statements describe the characters of wind-pollinated plants. Which one of these statements is incorrect ?
(i)The pollen grains are sticky
(ii)Stamens are well exposed
(iii)Flowers often have a single ovule

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30. Write the function of Nucleus of human

sperm



31. Name an orgainsm where cell division in

itself is a mode of reproduction

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32. Name an algae that reproduces asexually

through zoospores

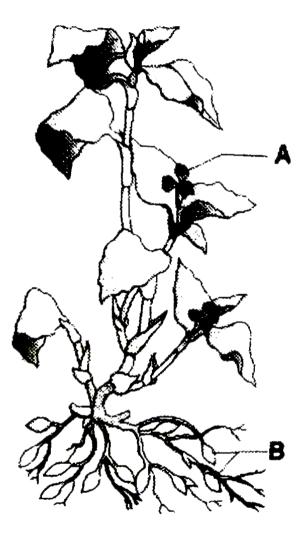
33. Name the phenomenon and one bird where the female gamete directly develops into a new organism.



Section **B**

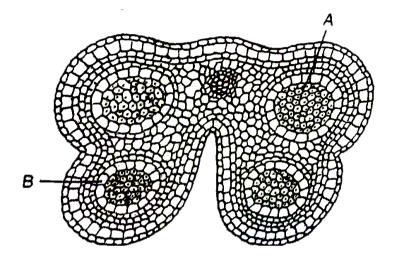
1. Identify the type of flower shown in A and B. Which out of the two will produce an assured

seed set ?



2. In the T.S. of a mature anther given below,

identify 'A' and 'B' and mention their function.





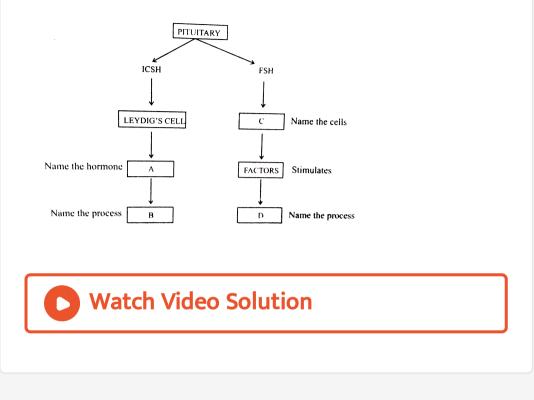
3. In the table given below , select and enter one correct device out of the following : Oral pill, condom , Copper T , Saheli,Vasectomy,

Diaphragm, Tubectomy, Cervical cap

Method of birth control	Device
(a) Barrier	
(b) IUD	
(c) Surgical Technique	
(d) Administering Hormones	

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4. Given below is an incomplete flow chart showing influence of hormones on gametogenesis in males. Observe the flow chart carefully and fill in the blanks A,B,C and



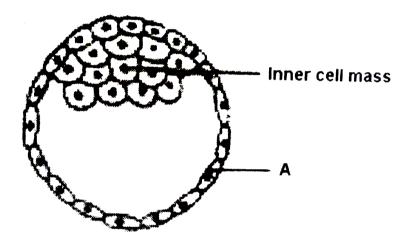
5. Study the figure given below and answer the

questions that follow :

(a)Name the stage of human embryo the figure represents.

(b)Identify 'A' in the figure and mention its function .

(c)Mention the fate of the inner cell mass after implantation in the uterus .



(d)Where are the stem cells located in this

embryo ?



6. Draw a vertical section of a maize grain and label (i) pericarp, (ii)scutellum, (iii)coleoptile, and (iv) radicle

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7. Why do some women used "Saheli" pills ?

8. Even though each pollen grain has two male gametes, why are at least 10 pollen grains and not 5 pollen grains required to fertilise 10 ovules present in a particular carpel ?

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9. Why is an apple called a false fruit and

banana a parthenocarpic fruit ? Explain

10. Explain how geitonogamy is functionally similar to cross pollination and genetically similar to self pollination ?

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11. Name any two copper releasing Intra Uterine Devices (IUDs).List two reasons that make them effective contraceptives .

12. If you squeeze a seed of orange you might

observe many embryos of different sizes. How

is it possible ? Explain.



13. Differentiate between menarche and

menopause.

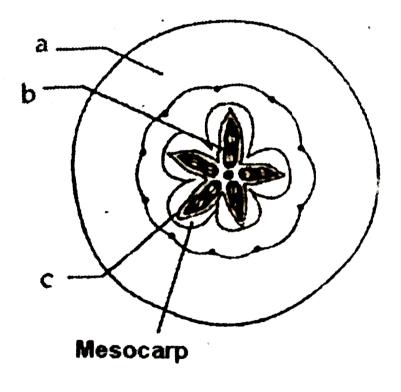
14. Differentiate between major structural changes in the human ovary during the follicular and luteal phase of the menstrual cycle.

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15. Explain the zygote intra fallopian transfer technique ZIFT. How is intrauterine transfer technique (IUT) different from it

16. (i)Given below is a T.S. of an apple. Identify a,b and C

(ii)Why is an apple considered as a false fruit ?





17. A fertilized egg is the blue print of future

development. Explain

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18. Describe the Lactational Amenorrhea

method of birth control

19. A moss plant produces a large number of antherozoids but relatively only a few egg cells. Why ?



20. Mention the reasons for difference in ploidy of zygote and primary endosperm nucleus in an angiosperm.



21. How many haploid cells are present in matue female gametophyte of a flowering plant? Name them.

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22. Placenta acts as an endocrine tissue. Justify.

