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## BIOLOGY

## BOOKS - TRUEMAN'S BIOLOGY <br> (ENGLISH)

## REPRODUCTION

Section A

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?

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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.


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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

## D Watch Video Solution

7. How does colostrum provide protection against diseases to new born babies ?

## D <br> Watch Video Solution

8. Why do internodal segments of sugarcane
fail to propagate vegetatively even when they are in contact with damp soil ?

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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 ?

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

## D Watch Video Solution

13. A bilobed, dithecous anther has 100
microspore
mother
cells
per
microsporangium. 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.

D Watch Video Solution
16. Pea flower produce assured seed sets. Give a reason

D Watch Video Solution
17. Identify the reproductive structure of the

Figure shown and name the orgainsm they are being released from

## D Watch Video Solution

18. Why do the pollen grains of Vallisneria have
a mucilaginous covering ?


D Watch Video Solution
19. Name the organism and the mode of reproduction represented in the diagram given below .


## D Watch Video Solution

20. Why do corn cobs have long tassels ?
21. Mention the function of trophoblast in human embryo

## D Watch Video Solution

22. Mention two inherent characteristics of

Amoeba and yeast that enable them to reproduce asexually

D Watch Video Solution
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
## D Watch Video Solution

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.

## D Watch Video Solution

28. Mention the differences between
spermiogenesis and spermiation.

## D Watch Video Solution

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

## D Watch Video Solution

30. Write the function of Nucleus of human
sperm
31. Name an orgainsm where cell division in
itself is a mode of reproduction

## - Watch Video Solution

32. Name an algae that reproduces asexually
through zoospores

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

## D Watch Video Solution

## Section B

1. Identify the type of flower shown in A and B.

Which out of the two will produce an assured
seed set?


- Watch Video Solution

2. In the T.S. of a mature anther given below, identify ' A ' and ' B ' and mention their function.


## - Watch Video Solution

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
D.


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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 ?

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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 ?

## D Watch Video Solution

9. Why is an apple called a false fruit and banana a parthenocarpic fruit ? Explain

## D Watch Video Solution

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

## - Watch Video Solution

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.

## D Watch Video Solution

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.

## D Watch Video Solution

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 ?


Mesocarp
17. A fertilized egg is the blue print of future development. Explain

## D Watch Video Solution

18. Describe the Lactational Amenorrhea method of birth control

- Watch Video Solution

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

## D Watch Video Solution

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.

- Watch Video Solution

22. Placenta acts as an endocrine tissue. Justify.

## D Watch Video Solution

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.

## D Watch Video Solution

24. Draw the sketch of a zoospore and a conidium. Mention two dissimilarities between
them and atleast one feature common to both structures.

## D Watch Video Solution

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.

D Watch Video Solution
26. Why does the zygote begin to divide only after the division of primary Endosperm cell (PEC)?

- Watch Video Solution

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.

## D Watch Video Solution

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 .

## D Watch Video Solution

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?

## D Watch Video Solution

32. All reproductive tract infections are STDs,
but all STDs are not RTIs. Justify with example

## D Watch Video Solution

33. What do you understand by amniocentesis
? Why is there a statutory ban on this ? Give reason

## D Watch Video Solution

34. When and where do chorionic villi appear
in humans ? State their function.

D Watch Video Solution
35. (a) How does cleistogamy ensure autogamy?
(b) State one advantage and one disadvantage of cleistogamy to the plant.

## D Watch Video Solution

36. Explain the steps that ensure cross pollination in an autogamous flower.

## D Watch Video Solution

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.

## D Watch Video Solution

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.

## - Watch Video Solution

## Section C

1. Draw a labelled diagram of the sectional view of a mature pollen grain of angiosperms.

Explain the function of generative cell and
vegetative cell


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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.


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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 14 th day and 21 st 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 ?



## D Watch Video Solution

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.

- Watch Video Solution

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

- Watch Video Solution

7. In an angiosperm the embryo sac is haploid,
zygote is diploid and endosperm is triploid.
Justify giving reasons for each stage.

