BIOLOGY

BOOKS - AAKASH SERIES

REPRODUCTION IN ORGANISMS

Exercise I Introduction

1. Find out the mismatch

A.

Organism	Life span
Crow	15 years

B.

Organism	Life span
Parrot	140 years

C.

Organism	Life span
Crocodile	600 years

D.

Organism	Life span
Butterfly	1-2years

Answer: C

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2. Individulas obtained through asexual reproduction are

A. Phenotypically similar

B. Genotypically similar

C. Both Phenotypically and genotypically different

D. both Phenotypically and genotypically similar

Answer: D

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3. Uniparental reproduction is (always)

A. Sexual reproduction

B. vegetative reproduction

C. Asexual reproduction

D. 2 and 3

Answer: D

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4. Number of parents involved in asexual and usual sexual reproductions respectively

A. 2,1

B. 1,2

C. 2,2

D. 1,1

Answer: B

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5. Find out the mismatch.

A. Binary fission-Amoeba

B. Buds-Hydra

C. Conidia -Pencillium

D. Gemmules-Paramecium

Answer: D

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6. Which plant is generally called " terror of Bengal "?

A. Water lettuce

B. Water hyacinth

C. Hydrilla

D. Vallisnana

Answer: B

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7. True statemenet regarding sexual reproduction

A. Off springs are not identical to the parents but identical among themselves

B. Off springs are identical to the parents but not identical among themsevles

C. Off springs are identical to the parents and identical among themselves

D. Off springs are not identical to the parents or among themselves

Answer: D

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8. The sequence of events occuring during the entire lifespan of living organisms

A. Juvenile phase-Mature phase-Old age-Death

B. Mature phase-Juvenile phase Old age-Death

C. Old age-Mature phase-Jevenile phase = Death

D. Juvenile phase-old age-Mature phase-Death

Answer: A

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9. Find out the correct match

A. Monocarpic plant-Bamboo

B. Menstrual cycle-Tiger

C. Oestrus cycle-Monkey

D. Menstrual cycle-Tiger

Answer: A

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10. The ploidy of endosperm in angiosperms is

A. n

B. 2n

C. 3n

D. 4n

Answer: C

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11. Find out the false statement

A. The end of reproductive phase can be considered as one of the parameters of senescence or old age

B. Hormones are responsible for the transition between jevenile phase to reproductive phase

C. Many of the mammals are continuous breeders

D. Non-primate mannals like crows, deers, tiger show oestrous cycle

Answer: D

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12. Find out the incorrect match

A. Isogamets-Cladophora

B. Heterogramets -Fucus

C. Isogametes -Homo sapines

D. Homogemetes-Cladophora

Answer: C

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13. The number of chromosomes present in a nerve cell of a human being.

A. 78,36,24,24

B. 78,42,48,24

C. 78,42,24,48

D. 34,48,24,78

Answer: C

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14. Chromosome number in gamete of onion is

A. A-Potato, B-Rice

B. A-Rice, B-Potato

C. A-Maize, B-Rice

D. A- Apple, B-Onion

Answer: B

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15. Find out the correct sequence of PCR

A. Maize $\rightarrow$ Frutify $\rightarrow$ Rice $\rightarrow$ Apple

B. Frutifly $\rightarrow$ Housefly $\rightarrow$ Maize $\rightarrow$ Rice

C. Potato $\rightarrow$ Apple $\rightarrow$ Dog $\rightarrow$ Cat

D. House fly $\rightarrow$ Apple $\rightarrow$ Onlion $\rightarrow$ Dog

Answer: B

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16. Development of new individual from female gamete without fertillisation is termed as

A. Parthnocarpy

B. Syngamy

C. Triple fusion

D. Parthenogenesis

Answer: D

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17. Parthenogenesis is commonly seen in

A. Rotifers, Honeybees, Some Lizirds, Some Birds

B. Rotifers, Dogs, Cats, Fruitfly

C. Human beings, Cats, Dog, Honey bees

D. Frutifly , Rats, Cats, Dogs

Answer: A

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18. Find out the mismatch

A. Internal fertilization - Bryophytes, Pteridophytes

B. External fertilization - Amphibians Fishes

C. Internal fertilization - Gymnosperms, Angiospherms

D. External fertilization - Mammals, Reptiles, Birds

Answer: D

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19. Identify ploidy of following parts of a flowering plant respectively Ovary, Anther, Eqq, Pollen, Male gamete,

Zygote

A. 2n,2n,n,n,n, 2n

B. 2n,n,2n,2n, n, 2n

C. n, 2n, 2n, n, 2n,n

D. 2n, 2n, n, n, n, n

Answer: A

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20. Find out the mismatch

	Part of flower	Post fertilized form
A.	Ovary	Fruit

B.

(Part of flower, Post fertilized form), (Ovules', $seeds$)

C.

Part of flower	Post fertilized form
Integuments	Seed coat

D.

Part of flower	Post fertilized form
Zygote	Endosperm

Answer: D

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21. Find out the incorrect statements

A. Embryonal protection and care are better in viviparous organisms

B. The process of development of zygote from embryo is called embryogenesis

C. Syngamy may occur either externally or Internally

D. Syngamy leads to the formation of a specialized celled "gameter"

Answer: D

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22. The given talbe enlists various organisms and their reproductive structures

Organism	*Chlamydo-monas*	*Penicillium*	*Hydra*	*Sycon*
Reproductive structure	I	II	III	IV

The information in which alternative completes the above table?