23. The number of taxa exhibiting asexual reproduction is drastically reduced in higher plants (angiosperms) and higher animals (vertebrates) as compared with lower groups of plants and animals. Analyse the possible reasons for this situation.



24. Draw the sketch of a zoospore and a conidium. Mention two dissimilarities between

them and atleast one feature common to both

structures.



25. Given below are the events that are observed in an artificial hybridization programme. Arrange them in the correct sequential order in which they are followed in the hybridization programme. (a)re-bagging , (b)selection of parents , (c)bagging , (d)dusting the pollen on stigma , (e)emasculation , (f)collection of pollen from

male parent.



26. Why does the zygote begin to divide only

after the division of primary Endosperm cell (PEC)?



27. Corpus luteum in pregnancy has a long life.

However if fertilisation does not take place, it

remains active only for 10-12 days. Explain.



28. What are the events that take place in the

ovary and uterus during follicular phase of the

menstrual cycle.



29. Given below is a flow chart showing ovarian changes during menstrual cycle. Fill in the space with the hormonal factor / responsible for the events shown .

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30. In GIFT, gametes are transferred to the

fallopian tube. Can gametes be transferred to

the uterus to achieve the same result ? Explain

31. Briefly explain IVF and ET, What are the conditions in which these methods are advised?



32. All reproductive tract infections are STDs,

but all STDs are not RTIs. Justify with example



33. What do you understand by amniocentesis

? Why is there a statutory ban on this ? Give

reason



34. When and where do chorionic villi appear

in humans ? State their function.



35. (a) How does cleistogamy ensure autogamy?

(b) State one advantage and one disadvantage

of cleistogamy to the plant.



36. Explain the steps that ensure cross

pollination in an autogamous flower.



37. Name all the haploid cells present in an unfertilized mature embryo-sac of a flowering plant. Write the total number of cells in it.

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38. Differentiate between the two cells enclosed in a mature male gaemetophyte of

an angiosperm.

39. Explain the hormonal regulation of the

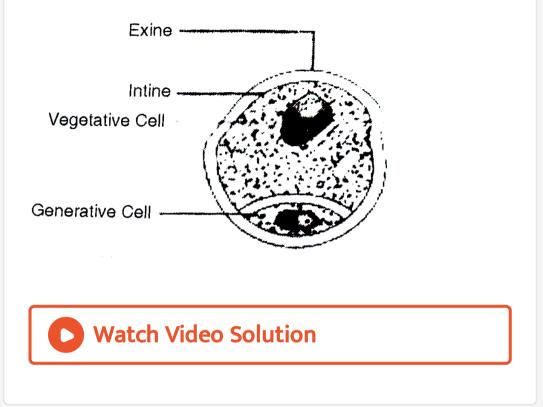
process of spermatogensis in humans.





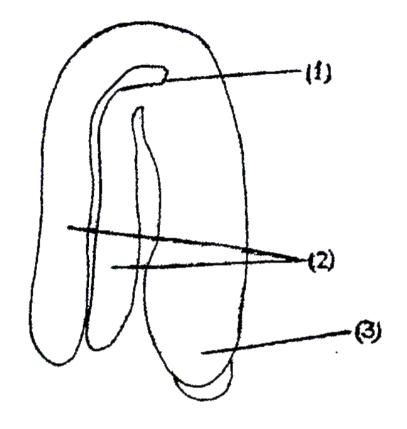
 Draw a labelled diagram of the sectional view of a mature pollen grain of angiosperms.
 Explain the function of generative cell and

vegetative cell



2. In the adjacent figure of a typical dicot embryo, label the parts (1),(2) and (3) . State

the function of each of the labelled part.





3. (a) In which part of the human female reproductive system do the following events take place ?

I-Release of 1st polar body

II-Release of 2nd polar body

III-Fertilisation

IV-Implanatation

(b) From where do signals for parturition originate and what does material pituitary release for stimulating uterine contrations for child birth ? **4.** The events of the menstrual cycle are represented below. Answer the questions following the diagram.

(i)State the levels of FSH, LH and Progesterone simply by mentioning high or low, around 13th and 14th day and 21st to 23 rd day.
(ii)In which of the above mentioned phases does the egg travel to the fallopian tube ?
(iii)Why is there no menstruation upon

fertilization ?



5. Draw a labelled diagram of a sectional view

of humen seminiferous tubule.

(b) Differentiate between gametogenesis in

humen males and females on the basis of

(i) time of initation of the process.

(ii) Products formed at the end of the process.



6. With the help of labelled diagrams, depict the stages of a microspore maturing into a pollen grain.



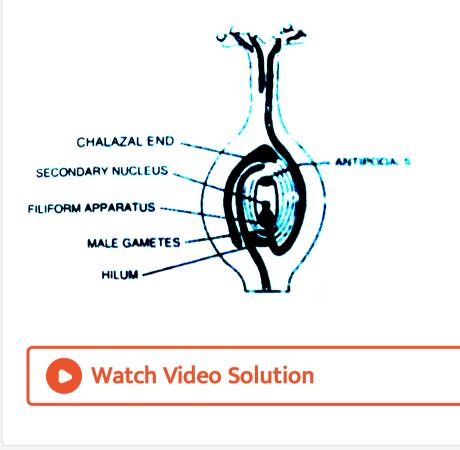
7. In an angiosperm the embryo sac is haploid ,

zygote is diploid and endosperm is triploid.

