BIOLOGY

BOOKS - MTG BIOLOGY (ENGLISH)

REPRODUCTION IN ORGANISM

Reproduction In Organism

1. Single celled animals are said to be immortal because

A. they grow indefinitely in size

B. they can tolerate any degree of change in temperature

C. they can reproduce throughtout their life span

D. they continue to live as their daughter cells.

Answer: d

Watch Video Solution

2. Which of the following statements are correct?

A. All the individuals of a species have exactly the same life span.

B. Smaller organisms always have shorter life span and vice versa.

C. Life span of an organism is the time period from its birth to its natural death.

D. No organism may have a life span of several hundred years.

Answer: c

Watch Video Solution

3. Which of the following has the longest life span ? a) Banyan Tree b) Tortoise c) Parrot d) Elephant

A. Banyan tree

B. Tortoise

C. Parrot

D. Elephant

Answer: a

Watch Video Solution

4. Select the option which arranges the given organisms in ascending order of their life span.

A. $\text{Parrot} < \text{Crow} < \text{Butterfly} < \text{Banyan tree}$

B. $\text{Butterfly} < \text{Crow} < \text{Parrot} < \text{Crocodile}$

C. $\text{Fruit fly} < \text{Crocodile} < \text{Parrot} < \text{Banyan tree}$

D. $\text{Parrot} < \text{Tortoise} < \text{Dog} < \text{Crow}$

Answer: c

Watch Video Solution

5. Identify the given organism and find its maximum life span.

A. Sparrow, 25 years

B. Crow, 30 years

C. Crow, 15 years

D. Eagle, 40 years

Answer: c

Watch Video Solution

6. Read the following statements about reproduction and select the incorrect one.

A. It is a biolgical process in which an organism gives rise to young ones.

B. It eneables the continuity of the species.

C. It produces genetic variations in organisms.

D. It maintains populations of the yound and adult persons only.

Answer: d

Watch Video Solution

7. _____ is a life process that is not essential for an individual's survival but for survival of the species.

A. Growth

B. Reproduction

C. Respiration

D. Nutrition

Answer: b

Watch Video Solution

8. Read the following statements about asexual reproduction and select the correct ones.

(i) It involves a single parent.

(ii) It is slower than sexual reproduction.

(iii) It produces progeny that are genetically identical with the parent but not with one another.

(iv) The progeny of asexual reproduction can be termed as clones.

A. (i) and (ii)

B. (ii) and (iii)

C. (i) and (iv)

D. (i), (iii) and (iv)

Answer: c

Watch Video Solution

9. Refer to the given figures and select the correct option.

a) binary fission b) multiple fission c) mitosis d) budding

A. It is a type of parthenogenesis.

B. It is a type of asexual reproduction.

C. This offspring produced can also be called clones.

D. Both (b) and (c)

Answer: d

Watch Video Solution

10. 'Clones' are individuals that have exactly the same a) lifespan b) physiology c) growth rate d) genetic makeup

A. lifespan

B. physiology

C. growth rate

D. genetic makeup.

Answer: d

Watch Video Solution

11. Which one of the following processes results in the formation of clone of bacteria ?

A. Regeneration

B. Budding

C. Binary fission

D. Fragmentation

Answer: c

Watch Video Solution

12. Asexual reproduction is seen in members of Kingdom

A. Monera

B. Plantae

C. Animalia

D. all of these

Answer: d

Watch Video Solution

13. During binary fission in Amoeba which of the following organelles is duplicated ? a) plasma membrane b) nucleus c) contractile vacuole d) all of these

A. Palsma membrane

B. Nucleus

C. Contractile vacuole

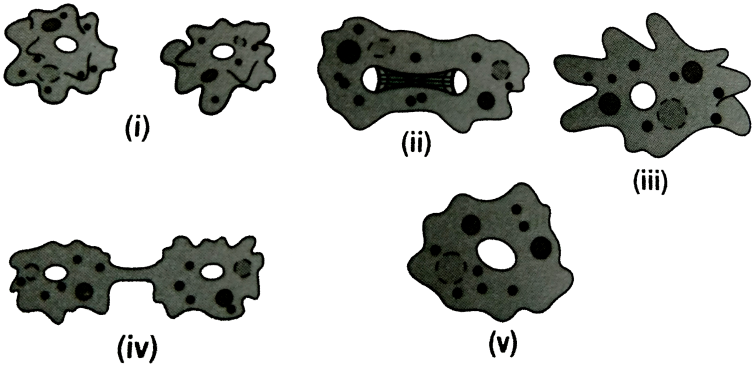
D. All of these

Answer: b

Watch Video Solution

14. Study the given figures representing the process of binary fission in Amoeba.

Arrange the figures in the correct sequence and select the correct answer.