A. Buds, Gemmules, Zoospores, Condidia

B. Conidia, Buds, Gemmules, Zoospores

C. Zoospores, Conidia, Buds, Germmules

D. Gemmules, Zoospores, Conidia, Buds

Answer: C

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23. Which of the following pairs of asexual reproductive strcutures is found in animals?

A. Conidia and Buds

B. Buds and Gemmules

C. Zoospores and Conidia

D. Gemmules and Zoospores

Answer: B

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24. Which of the following vegetative propagules are found in Agave and Eichhornia plants respectively?

A. Bulbil and Offset

B. Offset and Sucker

C. Sucker and Runner

D. Runner and Bulbil

Answer: A

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25. In which of the following pair of animals does oestrous cycle takes place?

A. Cow and rat

B. Human and rat

C. Gorilla and tiger

D. Monkey and gorilla

Answer: A

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26. Which of the following statements is correct regarding the bisecual and unisexual conditions in plants?

A. Homothallic and monoecious terms are used to describe bisexual condition in plants

B. Heterothallic and dioecious terms are used to describe bisexual condition in plants

C. Heterothallic and monoecious terms are used to describe unisexual condition in plants

D. Homothallic and dioecious terms are used to describe unisexual condition in plants

Answer: A

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27. Which of the following statements is correct?

A. The parental body of gymnosperm, angiosperm, and most of the animals including humans is diploid

B. The parental body of gymnosperm, angiosperm, and most of the animals excluding human is diploid

C. The parental body of gymnosperm, angiosperm, and most of the animals including humans is haploid

D. The parental body of gymnosperm, angiosperm, and most of the animals excluding humans is haploid

Answer: A

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28. The animals that possess both male and female reproductive organs are known as hermaphrodites or (i) organisms. The examples of such animals are earthworm

and (ii). The information in which alternative completes the given statements?

A. $\begin{matrix} i & ii \\ \text{Unisexula} & \text{Tapeworm} \end{matrix}$

B. $\begin{matrix} i & ii \\ \text{Unisexula} & \text{cockroach} \end{matrix}$

C. $\begin{matrix} i & ii \\ \text{Bisexual} & \text{Tapeworm} \end{matrix}$

D. $\begin{matrix} i & ii \\ \text{Bisexual} & \text{cockroach} \end{matrix}$

Answer: C

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29. Clones are morphologically and genetically (i) individuals. They are produced as a result of (ii)

reproduction. The information in which alternative completes the given statements?

A. $\begin{matrix} i & i \\ \text{similar} & \text{sexual} \end{matrix}$

B. $\begin{matrix} i & i \\ \text{similar} & \text{sexual/vegetative} \end{matrix}$

C. $\begin{matrix} i & i \\ \text{dissimilar} & \text{sexual} \end{matrix}$

D. $\begin{matrix} i & i \\ \text{dissimilar} & \text{sexual} \end{matrix}$

Answer: B

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30. The number of chromosomes present in the gametes of a housefly is six. How many chromosomes are present in the meiocytes of a housefly?

A. 6

B. 12

C. 24

D. 46

Answer: B

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31. The process by which unfertilized egg develops into an individual is known as

A. oogenesis

B. embryogenesis

C. parthenogenesis

D. spermatogenesis

Answer: C

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32. Reptiles and birds are known as (i) animals. In these animals, the development of zygote takes place (ii) the female body. The information in which alternative completes the given statements?

A. $\begin{matrix} \text{I} & ii \\ \text{Oviparous} & \text{outside} \end{matrix}$

B. $\begin{matrix} \text{I} & ii \\ \text{Oviparous} & \text{inside} \end{matrix}$

C. $\begin{matrix} \text{I} & ii \\ \text{viviparous} & \text{outside} \end{matrix}$

D.

I	ii
viviparous	inside

Answer: A

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33. Which of the following statements is incorrect about post fertilisation events in plants?

A. Ovary grows, enlarges, and ripens to become a fruit

B. Fruit develops, a thick protective wall, called pericarp, around it

C. Zygote divides several times to form an embryo enclosed in the seed

D. Petals of the flower grow and form a part of the fruit after fertilization

Answer: D

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34. Which of the following statements is incorrect regarding the process of external and internal fertilization?

A. Male and female gametes fuse inside the female body during internal fertilization

B. Male and female gametes fuse outside the female body during external fertilization

C. In internal fertilization the number of eggs produced by female is more

D. In external fertilzation, the number of eggs produced by female is more

Answer: C

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35. The meiocytes of a dog contain 78 chromosomes. The number of chromosomes present in the zygote stage after fertilisation in a dog will be

A. 19

B. 39

C. 78

D. 156

Answer: C

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36. Which of the following sequences correctly represents the series of events that take place during sexual reproduction?

A. Gametogenesis- Gamete transfer-Fertilisation - Zygote formation - Embryogenesis

B. Gamete transfer- Fertilisation - Gametogenesis- Zygote formation- Embryogenesis

C. Fertilisation - Zygote formation - Gamete transfer - Gametogenesis - Embryogenesis

D. Zygote formation- Gametetransfer- Embryogenesis- Fertilisation - Gametogenesis

Answer: A

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37. Which of the following processes involves the transfer of male gametes?

A. syngamy

B. Pollination

C. Embryogenesis

D. Parthenogenesis

Answer: B

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38. The plants such as (i) and date palm are called (ii). The staminate and pistillate flowers in these plants are found

in separate indivuals. The information in which alternative completes the given statement?

A. i papaya *ii* monoecious

B. i papaya *ii* dioecious

C. i coconut *ii* dioecious

D. i coconut *ii* monoecious

Answer: B

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39. Potatoes are vegetatively propagated from

A. Tubers

B. Offsets

C. Bulbils

D. Rhizomes

Answer: A

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40. In organisms that exhibit the (i) life cycle, the adult is haploid and it forms haploid gametes through (ii). The information in which alternative completes the given statements?