Justify giving reasons for each stage.



8. Draw a longitudinal section of a postpollinated pistil showing entry of pollen tube into a mature embryo-sac. Label filiform apparatus, chalazal end, hilum, antipodals male gametes and secondary nucleus .



9. (i) Write the characteristics features of anther, pollen and stigma of wind polinated flowers.

(ii) How do flowers reward their insect

pollinators ? Explain.



10. (a) Mention any four strategies adopted by

flowering plants to prevent self-pollination.

(b) Why is geitonogamy also referred to as

genetical autogamy?

11. Explain the process of artificial hybridisation to get improved crop, variety in(i) plants bearing bisexual flowers (ii) female parent producing unisexual flowers.

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12. Differentiate between perisperm and

endosperm giving one example of each

13. Fertilization is essential for the production of seed, but in some angiosperms seeds develop without fertilization.

(a)Give an example of an angiosperm that produces seeds without fertilization. Name the progress.

(b)Explain the two way by which seeds develop without fertilization.



14. Write the function of each one of the following :

- (a) (Oviducal) Fimbriae
- (b) Coleoptile
- (c) Oxytocin

:

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15. Write the function of each of the following

(a) Middle piece in human sperm.

(b) Tapeturn in anthers.

(c) Luteinizing hormone in human males.

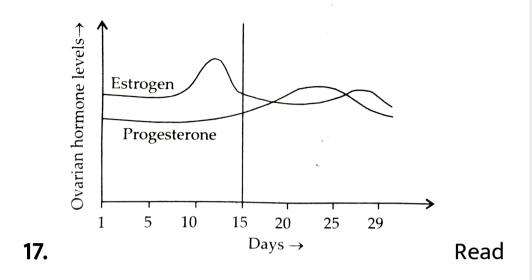


16. Write the function of each of the following

(a) Seminal vesicle

(b) Scutellum

(c) Acrosome of human sperm.



the graph given above and correlate the uterine events that take place according to the hormonal levels on

(i) 6 - 15 days

(ii) 16 - 25 days

(iii) 26 - 28 days (if the ovum is not fertilised)

(b) Specify the sources of the hormones

mentioned in the graph.



18. Expand the following and explain any one

of them.

(i) IVF (ii) ZIFT (iii) IUI (iv) MTP

19. Draw the following diagrams related to human reproduction and label them.

(a) The zygote after the first cleavage division

(b) Morula stage

(c) Blastocyst stage (sectional view)

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20. Suggest and explain any three Assisted Reproductive Technologies (ART) to an infertile couple.



- **21.** a) Describe the endosperm development in coconut.
- b) Why is tender coconut considered a healthy
- source of nutrition?
- c) How are pea seeds different from castor
- sees with respect to endosperm?

22. Write the changes a fertilized ovule undergoes within the ovary in an angiosperm plant.

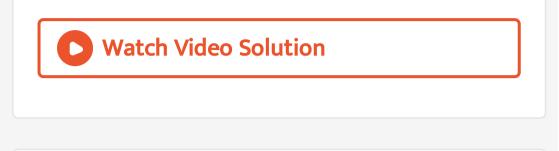


Section D

1. A woman has conceived and implantation has occurred in her uterus. Explain the

sequence of changes upto parturition which

take place within her body.



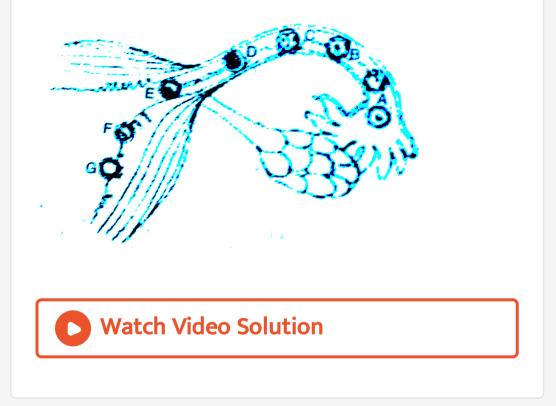
2. "Incompatibility is a natural barrier in the

fusion of gametes". Justify the statement.

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3. Show diagrammatically the stages of embryonic development from zygote upto

implantation in humans .



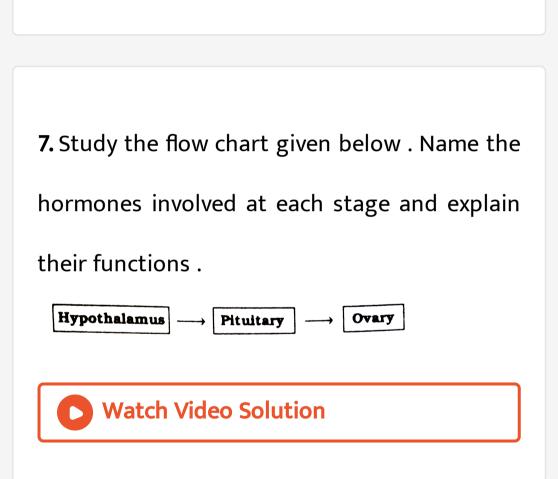
4. Draw a schematic diagram of a human

sperm and label the cellular components.