A. $(iv) \rightarrow (iii) \rightarrow (i) \rightarrow (ii) \rightarrow (v)$

B. $(iii) \rightarrow (iv) \rightarrow (i) \rightarrow (ii) \rightarrow (v)$

C. $(v) \rightarrow (iii) \rightarrow (ii) \rightarrow (iv) \rightarrow (i)$

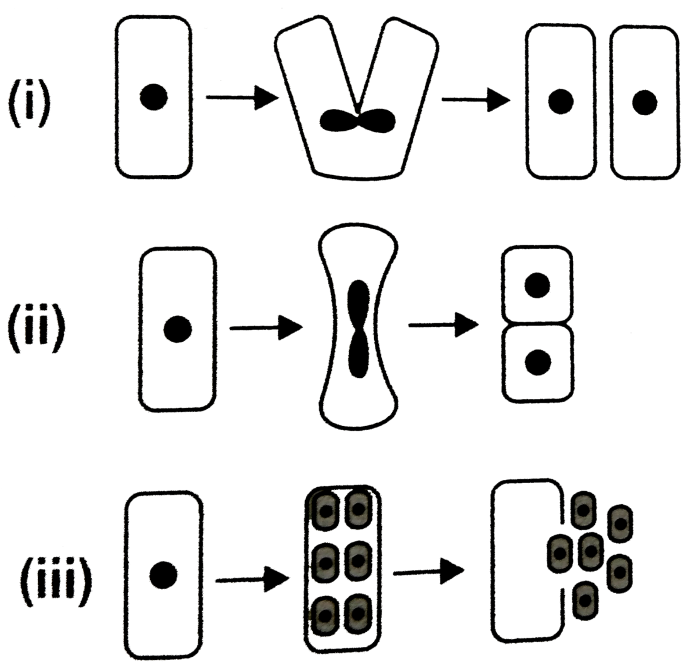
D. $(iv) \rightarrow (iii) \rightarrow (ii) \rightarrow (v) \rightarrow (i)$

Answer: c

Watch Video Solution

15. Refer to the given figures which show three different types of fission. Select the option which correctly matches them with the organism is

which they occur.



A. $\begin{matrix} i & ii & iii \\ \text{Euglena} & \text{Plasmodium} & \text{Amoeba} \end{matrix}$

B. $\begin{matrix} i & ii & iii \\ \text{Plasmodium} & \text{Paramecium} & \text{Euglena} \end{matrix}$

C. $\begin{matrix} i & ii & iii \\ \text{Euglena} & \text{Paramecium} & \text{Escherichia} \end{matrix}$

D. $\begin{matrix} i & ii & iii \\ \text{Euglena} & \text{Paramecium} & \text{Amoeba} \end{matrix}$

Answer: d

Watch Video Solution

16. Select the incorrect statement.

A. Amoeba and Paramecium reproduce by binary fission.

B. Buds are produced due to unequal divison in parent body

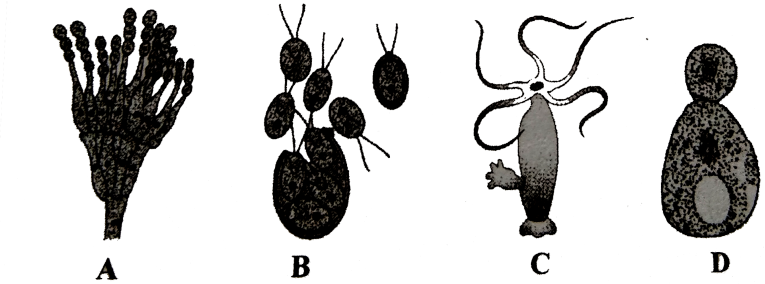
C. Encystation refers to the formation of two layered hard covering around Amoeba during unfavourable condition.