A. $\begin{matrix}(\mathrm{i}) & (ii)\\ \text{haplontic} & \text{mitosis}\end{matrix}$

B. $\begin{matrix}(\mathrm{i}) & (ii)\\ \text{haplontic} & \text{meiosis}\end{matrix}$

C. (i) diplontic (ii) mitosis

D. (i) haplontic (ii) meiosis

Answer: A

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41. The given table enlists the examples of monoecious and dioecious plants

Type of plants	Monoecious	Dioecious
Example	i	ii

The information in which alternative completes the given table?

A. (i) Cucumber (ii) Date palm

B. (i) Date palm (ii) Coconut

C. $\begin{matrix}(\mathrm{i}) & (ii) \\ \text{Papaya} & \text{Cucumber}\end{matrix}$

D. $\begin{matrix}(\mathrm{i}) & (ii) \\ \text{Melon} & \text{Coconut}\end{matrix}$

Answer: A

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42. Amoeba and Yeast reproduce asexually by fission and budding respectively, because they are

A. Microscopic organisms

B. Heterotrophic organisms

C. Unicellular organisms

D. Uninucleate organisms

Answer: A

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43. The term 'clone' cannot be applied to offspring formed by sexual reproduction be cause

A. Offspring do not possess exact copies of parental DNA

B. DNA of only one parent is copied and passed on to the offspring

C. Offspring are formed at different times

D. DNA of parent and offspring are completely different

Answer: C

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44. A multicellular, filamentous alga exhibits a type of sexual life cycle in which the meiotic division occurs after the formation of zygote The adult filament of this alga has

A. haploid vegetative cells and diploid gametangia

B. diploid vegetative cells and diploid gametangia

C. diploid vegetative cells and haploid gametangia

D. haploid vegetative cells and haploid gametangia

Answer: D

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45. The male gametes of rice plant have 12 chromosomes in their nucleus. The chromosome number in the female gamete, zygote and the cells of the seedling will be, respectively

A. 12,24,12

B. 24,12,12

C. 12,24,24

D. 24,12,24

Answer: C

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46. Appearance of vegetative propagules from the nodes of plants such as sugarcane and ginger is mainly because

A. Nodes are shorter than internodes

B. Nodes have meristematic cells

C. Nodes are located near the soil

D. Nodes have non-photosynthetic cells

Answer: B

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47. Offspring formed by sexual reproduction exhibit more variation than those formed by asexual reproduction because

A. Sexual reproduction is a lengthly process

B. Gametes of parents have qualitatively different genetic composition

C. Genetic material comes from parents of two different species

D. Greater amount of DNA is involved in sexual reproduction

Answer: B

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48. Choose the correct statement from amongst the following

A. Dioecious organisms are seen only in animals

B. Dioecious organisms are seen only in plants

C. Dioecious organisms are seen in both plants and animals

D. Dioecious organisms are seen only in vertebrates

Answer: C

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49. There is no natural death in single celled organisms like Amoeba and bacteria because

A. They cannot reproduce sexually

B. They reproduce by binary fission

C. Parental body is distributed among the offspring

D. They are microscopic

Answer: C

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50. There are various types of reproduction. The type of reproduction adopted by an organism depends on

A. The habitat and morphology of the organism

B. Morphology of the organism

C. Morphology and physiology of the organism

D. The organism's habitat, physiology and genetic makeup

Answer: D

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51. Identify the incorrect statement.

A. In asexual reproduction, the offspring produced are morphologically and genetically identical to the

parent

B. Zoospores are sexual reproductive structures

C. In asexual reproduction, a single parent produces offspring with or without the formation of gametes

D. Conidia are assexual structure in Penicillium

Answer: B

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52. Which of the following is a post-fertilisation event in flowering plants

A. Transfer of pollen grains

B. Embryo development

C. Formation of flower

D. Formation of pollen grains

Answer: B

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53. The number of chromosomes in the shoot tip cells of a maize plant is 20. The number of chromosomes in the microspore mother cells of the same plant shall be:

A. 20

B. 10

C. 40

D. 15

Answer: A

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54. The fertilized egg is called_____

A. ovum

B. blastocyst

C. diploid cell

D. zygote

Answer: D

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55. The ultimate stoppage of menstrual cycle is called

A. puberty

B. menarche

C. menopause

D. old age

Answer: C

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56. The process by which the sperms are produced is known as

A. ovulation

B. spermatogenesis

C. oogenesis

D. gestation

Answer: B

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57. Binary fission is seen in _____

A. Plasmodium

B. Hydra

C. Amoeba

D. Mucor

Answer: C

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58. The endosperm nucleus in angiosperms is

A. haploid

B. diploid

C. triploid

D. tetraploid

Answer: C

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59. Pollen tube contains_____

A. one male nucleus

B. two male nuclei

C. three male nuclei

D. four male nuclei

Answer: B

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

A. allogamy

B. autogamy

C. cross pollination

D. double fertilization

Answer: B

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61. Pollen grains are produced in

(a) Anther

(b) Pollen sac

(c) Filament

(d) Stigma

A. ovary

B. filament

C. stigma

D. anther

Answer: D

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62. The collective name for sepals is___

A. androecium

B. gynoecium

C. corolla

D. calyx

Answer: D

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63. The onest of the reproductive stage is called_____

A. menstruation

B. menarche

C. menopause

D. puberty

Answer: D

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64. The first time that the monthly breeding occurs is called_____