5. (a)Give a schematic representation of spermatogenesis in humans. (b) At which stage of life does gametogenesis begin in human male and female respectively? (c) Name the organs where gametogensis gets completed in male and female respectively. Watch Video Solution

6. Explain with the help of a diagram the development of a mature embryo sac from a

megaspore mother cell in angiosperm.



8. Explain the different stages of oogenesis in human starting from life till its completion. When and where in the body is oogenesis completed?

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9. (a) When and how does placenta develop in

human female?

(b) How is the placenta connected to the embryo?

(c) Placenta acts as an endocrine gland.

Explain.



10. Give reasons why:

(i) Most zygotes in angiosperms divide only after certain amount of endosperm is formed.
(ii) Groundnut seeds are exalbuminous and castor seeds are albuminous.
(iii) Micropyle remains as a small pore in the seed coat of a seed. (iv) Integuments of an ovule harden and the water content is highly reduced, as the seed matures.

(v) Apple and cashew are not called true fruits.



11. Describe in sequence the events that lead

to the development of a 3-celled pollen grain

from microscope mother cell in angiosperms.



12. (a) Trace the development of megaspore mother cell up to the formation of a mature embryo-sac in a flowering plant.

(b) Draw a labelled diagram of the structure of mature dicot embryo.

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13. (a) Draw a labelled longitudinal view of an albuminous 'seed'·

(b) How are seeds advantageous to flowering

plants ?



placenta.

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15. Although sexual reproduction is a long drawn, energy-intensive complex form of

reproduction, many groups of organisms in kingdom- Animalia and Plantae prefer this mode of reproduction. Give atleast three resaons for this.



16. Embryo sacs of some apomitic species appear normal but contain diploid cells. Suggest a suitable explanation for the condition. 17. Meiotic division during oogenesis is different from that in spermatogenesis. Explain how and why?

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18. Enumerate and describe any five reasons for introducing sex education to school-going children .

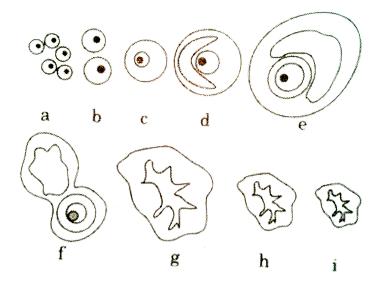
19. The following is the illustration of the sequence of ovarian events (a - 1) in a human female. (a) Identify the figure that illustrates ovulation and mention the stage of oogenesis it represents.

(b) Name the pituitary hormone that has caused the above mentioned event.

(c) Explain the changes that occur in the uterus simultaneously in anticipation(d) Write the differences between 'c and 'h'.

(e) Draw a labelled sketch of the structure of a

human ovum prior to fertilization.





20. (a) Draw a schematic labelled diagram of a

fertilised embryo sac of an Angiosperm.

(b) Describe the stage in embryo development

in a dicot plant.



21. (a) Draw a labelled diagram of sectional view of human ovary showing different stages of oogenesis.

(b) Where is morula formed in humans? Explain the process of its development from the zygote. **22.** (a) Draw a labelled diagram of the sectional

view of a typical anatropous ovule.

(b) Mention the fate of all the components of

the embryo sac after fertilization

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23. (a) Draw a diagrammatic sectional view of a

mature anatropous ovule and label the

following parts in it :

(i) that develops into seed coat.

(ii) that develops into an embryo after fertilization.

(iii) that develops into an endosperm in an albuminous seed.

(iv) through which the pollen tube gains entry into the embryo sac.

(v) that attaches the ovule to the placenta.

(b) Describe the characteristic features of wind

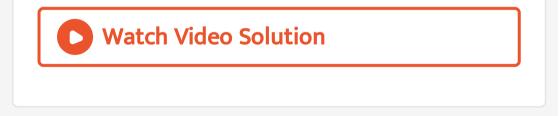
pollinated flowers.

24. (a) Draw a diagrammatic sectional view of the female reproductive system of human and label the parts (i) where the secondary oocytes develop (ii) which helps in collection of ovum after ovulation (iii) where fertilization occurs (iv) where implantation of embryo occurs. (b) Explain the role of pituitary and the ovarian hormones in menstrual cycle in human females.

25. (a) Draw a labelled schematic diagram of the transverse section of a mature anther of an angiosperm plant.

(b) Describe the characteristic features of an

insect pollinated flower.



26. Write two differences between

spermtogenesis and oogenesis





27. (a) Draw a diagram of a mature embryo sac of an angiosperm and label the following parts in it :

(i) Filiform apparatus (ii) Synergids

(iii) Central cell (iv) Egg cell

(v) Polar nuclei (vi) Antipodals

(b) Write the fate of egg cell and polar nuclei

after fertilization.