## - Watch Video Solution

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 .


## - Watch Video Solution

9. (i ) Write the characteristics features of anther, pollen and stigma of wind polinated flowers.
(ii) How do flowers reward their insect pollinators ? Explain.

## - Watch Video Solution

10. (a) Mention any four strategies adopted by flowering plants to prevent self- pollination.
(b) Why is geitonogamy also referred to as genetical autogamy?

## - Watch Video Solution

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

## D Watch Video Solution

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.

## D View Text Solution

14. Write the function of each one of the following :
(a) (Oviducal) Fimbriae
(b) Coleoptile
(c) Oxytocin

D Watch Video Solution
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.

## D View Text Solution

16. Write the function of each of the following
(a) Seminal vesicle
(b) Scutellum
(c) Acrosome of human sperm.

17. 

Read
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.

## - Watch Video Solution

18. Expand the following and explain any one of them.
(i) IVF (ii) ZIFT (iii) IUI (iv) MTP

- Watch Video Solution

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)

## D Watch Video Solution

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.

## D Watch Video Solution

## 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.

## D Watch Video Solution

2. "Incompatibility is a natural barrier in the fusion of gametes". Justify the statement.

## - Watch Video Solution

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


## D Watch Video Solution

4. Draw a schematic diagram of a human
sperm and label the cellular components.

## D <br> Watch Video Solution

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.

## D 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.

## D Watch Video Solution

7. Study the flow chart given below. Name the
hormones involved at each stage and explain
their functions .

Hypothalamus $\rightarrow$ Pituitary $\rightarrow$ Ovary

## D Watch Video Solution

8. Explain the different stages of oogenesis in human starting from life till its completion.

When and where in the body is oogenesis completed?

## D Watch Video Solution

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.

## D View Text Solution

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.

## D View Text Solution

11. Describe in sequence the events that lead
to the development of a 3-celled pollen grain from microscope mother cell in angiosperms.

## D Watch Video Solution

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.

## - Watch Video Solution

13. (a) Draw a labelled longitudinal view of an albuminous 'seed'.
(b) How are seeds advantageous to flowering plants?
14. Describe the post-zygotic events leading to
implantation and placenta formation in
humans. Mention any two functions of placenta.

## - Watch Video Solution

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.

## - Watch Video Solution

16. Embryo sacs of some apomitic species appear normal but contain diploid cells.

Suggest a suitable explanation for the condition.

D Watch Video Solution
17. Meiotic division during oogenesis is different from that in spermatogenesis.

Explain how and why?

## D Watch Video Solution

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.


## - Watch Video Solution

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.

## - Watch Video Solution

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

## D Watch Video Solution

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.

## D Watch Video Solution

26. Write two differences between
spermtogenesis and oogenesis

## Watch Video Solution

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.

## Multiple Choice Question

1. Regeneration was first discovered in Hydra by
A. Linnaeus
B. Trembley
C. Thomas Addison
D. Stanley

Answer: B

D Watch Video Solution
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

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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

D Watch Video Solution
7. Which of the following animals, is /are ovoviviparous

A. Hen

B. Platypus
C. (1) and (2)
D. Rattle snake

Answer: D

D Watch Video Solution
8. Parthenogenesis occurs in
A. Axolotl
B. Miracidium and Metacercaria
C. Cercaria
D. Sporocyst and redia

## Answer: D

## - Watch Video Solution

9. Paramecium reproduces by
A. asexual reproduction
B. sexual reproduction
C. both (1) and (2)
D. none of the above

## Answer: C

## - Watch Video Solution

10. When male differs female in morphol-ohy, it is called
A. heterogamy
B. homogamy
C. sexual dimorphism
D. hermaphroditism