D. Spores are formed due to multiple fission in sporulation.

Answer: c

Watch Video Solution

17. Refer to the given figures and select the correct option.



A. C and D reproduce by budding that includes nuclear division only.

B. All of these reproduce by the asexual mode of reproduction.

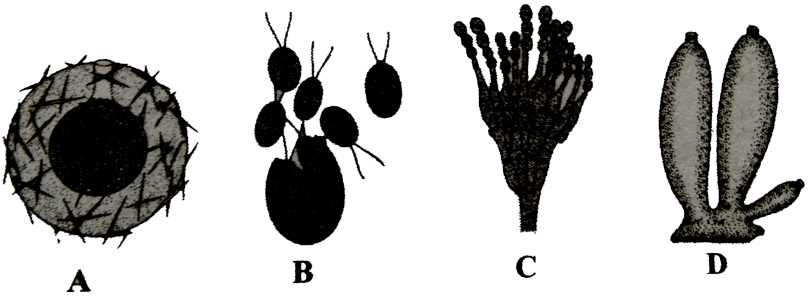
C. B represents multiple fission in an alga.

D. A shows spore formation in a moneran.

Answer: b

Watch Video Solution

18. Study the following figures and select the correct statements regarding these.



(i)A shows mode of asexual reproduction in sponges through internal buds.

(ii)B shows sexual reprodction through zoospores in Chlamydomonas.

(iii) C shows asexual reproduction through fragmentation in Penicullium.

(iv) D shows external budding in Sycon.

A. (i) and (ii)

B. Smaller organisms always have shorter life span and vice versa.

C. (ii), (iii), and (iv)

D. (i) and (iv)

Answer: d

Watch Video Solution

19. Which of the following is not used for vegetative propagation ?

A. Bud

B. Bulbil

C. Turion

D. Antherozoid

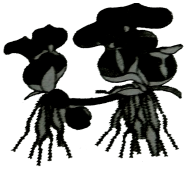
Answer: d

Watch Video Solution

20. This plant was introduced in India because of its beautiful flowers and shape of leaves but it became a notorious weed in Indain water bodies. Identify this plant.

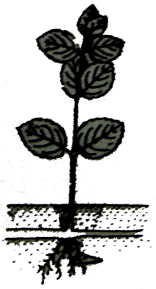
A. (a)

B. (b)



C. (c)

(d)



D.

Answer: b

Watch Video Solution

21. Read the following statements about 'Terror of Bengal' and select the correct ones.

(i) 'Terror of Bengal' is the name given to water hyacinth (Eichhornia), an algae.

(ii) Eichhornia was introduced in India due to its aesthetic value.

(iii) Eichhornia drains oxygen from the water which leads to death of fishes.

A. (i) and (ii)

B. (i) and (iii)

C. (ii) and (iii)

D. (i), (ii) and (iii)

Answer: c

Watch Video Solution

22. Match column I with column II and select the correct option from the codes given below.

Column I	Column II
Sponge	(i) Tuber
Yeast	(ii) Offset
Potato	(iii) Gemmules
Water hyacinth	(iv) Budding

A. A-(iv), B-(i), C-(ii),D-(iii)

B. A-(iii), B-(i), C-(iv),D-(ii)

C. A-(iii),B-(iv), C-(i),D-(ii)

D. A-(iv),B-(ii),C-(i),D-(iii)

Answer: c

Watch Video Solution

23. Read the following statements and select the correct option,

Statement 1 : Many pants are propagated vegetatively even though they bear seeds.

Statement 2 : Sweet potatoes multiply vegetatively by root tubers.