1. Regeneration was first discovered in Hydra

by

A. Linnaeus

B. Trembley

C. Thomas Addison

D. Stanley

Answer: B

2. Gerontology is the branch of science that deals with

A. birds

B. bones

C. ageing

D. earth

Answer: C

3. Sex first originated in

A. protistans

B. simple algae

C. angiosperms

D. both 1 and 2

Answer: D

4. Strobilanthus kunthiana (Neeelakuranji) flowers once in 12 years, The last time this plant flowered during September-Octobers 2006. It is found in hilly areas in

A. Kerala and Karnataka

B. Tamil Nadu

C. Andhra Pradesh

D. Both (1) and (2)

Answer: D





5. Blood is discharged from the uterus in

A. oestrous cycle

B. menstrual cycle

C. cardiac cycle

D. urea circle

Answer: B

6. Endosperm provides food to the growing

A. seeds

B. fruit

C. endosperm

D. embryo

Answer: D



7. Which of the following animals, is /are

ovoviviparous

A. Hen

B. Platypus

C. (1) and (2)

D. Rattle snake

Answer: D

8. Parthenogenesis occurs in

A. Axolotl

B. Miracidium and Metacercaria

C. Cercaria

D. Sporocyst and redia

Answer: D

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9. Paramecium reproduces by

A. asexual reproduction

B. sexual reproduction

C. both (1) and (2)

D. none of the above

Answer: C

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10. When male differs female in morphol-ohy, it

is called

A. heterogamy

B. homogamy

C. sexual dimorphism

D. hermaphroditism

Answer: C

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11. Paedogenesis is found in the larvae of

A. Taenia

B. Fasciola

C. Rana

D. Butterfly

Answer: B

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12. Oblique binary fission is found in

A. Monocystis

B. Plasmodium vivax

C. Planaria

D. Ceratium

Answer: D



13. Which one has the capacity to reproduce

without fertilization of eggs ?

A. Spider

B. Crow

C. Honey bee

D. Earthworm

Answer: C



14. The term homothallic and monoeious are

used to denote

A. Bisexual condition

B. Unisexual condition

C. Staminate flowers

D. Pistillate flowers

Answer: A



15. What is the maximum age of parrot?

A. 90 years

B. 25 years

C. 500 years

D. 140 years

Answer: D

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16. Which of the following statement is true about water hyacinth ?

A. It is very useful for farmer because it

acts as manure

B. It is found only in sea water

C. It takes oxygen from water which causes

death of fishes

D. It gives useful products to be used in

medicine

Answer: C

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17. Bryphyllum has asexual reproductive bodies

namely

A. runner

B. sucker

C. bulb

D. adventitous buds

Answer: D

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18. Which of following plats is monoecious ?

A. Papaya

B. Date palm

C. Coconut

D. Both (1) and (2)

Answer: C

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19. Internal fertilization is found in all

A. reptiles, birds, mammals

B. insects, annelies, echinoderms

C. sponges, flatworm, protochordates

D. fishes, amphibians, coelenterates

Answer: A

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20. Which are hermaphrodite ?

A. Earthworm, Hydra and Leech

B. Cockroach, Ascaris and Hydra

C. Earthworm, Ascaris and Leech

D. Ascaris, Cockroach and Hydra

Answer: A

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21. Gamma cups are located on the male and female thalami of Marchantia as

A. they are always attached to thalami

B. they are detached from the parent body

and germinate to form new individuals

C. Gemma cups are protective in function

D. they produce gametes

Answer: B

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22. Formation of the whole body of an organism from a small fragment is called

A. morphallaxis

B. epimorphosis

C. morphogenesis

D. metabolism

Answer: A



23. The vegetative propagation where a branch is injured defoliated and pegged down in the ground in know as

A. layering

- B. grafting
- C. cutting
- D. bud grafting

Answer: A

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24. It will not make any sense to produce seed-

less

A. grapes

B. bananas

C. guavas

D. pomegrantes

Answer: D

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25. The technique of obtaining large number

plantlets by tissue culture method is called

A. Plantiet culture

B. organ culture

C. micropropagation

D. macropropagation

Answer: C

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26. Fleshy buds produced in the axil of the leaves, which grow to form new plants when shed and on ground, are called

A. bulbs

B. bulbils

C. tubers

D. offsets

Answer: B

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27. Among the following which one is not a

method of asexual reproduction ?

A. Budding

- B. Layering
- C. Sowing
- D. Binary fission

Answer: C

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28. Double fertilization is found in

A. angiosperms

- B. gymnosperms
- C. pteridophytes
- D. bryphytes

Answer: A

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29. Seeds are called products of sexual reproduction because they

A. are formed by fusion of gametes

B. give rise to new plants

C. can be stored for long time

D. are formed by fusion of pollen tubes

Answer: A

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30. Bamboo species flower

A. only once in lifetime

B. once in 12 years

C. every year

D. twice in 50-100 years

Answer: A



31. Oestrous cycle is characteristic of mamma-

lian females other than primates and occurs in

females of

A. Monkeys

B. Cows

C. Apes

D. Humans

Answer: B

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32. Chromosome number in melocyte of drosophila (fruit fly) is

B. 4

C. 6

D. 8

Answer: D

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33. Life span of crocodile and May fly is respectively

A. 15 years, 1week

B. 30 years, 1 year

C. 45 years, 1 month

D. 60 years, 1day

Answer: D

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34. Zoospores of chlamydomonas are

A. asexual reproductive bodies

B. sexual reproductive bodies

C. buds

D. gemmules

Answer: A



35. The nodes are called 'eyes' which will form

a new plant

A. Ginger

B. Bryophyllum

C. Alocasia

D. Potato

Answer: D



36. Life span of tortoise is

A. 25-50 years

B. 50-75 years

C. 75 to 100 years

D. 100-150 years

Answer: D

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37. Vegetatively reproduced organism is