## Answer: C

## D Watch Video Solution

11. Paedogenesis is found in the larvae of
A. Taenia
B. Fasciola
C. Rana
D. Butterfly

Answer: B

- Watch Video Solution

12. Oblique binary fission is found in
A. Monocystis
B. Plasmodium vivax

## C. Planaria

D. Ceratium

## Answer: D

## D Watch Video Solution

13. Which one has the capacity to reproduce without fertilization of eggs ?
A. Spider
B. Crow
C. Honey bee
D. Earthworm

## Answer: C

## - Watch Video Solution

14. The term homothallic and monoeious are
used to denote
A. Bisexual condition
B. Unisexual condition

## C. Staminate flowers

## D. Pistillate flowers

## Answer: A

## D Watch Video Solution

## 15. What is the maximum age of parrot ?

A. 90 years
B. 25 years
C. 500 years

## D. 140 years

## Answer: D

## D Watch Video Solution

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

## D Watch Video Solution

17. Bryphyllum has asexual reproductive bodies
A. runner
B. sucker
C. bulb
D. adventitous buds

## Answer: D

D Watch Video Solution
18. Which of following plats is monoecious ?
A. Papaya

## B. Date palm

## C. Coconut

D. Both (1) and (2)

## Answer: C

## - Watch Video Solution

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

## D Watch Video Solution

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
C. Gemma cups are protective in function
D. they produce gametes

Answer: B

## D Watch Video Solution

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

## D Watch Video Solution

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

## D Watch Video Solution

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

## less

A. grapes
B. bananas
C. guavas
D. pomegrantes

## Answer: D

## D Watch Video Solution

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

## D Watch Video Solution

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

## D Watch Video Solution

27. Among the following which one is not a method of asexual reproduction?
A. Budding
B. Layering
C. Sowing
D. Binary fission

Answer: C

D Watch Video Solution
28. Double fertilization is found in
A. angiosperms
B. gymnosperms
C. pteridophytes
D. bryphytes

Answer: A

- Watch Video Solution

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

D Watch Video Solution
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

## D Watch Video Solution

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

## - Watch Video Solution

32. Chromosome number in melocyte of drosophila (fruit fly) is
A. 2
B. 4
C. 6
D. 8

Answer: D

## - Watch Video Solution

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

- Watch Video Solution

34. Zoospores of chlamydomonas are
A. asexual reproductive bodies
B. sexual reproductive bodies
C. buds
D. gemmules

Answer: A
( Watch Video Solution
35. The nodes are called 'eyes' which will form
a new plant
A. Ginger
B. Bryophyllum
C. Alocasia
D. Potato

## Answer: D

## D Watch Video Solution

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

## D Watch Video Solution

37. Vegetatively reproduced organism is

A. Dahlia
B. Ginger
C. Potato
D. all of the above

## Answer: D

## D Watch Video Solution

38. Ciliate motile spores are called
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

D Watch Video Solution
44. Chromosome number in gamete of onion
A. 8
B. 16
C. 24
D. 32

Answer: B

D Watch Video Solution
45. Comparable to angiospersm, which of the following algae exhibits diplontic life cycle ?
A. Spirogyra
B. Ectocarpus
C. Polysiphonia
D. Fucus

Answer: D
(D) Watch Video Solution
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

## D Watch Video Solution

48. The meiocyte is
A. haploid
B. diploid
C. triploid

## D. none of these

## Answer: B

## D Watch Video Solution

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

## D Watch Video Solution

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

## D Watch Video Solution

51. Vegetative reproduction of Agave occurs
through
A. rhizome
B. stolen
C. bulbils
D. suckers

Answer: C

- Watch Video Solution

52. New Banana plants develop from
A. rhizome
B. suckers
C. stolons
D. seed

Answer: B

- Watch Video Solution

53. Tea and Cocoa are propagated by
A. layering
B. stem cuttings
C. grafting
D. bud grafting

Answer: B
( Watch Video Solution
54. In Lacerta saxicola armaniaca (lizard) there are
A. females only
B. males only
C. bisexual only
D. Both (1) and (2)