A. maturity

B. menarche

C. menopause

D. puberty

Answer: B

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65. The most important part of the plant for continuation of the life of the species_____

A. stem

B. root

C. flower

D. leaf

Answer: C

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66. The type of vegetative propagation seen in Chrysanthemum is_____

A. runner

B. sucker

C. stolon

D. offset

Answer: B

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67. Successfully grafted plants bear the flowers and fruits characteristic of the _____

A. scion

B. stock

C. either scion or stock

D. a mixture of scion and stock

Answer: A

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68. Sugarcane is normally grown by _____

A. cutting

B. grafting

C. layering

D. seeds

Answer: A

69. Unequal daughter cells are produced in _____

A. fragmentation

B. sporulation

C. fission

D. budding

Answer: D

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70. Vegetative propogation in sweet potato is by_____

A. stem

B. root

C. leaf

D. Rhizomes

Answer: B

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71. Vegetative propogation in Bryophyllum is by

A. stem

B. root

C. leaf

D. none of the above

Answer: C

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72. An example of a hermaphrodite is_____

A. Frog

B. Fish

C. Earthworm

D. Hydra

Answer: C

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73. Multiple fission is seen in_____

A. Yeast

B. Paramoecium

C. Plasmodium

D. Rhizopus

Answer: C

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74. In mammals that are seasonal brreeders, females are receptive only once in a year. This is called

A. a follicular cycle

B. an estrous cycle

C. a menstrual cycle

D. a luteal cycle

Answer: D

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75. How many chromosomes does a normal, mature, human sperm cell contain?

A. 1

B. 2

C. 23

D. 46

Answer: C

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76. Which of the following shows budding?

A. Yeast

B. Amoeba

C. Paramoecium

D. Plasmodium

Answer: A

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77. Multiple fission is seen in_____

A. Hydra

B. Yeast

C. Spirogyra

D. Plasmodium

Answer: D

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78. The most common method of reproduction in bacteria is .....

A. Binary fission

B. Multiple fission

C. Budding

D. Spore formation

Answer: A

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79. Which of the following shows spore formation?

A. Amoeba

B. Mucor

C. Plasmodium

D. Paramoecium

Answer: B

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80. Regeneration is observed in _____

A. Amoeba

B. Paramoecium

C. Spirogyra

D. Yeast

Answer: C

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81. Which of the following does not show regeneration?

A. Mucor

B. Planaria

C. Sponges

D. Starfish

Answer: C

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82. Which one of the following is not a natural method of vegetative propagation

A. cutting

B. Layering

C. Grafting

D. Hybridization

Answer: D

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83. In potato, vegetative propagation takes place by

A. leaves

B. stem

C. root

D. seeds

Answer: B

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84. In the human female, fertilization of the ovum takes place in

A. vagina

B. ovary

C. fallopian tube

D. uterus

Answer: C

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85. The process of release of the egg from the ovary is called

A. ovulation

B. oogenesis

C. menstruction

D. spermatogenesis

Answer: A

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86. Many unicellular organisms reproduce by the process of

A. fission

B. regeneration

C. ovulation

D. nondisjuction

Answer: A

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87. Why asexual reproduction is sometimes disadvantageous ?

A. It allows animals that do not move around to produce offspring without finding mates

B. It allows an animal to produce many offspring quickly

C. It saves the time and energy required to produce gametes

D. It produces genetically uniform populations

Answer: D

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88. Fission is an asexual process

A. that allows regrowth of lost body parts

B. that occurs in individuals that live in isolated areas

C. in which a parent separates into two or more individuals

D. in which a parent fragments into several pieces

Answer: C

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89. Which of the following statements is true regarding sexual reproduction ?

A. Sexual reproduction creates an individual that is a genetic copy of one parent

B. Sexual reproduction generates greater genetic variation

C. Sexual reproduction allows animals to expand their populations faster than asexual reproduction

D. Populations of organisms that reproduce through sexual reproduction generally have difficulty in adapting to changing environments

Answer: B

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90. Hermaphrodites are animals that

A. possess both male and female reproductive system

B. have the gonads of one sex bu the external appearance of the other

C. develop from unfertilized eggs

D. must fertilize themselves

Answer: A

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91. Reproductive system with external fertilization are most common in

A. terrestrial animals

B. populations with many more males than females

C. animals that are widely dispersed

D. aquatic animals

Answer: D

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92. An example of asexual reproduction in plants is

A. growing plants from cyttings

B. formation of flower and fruit

C. grass growing from seed

D. growing plants from embryo

Answer: A

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93. The non-essential parts of a flower are the

A. petals and sepals

B. stamen and pistil

C. anther and ovary

D. petal and anther

Answer: A

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94. The reproductive structures in ferns and mosses is

A. seeds

B. sori

C. spores

D. zygospores

Answer: C

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95. All tracheophytes except pteridophytes reproduce by

A. sori

B. seeds

C. spores

D. zygospores

Answer: B

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96. The parts of the female pistil are

A. anther and filament

B. ovary, style and stigma

C. ovary and anther

D. sepal and petal

Answer: B

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97. Flowers with only male reproductive organs are

A. hermaphrodite flowers

B. pistillate flowers

C. staminate flowers

D. Bisexual flowers

Answer: C

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98. The egg cell in a flowering plant is produced in the

A. carpel

B. stamen

C. anther

D. Filament

Answer: A

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99. Which one of the following is not the part of a seed?

A. zygote

B. plumule

C. testa

D. Radical

Answer: A

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100. Asexual reproduction involves:

A. both meternal and paternal parents

B. only maternal parents

C. only paternal parents

D. only one of the parents either paternal of maternal

Answer: D

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101. Which of the following is not correct for asexual reproduction?