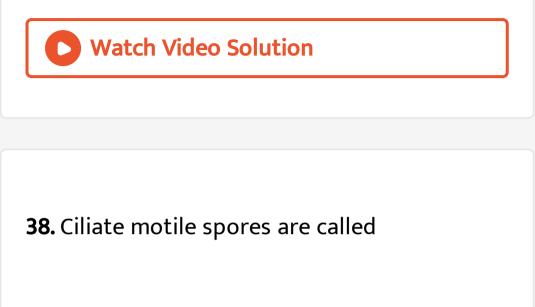
A. Dahlia

B. Ginger

C. Potato

D. all of the above





- A. aplanospores
- B. conidia
- C. zoospores
- D. oospores





39. The endosperm in angiosperm is

A. haploid

B. diploid

C. triploid

D. none of these

Answer: C

40. The endosperm in gymnosperms is

A. haploid

B. diploid

C. triploid

D. none of these

Answer: A

41. In wheat, pollination take place by

A. water

B. wind

C. animals

D. bats

Answer: B



42. In maize pollination is called

A. anemophily

B. entomophily

C. zoophily

D. hydrophily

Answer: A

43. Chromosome number in meiocyte of human beings is

A. 40

B.42

C. 44

D. 46

Answer: D

44. Chromosome number in gamete of onion

is

A. 8

B. 16

C. 24

D. 32

Answer: B



45. Comparable to angiospersm, which of the following algae exhibits diplontic life cycle ?

A. Spirogyra

B. Ectocarpus

C. Polysiphonia

D. Fucus

Answer: D

46. The term used for the offspering that are ex-actly identical to one another as well as identical to their parents is

A. twins

B. replicates

C. drones

D. clone

Answer: D

47. Find the correct combination.

A. Zoospore in sponge

B. Gemmules in Penicillium

C. Conidium in Algae

D. Buds in Hydra

Answer: D

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48. The meiocyte is

A. haploid

B. diploid

C. triploid

D. none of these

Answer: B

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49. Grafting in monocots is rarely successful

because

A. monocots have closed vascular cambium

B. monocots are without cambium

C. both (1) and (2)

D. both wrong

Answer: C

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50. If you have taken scion of desi mango and stock of dasheri mango, what type of mango will be born ?

A. Dasheri

B. Desi

C. Hybrid

D. None

Answer: B

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51. Vegetative reproduction of Agave occurs

through

A. rhizome

B. stolen

C. bulbils

D. suckers

Answer: C

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52. New Banana plants develop from

A. rhizome

B. suckers

C. stolons

D. seed

Answer: B

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53. Tea and Cocoa are propagated by

A. layering

B. stem cuttings

C. grafting

D. bud grafting

Answer: B



54. In Lacerta saxicola armaniaca (lizard) there

are

A. females only

B. males only

C. bisexual only

D. Both (1) and (2)

Answer: A



55. In which type of parthenogenesis, only males are produced ?

A. Arrhenotocky

B. Thelytoky

C. Amphitoky

D. Both (1) and (2)

Answer: A



56. Vegetative propagation plays a vital role in

A. sericulture

B. apiculture

C. sylviculture

D. horticulture

Answer: D

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57. Adventive embryony in Citrus is due to

A. egg

B. nucellus

C. embryo

D. integument





58. After fertilization the ovary develops into

A. seed

B. fruit

C. pericarp

D. stamens

Answer: B



59. Ginger multiplies vegetatively by

A. bud

B. tuber

C. corm

D. rhizome

Answer: D

60. Layering is used for vegetative propagation of

A. Jasmine

B. Rose

C. Mango

D. all of the above

Answer: A

61. In vegetative propagation by tubers, which of following remains constant through generations?

A. Morphology

B. Vigour only

C. Vigour and morphology only

D. Morphology, vigour and disease

resistance

Answer: D



62. Natural parthenogenesis is found in

A. aphids

B. honey bees

C. wasps

D. all the above

Answer: D

63. Stem cuttings are commonly used for the

propagation of

A. Mango

B. Cotton

C. Rose

D. Banana

Answer: C

64. Mango and Guava are propagated through

A. tissue culture

B. grafting

C. stem cuttings

D. layering

Answer: B

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65. First succesful animal clone was

A. dolly goat

B. dolly sheep

C. molly goat

D. molly sheep

Answer: B

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66. The terminal irreversiable stage of ageing

is called

A. autogamy

B. syngamy

C. senescence

D. cytogamy

Answer: C

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67. Which type of binary fission occurs in paramecium

A. simple binary fission

B. longitudinal binary fission

C. transverse binary fission

D. oblique binary fission

Answer: C

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68. Plasmotomy occurs in

A. Hydra

B. Obelia

C. Opalina

D. Plasmodium

Answer: C

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69. Gemmule formation occurs in

A. fresh water sponge

B. some marine spomges

C. Labeo rohita

D. Both (1) and (2)

Answer: D



70. Menstrual cycle occurs in

A. old world monkeys

B. apes

C. humans

D. all of these

Answer: D

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71. Isogametes are present in

A. Fuccus

B. Cladophora

C. Frog

D. Bird





72. In grafting stock and scion ought to be joined

A. Phloem to phloem

B. xylem to xylem

C. pith to pith

D. cambium to cambium





73. Ramphotyphlops braminus produces females only by pathenogenesis. It is a

A. snake

B. bird

C. frog

D. mammal





74. Induction of rooting on stems before separating them from parent plant is

A. grafting

B. layering

C. root-stem joint

D. cutting

Answer: B



75. Grafting in sugarcane can not be performed because

A. vascular bundles are scattered

- B. pholem is internal to xylem
- C. sugarcane plant is delicate
- D. it is unable to bear injury