Answer: A

## - Watch Video Solution

55. In which type of parthenogenesis, only males are produced ?
A. Arrhenotocky
B. Thelytoky

## C. Amphitoky

D. Both (1) and (2)

## Answer: A

## D Watch Video Solution

56. Vegetative propagation plays a vital role in
A. sericulture
B. apiculture
C. sylviculture

## D. horticulture

## Answer: D

## D Watch Video Solution

57. Adventive embryony in Citrus is due to
A. egg
B. nucellus
C. embryo
D. integument

## - Watch Video Solution

58. After fertilization the ovary develops into
A. seed
B. fruit
C. pericarp
D. stamens
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

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# 62. Natural parthenogenesis is found in 

A. aphids
B. honey bees
C. wasps
D. all the above

Answer: D

- Watch Video Solution

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

## D Watch Video Solution

A. dolly goat
B. dolly sheep
C. molly goat
D. molly sheep

Answer: B

- Watch Video Solution

66. The terminal irreversiable stage of ageing is called
A. autogamy
B. syngamy
C. senescence
D. cytogamy

Answer: C

- Watch Video Solution

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

D Watch Video Solution
68. Plasmotomy occurs in
A. Hydra

## B. Obelia

## C. Opalina

D. Plasmodium

## Answer: C

## D Watch Video Solution

69. Gemmule formation occurs in
A. fresh water sponge
B. some marine spomges
C. Labeo rohita
D. Both (1) and (2)

## Answer: D

## D Watch Video Solution

## 70. Menstrual cycle occurs in

A. old world monkeys
B. apes
C. humans

D. all of these

## Answer: D

## D Watch Video Solution

71. Isogametes are present in
A. Fuccus
B. Cladophora
C. Frog
D. Bird

Answer: B

## - Watch Video Solution

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

## Answer: D

## D Watch Video Solution

73. Ramphotyphlops braminus produces
females only by pathenogenesis. It is a
A. snake
B. bird
C. frog
D. mammal

## D Watch Video Solution

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

## - Watch Video Solution

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

## D Watch Video Solution

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

## D Watch Video Solution

## 77. Ramet is

A. clone
B. callus
C. cell aggregate
D. individual member of clone

## Answer: D

## D Watch Video Solution

78. Development of seed from an unfertilized egg is
A. vivipary
B. pathenocarpy
C. apogamy
D. apospory

## Answer: C

## D Watch Video Solution

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

## D Watch Video Solution

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

## D Watch Video Solution

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

## D Watch Video Solution

82. Maximum life span of Eagle is
A. 90 years
B. 15 years
C. 10 years
D. 5 years

Answer: A

D Watch Video Solution
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

## D Watch Video Solution

84. In which of the following organisms, self fertilization is seen ?
A. Fish
B. Roundworm
C. Earthworm
D. Tapeworm

## Answer: D

## D Watch Video Solution

85. Which of the following animals is having longitudinal binary fission
A. Euglena
B. Plasmodium
C. Planaria
D. Paramecium

Answer: A

D Watch Video Solution
86. These processes are necessary for the complete development of male gametophyte
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

## D Watch Video Solution

87. From which cells peripheral region of radicle is produced
A. vegetative cell
B. Hypophysis
C. Apical octant
D. Micropylar octant

Answer: B
(D) Watch Video Solution
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

## D Watch Video Solution

# 90. Spermatids are transformed into 

spermatozoa by
A. Amphibian
B. Spermatogenesis
C. Meiosis
D. Spermatosis

Answer:
(D) Watch Video Solution

# 91. Study of pollen grain is called 

A. Entomology
B. Palynology
C. Paleobotany
D. Co-taxonomy

Answer: B
(D) Watch Video Solution
92. Which is immortal?
A. Plasma Cell
B. Germ Cell
C. Brain Cell
D. Kidney Cell