A. It is uniparental

B. Interchange of genes between individuals is more limited

C. Mutations are immediately expressed

D. Mutations are often not expressed immediately

Answer: D

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102. The offspring produced by asexual reproduction of an individual and having same genotype, are called

A. twins

B. clones

C. siblings

D. none of these

Answer: B

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103. The basic forms of asexual reproduction are fission, budding gemmulation and fragmentation. Binary fission is common among

A. bacteria and Protozoa

B. vertebrates and Protozoa

C. Primates and invertebrates

D. all chordates including humans

Answer: A

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104. Which of the following is not a process of asexual reproduction

A. Budding

B. Syngamy

C. Gemmulation

D. Fragmentation

Answer: B

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105. Binary fission is found in

A. Vorticella

B. Planaria

C. Paramecium

D. All of these

Answer: D

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106. Which of the following represents the internal buds?

A. Hydra

B. Obelia

C. Gemmule

D. Sycon

Answer: C

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107. Which of the following is not true about sexual reproduction?

A. Gametes are diploid in humans

B. Sperm and ova fuse to form zygote

C. It introduces new gene combinations is a population

D. Diploid zygote divides by mitosis

Answer: A

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108. The earthworm employ cross fertilization in which

A. the sperm of one individual fertilizes the eggs of the other

B. the sperm of one individual fertilizes the eggs of the same

C. two sperms fertilizes the single ova of the same individual

D. many sperms fertilizes the single ova of the same individual

Answer: A

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109. Which of the following is a hermaphrodite?

A. anther and filament

B. Earthworm

C. Aphid

D. Trout

Answer: B

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110. Binary fission is absent in

A. Amoeba

B. Paramoecium

C. Planaria

D. Spirogyra

Answer: D

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111. Isogamy takes place in

A. Plasmodium

B. Hydra

C. Monocystis

D. Plarnaria

Answer: C

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112. Fusion of two dissimilar gametes is known as

A. allogamy

B. anisogamy

C. autogamy

D. dichogamy

Answer: B

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113. The gemmule formation is the form of asexual reproduction in class of porifera

A. calcarea

B. demospongia

C. hexactinellida

D. All of these

Answer: D

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114. Natural parthenogenesis occurs in

A. Frog to form females

B. honey bee to produce drones

C. cockroach

D. vegetarian eggs

Answer: B

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115. Vegetatively propagated plants

A. show adaptive variations

B. better fitted in the struggle for existence

C. stouter than parents

D. clone of their parents

Answer: D

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116. Diplospory is development of embryo from

A. nucellus

B. integument

C. megaspore mothe cell

D. megaspore

Answer: C

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117. What is common in Bryophyllum, Scilla and Begonia?

A. All are members of family Liliacease

B. All reproduce only sexually

C. All reprodce through leaves vegetatively

D. All lack heterospory

Answer: C

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118. In Amorphophallus and Colocasia vegetative reproduction is carried out though

A. rhizome

B. bulbils

C. corms

D. offsets

Answer: C

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Exercise Ii

1. Among the following asexual reproductive organs are

(A) Zoospores (B) Gemmules in Sponge (C) Bulbil of Agave (D) Rhizome of ginger (E) Offset of water hyacinth (F) Leaf buds of Bryophyllum

A. A, B, C , D only

B. A,D,E,F only

C. B,D,E,F only

D. A,B,C,D,E,F

Answer: D

Watch Video Solution

2. A few statements with regard to sexual reprodction are given below.

(i) Sexual reproduction does not always require two individuals.

(ii) Sexual reproduction generally involves gametic fusion.

(iii) Meiosis never occurs during sexual reproduction.

(iv) External fertilisation is a rule during sexual reproduction.

Choose the correct statements from the option below.

A. i and iv

B. i and ii

C. ii and iii

D. i and iv

Answer: B

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3. During parthenogenesis as the egg develops without meiosis

A. the offsprings are identical in all inherited respect to the mother

B. the offsprings are differ in all inherited respect to the mother

C. there is no relation between mother and offspring genetically

D. none of the above

Answer: A

Watch Video Solution

4. Bud grafting is commonly used in

A. litchi

B. pomegranate

C. rose

D. jasmine

Answer: C

Watch Video Solution

5. Vegetatively propagated plants

A. show adaptive variations

B. better fitted in the struggle for existence

C. stouter than parents

D. clone of their parents

Answer: D

Watch Video Solution

6. Which of the following is a type of agamospermy?

A. Layering

B. grafting

C. Adventitive embryony

D. All of these

Answer: C

Watch Video Solution

7. Grafting is employed for better and quicker yield of good varieties of

A. apple

B. citrus

C. mango

D. All of these

Answer: D

Watch Video Solution

8. Apomixis is

A. development of plants in darkness

B. development of plants without fusion of gametes

C. inability to perceive stimulus for flowering

D. effect of low temperature on plant growth

Answer: B

Watch Video Solution

9. Pencillium asexually reproduces, through

A. Zoospores

B. Conidia

C. Chlamydospores

D. Akinetes

Answer: B

Watch Video Solution

10. Micro scopic angiospermic plant is

A. Wolffia

B. Chlamydomonas

C. Chlorella

D. Neurospora

Answer: A

Watch Video Solution

11. Algal member with diplontic life cycle is

A. Spirogyra

B. Chara

C. Rock weed

D. Nostoc

Answer: C

Watch Video Solution

12. Reproductive system with external fertilization are most common in

A. terrestrial animals

B. populations with many more males than females

C. animals that are widely dispersed

D. Aquatic lower organisms

Answer: D

Watch Video Solution

13. In a tissue culture pollen develops into a haploid plant. It is due to the property of

Totipotency

Organogenesis

Parthenocarpy

Test tube fertilization

A. Totipotency

B. Organogenesis

C. Parthenocarpy

D. Test tube fertilization

Answer: A

 Watch Video Solution

14. Haploid plants can be obtained by culturing

Young leaves

Endosperm

Pollen grains

Root tips

A. Young leaves

B. Endosperm

C. Pollen grains

D. Root tips

Answer: C

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15. Which of the following statements is correct regarding the bisecual and unisexual conditions in plants?