Answer: A



76. In a grafted plant, stock has 48 chromosomes while scion has 24 chromosomes. The chromosome number for root cells and eggs are

A. 48 and 24

B. 24 and 24

C. 24 and 12

D. 48 and 12

Answer: D

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77. Ramet is

A. clone

B. callus

C. cell aggregate

D. individual member of clone





78. Development of seed from an unfertilized egg is

A. vivipary

B. pathenocarpy

C. apogamy

D. apospory

Answer: C



79. Which of the following groups of plants are propagated through underground root

A. Bryphyllum and Kalanchoe

B. Pistia, Chrysanthemum and Pineapple

C. Ginger, Potato, Onion, Zamikand

D. Sweet Potato, Asparagus, Tapioca and

Dahlia

Answer: D



80. A scion is grafted to a stock. The quality of fruits produced will be determined by the genotype of -

A. stock

B. scion

C. both stock and scion

D. neither stock nor scion

Answer: B

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81. The living organisms can be undexceptionally distinguished from the non - living things on the basis of their ability for

A. reproduction

- B. growth and movement
- C. responsiveness to touch
- D. intersection with the environment and

progressive evolution

Answer: A

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82. Maximum life span of Eagle is

A. 90 years

B. 15 years

C. 10 years

D. 5 years

Answer: A

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83. Male gametes in angiosperms are formed

by the division of

A. vegetative cell

B. microspore mother cell

C. microspore

D. generative cell

Answer: D

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84. In which of the following organisms, self

fertilization is seen ?

A. Fish

- B. Roundworm
- C. Earthworm
- D. Tapeworm

Answer: D



85. Which of the following animals is having

longitudinal binary fission

A. Euglena

- B. Plasmodium
- C. Planaria
- D. Paramecium

Answer: A



86. These processes are necessary for the complete development of male gametophyte from pollen mother cell

A. One meiotic and two mitotic divisions B. One meiotic cell division and one mitotic and division C. Two meiotic cell divisions and one mitotic cell divison D. Two mitotic cell divisions

Answer: A

87. From which cells peripheral region of

radicle is produced

A. vegetative cell

B. Hypophysis

C. Apical octant

D. Micropylar octant

Answer: B

88. It is a process of embryosac formation from cell of nucellus, without undergoing meiosis ?

A. Polyembryony

B. Incompatibility

C. Parthenocarpy

D. Parthenogenesis

Answer: D

89. It can regenerate entire alimentary canal

A. Amphibian

B. Fish

C. Sea cucumber

D. Parthenogenesis

Answer: C



90. Spermatids are transformed into

spermatozoa by

A. Amphibian

B. Spermatogenesis

C. Meiosis

D. Spermatosis

Answer:

91. Study of pollen grain is called

A. Entomology

B. Palynology

C. Paleobotany

D. Co-taxonomy

Answer: B



92. Which is immortal?

A. Plasma Cell

B. Germ Cell

C. Brain Cell

D. Kidney Cell

Answer: B

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93. Monocarpic plant

A. flowers twice in every year

B. bears only one type of flower

C. flowers once in every year

D. dies after flowering once in its life cycle

Answer: D

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94. Exponential growth occur in

A. yeast

B. asexual reproduction

C. bacteria

D. all of these

Answer: B

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95. Vegetative propagation in mint occurs by

A. offset

B. rhizome

C. sucker

D. runner

Answer: C

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96. Synergids are

A. haploid

B. diploid

C. triploid

D. tetraploid

Answer: A



97. Match the items in column I with column II

and choose the correct option

	Column I		Column II
A	Binary fission	1.	Algae
В	Zoospore	2.	Amoeba
С	Conidium	3.	Hydra
D	Budding	4.	Penicillium
Е	Gemmules	5.	Sponge

A. A-1, B-4, C-5, D-3

B. A-2, B-1, C-4, D-3

C. A-2, B-4, C-3, D-5

D. A-1, B-4, C-3, D-2

Answer: B



98. Which one of the following animals posesses high regeneation capacity?

A. Planaria

B. Taenia

C. Salpa

D. Periplaneta

Answer: A

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99. Asexual reproduction in fungi takes place

by

A. endospore

B. gametangia

C. exospores

D. conidiospore

Answer: D



100. Gymnosperms bear seeds but lack fruits

because they lack

A. cotyledon

B. embryo

C. ovary

D. ovule

Answer: C



101. Which one of the following processes

results in the formation of clone of bacteria ?

A. Binary fission

B. Conjugation

C. Transformation

D. Transduction

Answer: A



102. Egg apparatus of angiosperm consists of

A. an egg cell and two antipdals

B. an egg cell and two synergids

C. an egg cell and two polar nuclei

D. an egg and the central cell

Answer: B

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103. Breeding of crops with high levels of minerals vitamins and proteins called

A. somatic hybridisation

B. biofortification

C. biomagnification

D. micropropagation

Answer: B

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104. Vegetative propagation in Pistia occurs by

A. stolon

B. offset

C. runner

D. sucker





105. Which of the following is pollinated by water

A. Viola

B. Yucca

C. Oxalis

D. Commelina



106. Find out the wrongly matched pair

- A. tuber potato
- B. rhizome ginger
- C. bulbil- Agave
- D. leaf buds banana

Answer: D



107. The term parthenogenesis was coined by

A. (a) Siebold

B. (b) Boveri

C. (c) Balfour

D. (d) Grobben

Answer: A

108. The offspring formed by asexual reproduction are identical and are referred to

as

A. (a) Zoospores

B. (b) Clones

C. (c) Conidia

D. (d) gemmules

Answer: B

109. The type of pollination involving transfer of pollen grains from anther to the stigma of the same flower is known as