Answer: B

D Watch Video Solution
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

## D Watch Video Solution

94. Exponential growth occur in
A. yeast
B. asexual reproduction
C. bacteria
D. all of these

Answer: B

- Watch Video Solution


# 95. Vegetative propagation in mint occurs by 

A. offset
B. rhizome
C. sucker

## D. runner

## Answer: C

## D Watch Video Solution

## 96. Synergids are

A. haploid
B. diploid
C. triploid
D. tetraploid

## Answer: A

## - Watch Video Solution

97. Match the items in column I with column II
and choose the correct option

| Column I |  |  |
| :--- | :--- | :--- |
| Column II |  |  |
|  | Binary fission | 1. Algae |
| A Zoospore | 2. Amoeba |  |
| C Conidium | 3. | Hydra |
| D Budding | 4. Penicillium |  |
| E 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

## D Watch Video Solution

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

B. Taenia

C. Salpa
D. Periplaneta

Answer: A

## D Watch Video Solution

99. Asexual reproduction in fungi takes place by
A. endospore
B. gametangia

## C. exospores

D. conidiospore

## Answer: D

## - Watch Video Solution

100. Gymnosperms bear seeds but lack fruits
because they lack
A. cotyledon
B. embryo
C. ovary
D. ovule

## Answer: C

## - Watch Video Solution

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

## D Watch Video Solution

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

## D Watch Video Solution

103. Breeding of crops with high levels of minerals vitamins and proteins called
A. somatic hybridisation
B. biofortification
C. biomagnification

## D. micropropagation

Answer: B

## D Watch Video Solution

104. Vegetative propagation in Pistia occurs by
A. stolon
B. offset
C. runner
D. sucker

Answer: B

## - Watch Video Solution

105. Which of the following is pollinated by
water
A. Viola
B. Yucca
C. Oxalis
D. Commelina

## Answer:

## - Watch Video Solution

106. Find out the wrongly matched pair
A. tuber - potato
B. rhizome-ginger
C. bulbil- Agave
D. leaf buds - banana
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

- Watch Video Solution

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

D Watch Video Solution
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 |
| :--- | :--- | :--- |
| A | Gemmules | 1. Agave |
| B Leaf-buds | 2. Penicillium |  |
| C | 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

Answer: A

## - Watch Video Solution

112. The chromosomal number in the meiocytes of housefly is :
A. 8
B. 12
C. 21
D. 23

## - Watch Video Solution

113. The 'Eyes' of the potato tuber are :-
A. root buds
B. flower buds
C. shoot buds
D. axillary buds
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

## - Watch Video Solution

116. Testa of seed develops from
A. ovary wall
B. hilum
C. outer integument of ovule
D. funicle
117. ovule in which funicle, chalaza and micropyle occur in one vertical plane is
A. campylotropous
B. amphitropous
C. orthropous
D. anatropous

Answer: C

# 118. Ovule integument gets transformed into 

A. seed
B. fruit wall
C. seed coat
D. cotyledons

Answer: C
( Watch Video Solution
119. Both, autogamy and geitonogamy are prevented in
A. Papaya
B. cucumber
C. castor
D. maize

Answer: A

D Watch Video Solution
120. Dentrification is carried out by
A. Pseudomonas
B. Nitrobacter
C. Nitrosomonas
D. Nitrococcus

Answer: A

- Watch Video Solution

121. In general, pollen tube enter the ovule through
A. micropyle
B. chalaza
C. hilum
D. funicle

Answer: A

D Watch Video Solution
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

## D Watch Video Solution

124. The fleshy edible part of an apple is
A. (a) thalamus
B. (b) nucellus
C. (c) ovary
D. (d) endosperm

Answer: A

D Watch Video Solution
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

# 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

Answer: B

## - Watch Video Solution

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

## D Watch Video Solution

129. In ginger, vegetative propagation occurs
through :
A. Offsets

## B. Bulbils

## C. Runners

D. Rhizome

Answer: D

- Watch Video Solution

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 acinth
Mode of reproduction Example
B.

Rhizome
Banana
Mode of reproduction Example
C.

Binary fission
Sargassum
Mode of reproduction Example
D.

Conidia

## Answer: C

131. Which of the following flowers only once in its lifetime
A. Papaya
B. Mango
C. Jackfruit
D. Bamboo species

Answer: D