A. Homothallic and monoecious terms are used to describe bisexual condition in plants

B. Heterothallic and dioecious terms are used to describe bisexual condition in plants

C. Heterothallic and monoecious terms are used to describe unisexual condition in plants

D. Homothallic and dioecious terms are used to describe unisexual condition in plants

Answer: A

Watch Video Solution

16. Algal member with heterogametes

A. Cladophora

B. Fucus

C. Spirogyra

D. Marchantia

Answer: B

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17. P. Maheswari popularized the use of these characters in plant taxonomy

A. Anatomical

B. Embryological

C. In vitro tissue culture

D. Morphological

Answer: B

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18. Cell division itself is a mode of reproduction in

A. Euglena

B. Penicillum

C. Rhizopus

D. Liver worts

Answer: A

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19. Organisms like plants, animals, protists, prokaryotes and fungi are quite diverse in many aspects. But they share a smilar pattern with respect to

A. Nutrition

B. Survival

C. Propagation

D. Sexual reproduction

Answer: D

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20. End of juvenile/vegetative phase and beginning of (sexual) reproductive phase can be easily seen in

A. An annual like rice plant

B. In a biennial like radish plant

C. A perennial like century plant

D. All of the above

Answer: D

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21. Select correct option w.r.t. heterogametes of algae. Cladophora, Chlamydomonas, Fucus, Ulothrix, Volvox, Chara, Spirogyra

A. Funaria and Pteris

B. Liver worts

C. Chara and Fucus

D. Chara and Marchantia

Answer: C

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22. Oogonium and archegonium are the female sex organs (gametangia) respectively in

A. Chara and Marchantia

B. Maize and Carica

C. Papaya and date palm

D. Marchantia and fucus

Answer: A

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23. Male and female sex organs develop on different vertically growing stalk-like structures of this plant which bears rhizoids

A. Papaya

B. Date palm

C. Marchantia

D. Chara

Answer: C

Watch Video Solution

24. Swarm spores' are produced by

A. Penicillium

B. Rhizopus

C. Rock weed

D. Chlamydomonas

Answer: D

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25. Consider the following statements, and choose the correct one

A. In organisms with external fertilization zygote is formed in the body of the organism

B. Zygote is formed in all sexually reproducing organisms

C. In all aquatic organisms, gametic union takes place in water

D. Parthenogenesis' is the formation of embryo from an unfertilized male gamete

Answer: B

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26. The life-cycle of a Brown alga (Rockweed) is

A. Diplontic life- cycle

B. Diplohaplontic life- Cycle

C. Haplontic life- cycle

D. Haplo diplontic life- cycle

Answer: A

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27. The diagrams below represent various processes associated with reproduction. Asexual reproduction by

budding is represented by

(1)

(3)

(2)

(4)

A. 1

B. 2

C. 3

D. 4

Answer: B

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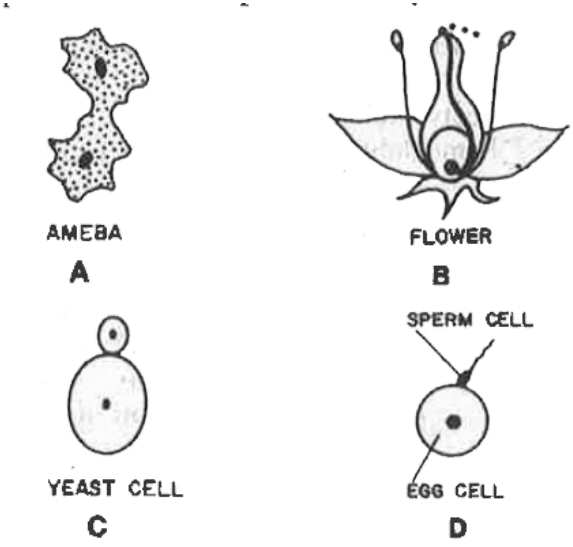
28. The diagrams below represent various processes associated with reproduction. Asexual reproduction is represented by



A. A only

B. B only

C. A and C

D. B and D

Answer: C

Watch Video Solution

29. Find out the mismatch

A.	Part of flower	Post fertillized form
	Ovary	Fruit
B.	Part of flower	Post fertillized form
	Ovules	Seeds
C.	Part of flower	Post fertillized form
	Integuments	Seed coat
D.	Part of flower	Post fertillized form
	Zygote	Endosperm

Answer: D

Watch Video Solution

30. Find out the mis match

A.

Part	Ploidy
Embryo	$2n$

B.

Part	Ploidy
Egg	n

C.

Part	Ploidy
Endosperm	$2n$

D.