A. Both statements 1 and 2 are correct.

B. Statement 1 is correct but statement 2 is incorrect.

C. Statement 1 is incorrect but statement 2 is correct.

D. Both statements 1 and 2 are incorrect.

Answer: a

Watch Video Solution

24. Which of the following options shows two plants in which new plantlets arise from the same organ ?

A. Dahlia and ginger

B. Potato and sweet potato

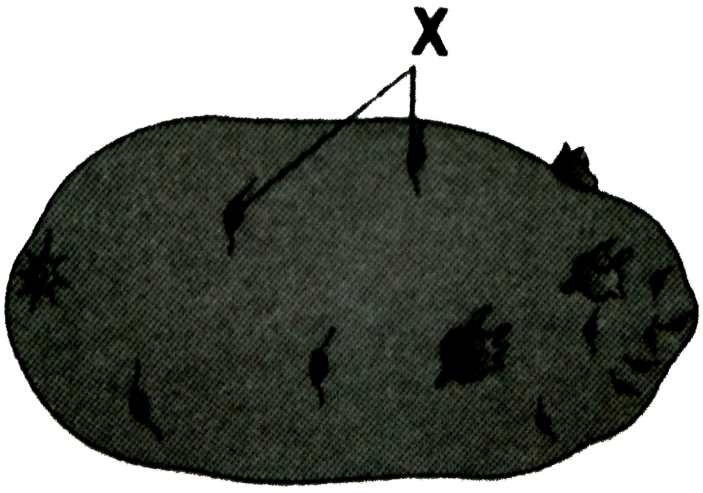
C. Dahlia and rose

D. Potato and sugarcane

Answer: d

Watch Video Solution

25. Refer to the given figure and identify X in it.



A. Offset

B. Eyes

C. Runner

D. Bulb

Answer: b

Watch Video Solution

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

A. bulbs

B. bulbils

C. tubers

D. offsets.

Answer: b

Watch Video Solution

27. In which of the following plants, vegetative propagation occurs by adventitious buds ?

A. 

B. 

C. 

D. None of these

Answer: b

Watch Video Solution

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

A. Bryophyllum and Kalanchoe

B. Chryansanthemum and Agave

C. Agave and Dioscorea

D. Bryophyllum and Asparagus

Answer: a

Watch Video Solution

29. Read the following statements and select the correct ones.

(i) Conidia are the asexual propagules restricted to Kingdom Fungi.

(ii) Apiece of potato tuber having at least one eye (or node) is capable of giving rise to a new plant.

(iii) Ginger propagates vegetatively with the help of its underground roots.

(iv) Fleshy buds which take part in vegetative propagation are called bulbilsm present in Dioscorea, Agave, etc.

A. (i) and (iii)

B. (i) and (iv)

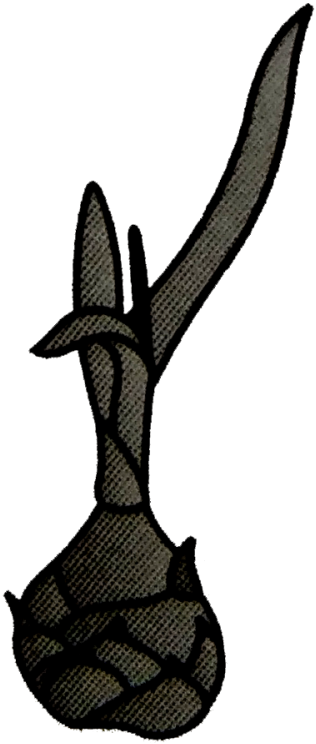
C. (i),(ii) and (iv)