A. geitonogamy

B. xenogamy

C. autogamy

D. apogamy

Answer: C

110. The stage between two meiotic division is called

A. interphase

B. cytokinesis

C. interkinesis

D. karyokinesis

Answer: C



111. Match list I with list II and select the

correct option

List I		List II	
А	Gemmules	1. Agave	
В	Leaf-buds	2. Penicillium	
С	Bulbil	3. Water hyacinth	
D	Offset	4. Sponges	
E	Conidia	5. Bryophyllum	

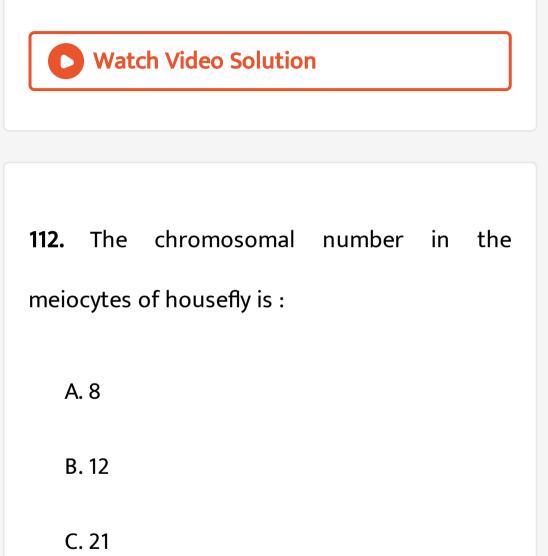
A. A-4, B-5, C-1, D-3,E-2

B. A-4, B-3, C-2, D-1, E-5

C. A-3, B-5, C-4, D-2, E-1

D. A-4, B-1, C-5, D-3, E-2





D. 23





113. The 'Eyes' of the potato tuber are :-

A. root buds

- B. flower buds
- C. shoot buds
- D. axillary buds

Answer: D



114. Nucellar polyembryony is reported in species of

A. Citrus

B. Gossypium

C. Triticum

D. Brassica

Answer: A





115. Biodiversity of a geographical region represents

A. endangered species found in the region

B. the diversity in the oragnisms living in

the region

C. genetic diversity in the dominant species

of the region

D. None of these





116. Testa of seed develops from

A. ovary wall

B. hilum

C. outer integument of ovule

D. funicle

Answer: C



117. ovule in which funicle, chalaza and micropyle occur in one vertical plane is

A. campylotropous

B. amphitropous

C. orthropous

D. anatropous







118. Ovule integument gets transformed into

A. seed

B. fruit wall

C. seed coat

D. cotyledons

Answer: C

119. Both, autogamy and geitonogamy are prevented in

A. Papaya

B. cucumber

C. castor

D. maize

Answer: A

120. Dentrification is carried out by

A. Pseudomonas

- B. Nitrobacter
- C. Nitrosomonas
- D. Nitrococcus

Answer: A



121. In general, pollen tube enter the ovule through

A. micropyle

B. chalaza

C. hilum

D. funicle

Answer: A

122. Transfer of pollen from anthers of one flower to the stigma of another flower of the same plant is

A. geitonogamy

B. xenogamy

C. cleistogamy

D. chasmogamy

Answer: A

123. The endosperm cells in angiosperms are

A. (a) haploid

B. (b) diploid

C. (c) triploid

D. (d) tetraploid

Answer: C



124. The fleshy edible part of an apple is

A. (a) thalamus

B. (b) nucellus

C. (c) ovary

D. (d) endosperm

Answer: A

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125. Why asexual reproduction is sometimes

disadvantageous ?

A. It allows animals that do not move around to produce offspring without findingmate B. it allows an animals to produce many offspring quickly C. it save the time and energy of gamete production D. it produce genetically uniform populations

Answer: D



126. Meiosis takes place in

A. Gemmule

B. Megaspore

C. Meiocyte

D. Conidia

Answer: C

127. Monoecious plant of Chara shows occurrence of

A. Upper antheridium and lower oogonium

on the same plant

B. Upper oogonium and lower antheridium

on the same plant

C. Antheridiphore and archegoniophore on

the same plant

D. Stamen and carpel on the same plant





128. Which one of the following is wrong about Chara

A. Gobule is male reproductive structure

B. Upper oogonium and lower round

antheridium

C. Globule and nucule present on the same

plant

D. Upper antheridium and lower oogonium

Answer: D

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129. In ginger , vegetative propagation occurs through :

A. Offsets

B. Bulbils

C. Runners

D. Rhizome

Answer: D

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130. Which of the following pairs is not correctly matched ?

Mode of reproduction	Example	
(1) Offset	Water hyacinth	
(2) Rhizome	Banana	
(3) Binary fission	Sargassum	
(4) Conidia	Penicillium	

A.

Mode of reproduction Example Offset Waterhy

B. Mode of reproduction Rhizome

C. Mode of reproduction

...Binary fission

D. Mode of reproduction Conidia

Example Waterhy acinth Example Banana Example Sargassum Example Penicillium

Answer: C

131. Which of the following flowers only once in its lifetime

A. Papaya

B. Mango

C. Jackfruit

D. Bamboo species

Answer: D