Part	Ploidy
Perisperm	$2n$

Answer: C

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31. Arrange the following in ascending manner basing on their life span

(a) Carrot (b) Wolffia (c) Rosa plant (d) Pinus plant

A. a,b,c,d

B. a,b,d,c

C. b,a,d,c

D. b,a,c,d

Answer: D

Watch Video Solution

32. Microscopic angiospermic plant is

A. Eucalyptus

B. Chlamydomonas

C. Wolffa

D. Chara

Answer: C

Watch Video Solution

33. In budding new individuals are formed by:

A. meiosis and mitosis

B. meiosis only

C. mitosis only

D. meiosis, mitosis and amitosis

Answer: C

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34. Sometimes in budding, buds do not get separated from the mother individual and form

A. clones

B. gemmule

C. colony

D. exogenous bud

Answer: C

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35. Tapeworms are self fertilizing in which :

A. the sperm produced in the tests of one individuals can fertilize the eggs produced by the same individual

B. the sperm produced in the testes of one individual can fertilize the eggs produced by different individual

C. the sperm of one individual fertilizes te eggs of different species

D. the ova of one individual fertilizes the sperm of different genera

Answer: A

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36. Parthenogenesis was discovered in aphids by

A. Charles Bonnet (1745)

B. Charles Drawin (1776)

C. Charles Lyall (1775)

D. Charles Brown (1878)

Answer: A

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37. Vegetative reproduction results in

A. the offsprings are identical in all characters with respect to the mother plant

B. the offsprings differ in all characters with respect to the mother plant

C. there is no relation between mother and offsprings genetically

D. none of the above

Answer: A

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38. Production of parthenocarpic fruits is of no use in

A. litchi

B. pomegranate

C. rose

D. jasmine

Answer: B

Watch Video Solution

39. Which of the following is a type of agamospermy?

A. Layering

B. grafting

C. Adventitive embryony

D. All of these

Answer: C

40. Grafting is employed for better and quicker yield of good varieties of

A. apple

B. citrus

C. mango

D. all of these

Answer: D

Watch Video Solution

41. Apomixis is

A. development of plants in darkness

B. development of plants without fusion of gametes

C. inability to perceive stimulus for flowering

D. effect of low temperature on plant growth

Answer: B

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42. Which of the following is a type of agamospermy?

A. Development of embryo without gametic union

B. A type of sexual reproduction in which there is no differentiation of male and female gametes

C. Development of new individual from the union of two sperms

D. Development of new individual directly without forming an embryo

Answer: A

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Exercise Ii Exemplar Questions

1. A few statements describing certain features of reproduction are given below

I. gametic fusion takes place.

II. Tranfer of genetic material takes place.

III. Reduction division takes place.

IV. Progeny have some resemblance with parents.

Select the options that are true for both asexual and sexual reproduction from the options given below

A. I and II

B. II and III

C. II and IV

D. I and III

Answer: C

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2. The term 'clone' cannot be applied to offspring formed by sexual reproduction be cause

A. Offspring do not possess exact copies of parental DNA

B. DNA of only one parent is copied and passed on to the offspring

C. Offspring are formed at different times

D. DNA of parent and offspring are completely different

Answer: A

3. Amoeba and Yeast reproduce asexually by fission and budding respectively, because they are

A. Microscopic organisms

B. heterotophic organisms

C. Unicellular organisms

D. Uninucleate organisms

Answer: C

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4. A few statements with regard to sexual reprodction are given below.

(i) Sexual reproduction does not always require two individuals.

(ii) Sexual reproduction generally involves gametic fusion.

(iii) Meiosis never occurs during sexual reproduction.

(iv) External fertilisation is a rule during sexual reproduction.

Choose the correct statements from the option below.

A. I and IV

B. I and II

C. II and III

D. I and III

Answer: B

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5. A multicellular, filamentous alga exhibits a type of sexual life cycle in which the meiotic division occurs after the formation of zygote The adult filament of this alga has

A. haploid vegetative cells and diploid gametangia

B. diploid vegetative cells and diploid gametangia

C. diploid vegetative cells and haploid gametangia

D. haploid vegetative cells and haploid gametangia

Answer: D

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6. The male gametes of rice plant have 12 chromosomes in their nucleus. The chromosome number in the female gamete, zygote and the cells of the seedling will be, respectively

A. 12,24,12

B. 24,12,12

C. 12,24,24

D. 24,12,24

Answer: C

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7. Given below are a few statements related to external fertilization. Choose the correct statements.

(i) The male and female gametes are formed and released simultaneously.

(ii) Only a few gametes are released into the medium.

(iii) Water is the medium in a majority of organisms exhibiting external fertilization.

(iv) Offspring formed as a result of external fertilization

have better chance of survival than those formed inside an organism.

A. III and IV

B. I and III

C. II and IV

D. I and IV

Answer: B

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8. The statements given below describe certain features that are observed in the pistil of flowers.

(i) Pistil may have many carpels.

(ii) Each carpel may have more than one ovule.

(iii) Each carpel has only one ovule.

(iv) Pistil have only one carpel.

A. I and II

B. I and III

C. II and IV

D. III and IV

Answer: A

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9. Which of the following situations correctly describe the similarity between an angiosperm egg and a human egg ?

(i) Eggs of both are formed only once in a lifetime.

(ii) Both the angiosperm egg and human egg are stationary.

(iii) Both the angiosperm egg and human egg are motile transported.

(iv) Syngamy in both results in the formation of a zygote.

A. II and IV

B. only IV

C. III and IV

D. I and IV

Answer: B

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10. Appearance of vegetative propagules from the nodes of plants such as sugarcane and ginger is mainly because

A. Nodes are shorter than internodes

B. Nodes have meristematic cells

C. Nodes are located near the soil

D. Nodes have non-photosynthetic cells

Answer: B

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11. Which of the following statements, support the view that elaborate sexual reproductive process appeared

much later in the organic evolution ?

(i) Lower groups of organisms have simpler body design.

(ii) Asexual reproduction is common in lower groups.