D. (i), (ii) and (iii)

Answer: C

Watch Video Solution

30. Identify the given vegetative propagule.



A. Bulb

B. Runner

C. Rhizome

D. Bulbil

Answer: d

Watch Video Solution

31. If a leaf cell of Agave has x chromosomes then what will be the number of chromosomes in a cell of its bulbil ?

A. 2x

B. $x/2$

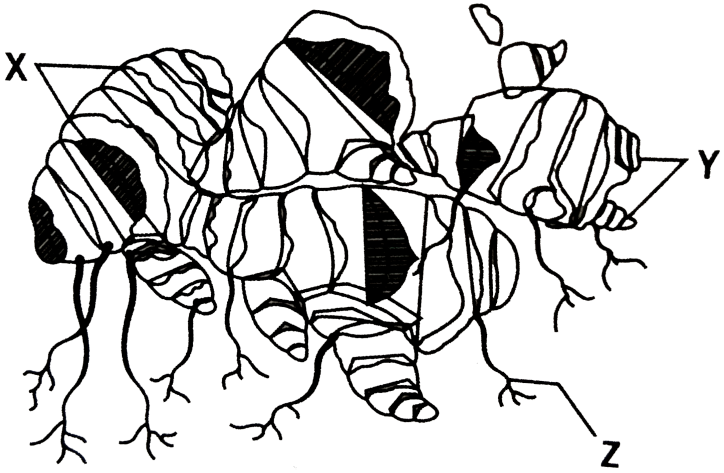
C. $x/4$

D. x

Answer: d

Watch Video Solution

32. Refer to the given figure and identify X, Y and Z in it.



A. X-Buds, " "Y-Nodes, " "Z-Adventitious Root

B. X-Nodes, " Y-Buds, " "Z-Adventitious Root

C. X-Nodes, " "Y-Adventitious Root, " " Z-Buds

D. X-Buds, " " Y-Adventitious Root, " " Z-Nodes

Answer: b

Watch Video Solution

33. Select the mismatched pair of organism and its mode of multiplication.

Watch Video Solution

34. Which of the following cannot serve as a vegetative propagule ?

A. Organism — Mode of multiplication
Agave, Oxalis — Bulbils

B. Organism — Mode of multiplication
Amoeba, Paramecium — Binary fission

C. Organism — Mode of multiplication
Chlamydomones, Ulothrix — Sporangiospores

D. Organism — Mode of multiplication
Adiantum caudatum — Adventitou buds present at leaf tips

Answer: b

Watch Video Solution

35. It is a common method of vegetative propagation in which 20-30 cm long pieces of one year old stems are cut, their lower ends are dipped in

root promoting hormones and are then planted in the soil, which then develop adventitious roots. This method of vegetative propagation is performed in

A. A piece of potato tuber with eyes

B. A middle piece of sugarcane internode

C. A piece of ginger rhizome

D. A marginal piece of Bryophyllum leaf

Answer: d

Watch Video Solution

36. Which of the following options correctly identifies artificial and natural methods of vegetative propagation ?

A. rose and sugarcane

B. lemon and orange

C. Begonia and Bryophyllum

D. all of these

Answer: b

Watch Video Solution

37. Match the organisms given in column I with their mode of reproduction in column II and select the correct answer from the codes given below.

Column I	Column II
Potato	(i) Zoospores
Spirogyra	(ii) Stem cuttings
Rose	(iii) Conidiospores
Penicillium	(iv) Stem tubers

A.	Artificial methods	Natural methods
	Grafting	Cutting
B.	Artificial methods	Natural methods
	Layering	Bulbils
C.	Artificial methods	Natural methods
	Offset	Tissue culture
D.	Artificial methods	Natural methods
	Tubers	Rhizomes

Answer: b

Watch Video Solution

38. Asexual reproduction is the _____ method of reproduction in organisms that have a relativeluy simple organisation like _____ and _____.

Fill in the blanks in the above statement.

A. A-(i), B-(iii), C-(ii), D-(iv)

B. A-(iv), B-(i), C-(ii), D-(iii)

C. A-(iv),(B-(i),C-(iii),D-(ii)

D. A-(ii), B-(i), C-(iv), D-(iii)

Answer: c

Watch Video Solution

39. The uniparental reproduction is called _____ reproduction while biparental reproduction is termed _____ reproduction. Higher organisms

mostly show_____ reproduction.

A. rare, plant, bacteria

B. common, plant, bacteria

C. common, algae, fungi

D. rare, algae, fungi

Answer: c

Watch Video Solution

40. It is observed that simple organisms like algae and fungi normally reproduce asexually but before the onset of adverse conditions they shift to sexual reprodction, It is so because sexual reproduction