(iii) Asexual reproduction is common in higher groups of organisms.

(iv) The high incidence of sexual reproduction in angiosperms and vertebrates.

Choose the correct answer given below.

A. I and III

B. I and II

C. II and IV

D. II and III

Answer: C

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12. Offspring formed by sexual reproduction exhibit more variation than those formed by asexual reproduction because

A. Sexual reproduction is a lengthly process

B. Gametes of parents have qualitatively different genetic composition

C. Genetic material comes from parents of two different species

D. Greater amount of DNA is involved in sexual reproduction

Answer: B

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13. Choose the correct statement

A. Dioecious organisms are seen only in animals

B. Dioecious organisms are seen only in plants

C. Dioecious organisms are seen in both plants and animals

D. Dioecious organisms are seen only in vertebrates

Answer: C

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14. There is no natural death in single celled organisms like Amoeba and bacteria because

A. they can'not reproduce sexually

B. They reproduce by binary fission

C. Parental body is distributed among the offspring

D. They are microscopic

Answer: C

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15. There are various types of reproduction. The type of reproduction adopted by an organism depends on

A. The habitat and morphology of the organism

B. Morphology of the organism

C. Morphology and physiology of the organism

D. The organism's habitat, physiology and genetic makeup

Answer: D

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16. Identify the incorrect statement.

A. In asexual reproduction, the offspring produced are morphologically and genetically identical to the parent

B. Zoospores are sexual reproductive structures

C. In asexual reproduction, a single parent produces offspring with or without the formation of gametes

D. Conidia are assexual structure in Penicillium

Answer: B

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17. Which of the following is a post-fertilisation event in flowering plants

A. Transfer of pollen grains

B. Embryo development

C. Formation of flower

D. Formation of pollen grains

Answer: B

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18. The number of chromosomes in the shoot tip cells of a maize plant is 20. The number of chromosomes in the

microspore mother cells of the same plant shall be:

A. 20

B. 10

C. 40

D. 15

Answer: A

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Exercise Iii Previous Aipmt Neet Questions

1. Which one of the following statements is not correct?

A. offspring produce by the asexual reproduction are called clone

B. Microscopic motile, asexual, reproductive structures are called zoospores

C. In potato, banana and ginger the plantlets arise from, the internodes present in the modified stem

D. Water hyacinth, growing in the standing water, drains oxygen from water that leads to death of fishes

Answer: C

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2. Which of the following pairs is not correctly matched

A. Binary fission- Saragassum

B. Conidia- Penicillum

C. Offset- Water hyacinth

D. Rhizome- Banana

Answer: A

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3. Which one of the following shows isogamy with non-flagellated gametes?

A. Sargassum

B. Ectocarpus

C. Ulothrix

D. Spirogyra

Answer: D

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4. Meiosis takes place in

A. Gemmule

B. Meiospore

C. Meiocyte

D. Conidia

Answer: C

Watch Video Solution

5. Which one of the following is correctly matched

A. onion-bulb

B. Giner-Sucker

C. Chlamydomoas-conidia

D. Yeast-Zoospores

Answer: A

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6. Which one of the following pairs of wrongly matched while the remaining three are correct?

A. Penicillium-Conidia

B. Water hyacinth-runner

C. Bryophyllum -leaf buds

D. Agave-Bulbils

Answer: B

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7. What is common between vegetative reproduction an apomixis ?

A. Both are applicable to only dicot plants

B. Both bypass the flowering phase

C. Both occur round the year

D. Both produce progeny identical to the parent

Answer: D

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8. The "eyes" of the potato tube are

A. root buds

B. flower buds

C. shoot buds

D. axillary buds

Answer: D

Watch Video Solution

9. Vegetative propagation in Pistia occurs by

A. Stolon

B. offset

C. Runner

D. Sucker

Answer: B

Watch Video Solution

10. Vegetative propagation in mint occurs by :

A. offset

B. rhizome

C. sucker

D. runner

Answer: C

Watch Video Solution

11. What is true for celeavage ?

A. Size of embryo increases

B. Size of cells decrease

C. Size of cells increase

D. Size of embryo decreases

Answer: D

Watch Video Solution

12. Which of the following unicellular organism has a macro-nucleus for trophic organism has a macro-nucleus for trophic function and one of more micro-nuclei for reproduction ?

A. Euglena

B. Amoeba

C. Paramecium

D. Trypanosoma

Answer: C

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13. In which one pair, both the plants can be vegetatively propagated by leaf pieces ?

A. Bryophyllum and Kalanchoe

B. Chrysanthermum and Kalanchoe

C. Agave and Kalanchoe

D. Asparagus and Bryophyllum

Answer: A

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14. In a type of apomixids known as adventive embryony embryos develop directly from the

A. nucellus or integuments

B. synergids or antipodals in an embryo sac

C. accessory embryo sacs in the ovule

D. zygote

Answer: A

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15. In a tissue culture pollen develops into a haploid plant. It is due to the property of

A. totipotency

B. Organogenesis

C. Parthenocarpy

D. Test tube fertilization

Answer: A

Watch Video Solution

16. Adventive reproduction occurs

A. Citrus

B. potato

C. coconut

D. corn

Answer: A

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17. Clones are stored in

A. book shelves

B. gene banks

C. populations

D. biological reserves

Answer: D

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18. Which plants will lose its economic value if its furits are produced by induced parthenocarpy ?

A. Grape

B. Pomegranate

C. Orange

D. Banana

Answer: B

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19. Haploid plants can be obtained by culturing

A. Young leaves

B. Endosperm

C. Pollen grains

D. Root tips

Answer: C

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