A. sexual, asexual, sexual

B. asexual, sexual, asexual

C. asexual, sexual, sexual

D. sexual, asexul, asexual

Answer: c

Watch Video Solution

41. Sexual reproduction is considered more beneficial than asexual reproduction because

A. it is not affected by adverse environmental conditions

B. fertilisation is a chance factor

C. it rapidly multiplies the population

D. it assists in evolution by producing variations.

Answer: d

Watch Video Solution

42. The growth phase of an organism before attaining sexual maturity is referred to as

A. juvenile phase

B. vegetative phase

C. both (a) and (b)

D. none of these.

Answer: c

Watch Video Solution

43. Select the monocarpic plant out of the following .

A. Bamboo

B. Litchi

C. Mango

D. All of these

Answer: a

Watch Video Solution

44. Clear cut vegetative, reproductive and senescent phases cannot be observed in

A. annual plants

B. perennial plants

C. biennial plants

D. ephemeral plants.

Answer: b

Watch Video Solution

45. Strobilanthus kunthiana flowers once in

A. 5 years

B. 12 years

C. 20 years

D. 50 years.

Answer: b

Watch Video Solution

46. Strobilanthus kunthiana differs from bamboo in

A. being monocarpic

B. length of juvenile phase

C. being polycarpic

D. none of these.

Answer: b

Watch Video Solution

47. Oestrous cyle is reported in

A. cows and sheep

B. humans and monkeys

C. chimpanzees and gorillas

D. none of these.

Answer: a

Watch Video Solution

48. Which of the following animals show menstrual cycle ?

A. Gorillas and chimpanzees

B. Monkeys and humans

C. Orangutans and monkeys

D. All of these

Answer: d

Watch Video Solution

49. Read the following statements about the reproductive cycles in mammals and select the correct ones.

(i) Oestrous cycle occurs in primate mammals.

(ii) In species with oestrous cycle, females are generally sexually active during oestrous phase.

(iii)Both the cycles show monthly recurrence.

A. (i) and (ii)

B. (ii) and (iii)

C. (ii) only

D. (i), (ii) and (iii)

Answer: c

Watch Video Solution

50. Organisms reproducing throughout the year are called _____ breeders e.g., _____ , and those who show recurring sexual activity are called _____ breeders e.g., _____ .

A. continuous, sparrow, seasonal, hen

B. seasonal, lizard, continuous, hen

C. continuous, man, seasonal, tiger

D. seasonal, hen, continuous, tiger

Answer: c

Watch Video Solution

51. Senescent phase of an organism's life span can be recognised by

A. slow metabolism

B. cessation of reproduction

C. decreased immunity `

D. all of these

Answer: d

Watch Video Solution

52. The events in sexual reproduction are

(i) pre-fertilisation

(ii)fertilisation

(iii) post-fertilisation

The sequential order of their occurrence is

A. (ii)-(i)-(i)

B. (iii)-(ii)-(i)

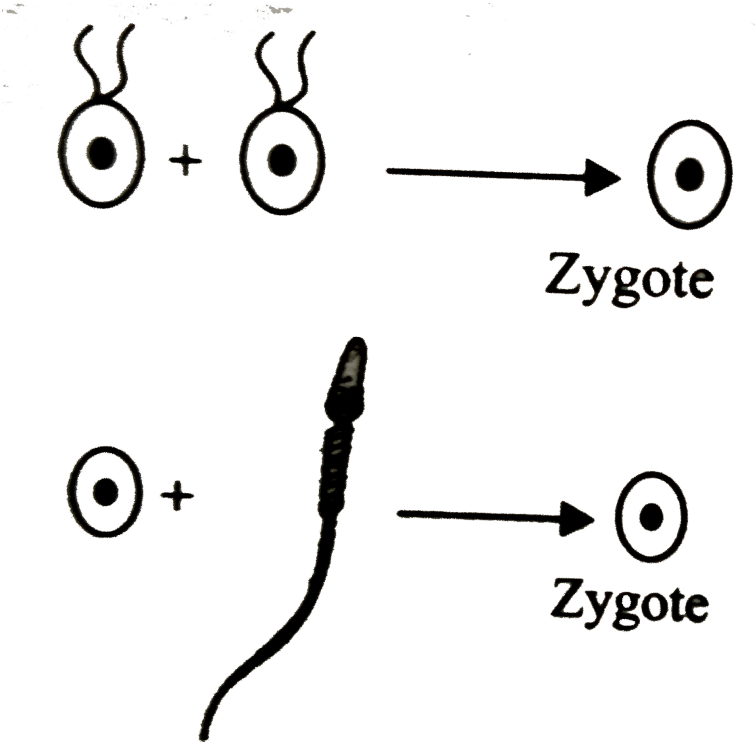
C. (i)-(ii)-(iii)

D. (i)-(iii)-(iv)

Answer: c

Watch Video Solution

53. Refer to the given diagrams showing different types of syngamy and select the option that gives correct example of each of these.



A. $\underset{\text{Fucus}}{i}$ $\underset{\text{Chlamydomonas}}{ii}$

B. $\underset{\text{Homo sapiens}}{i}$ $\underset{\text{Fucus}}{ii}$

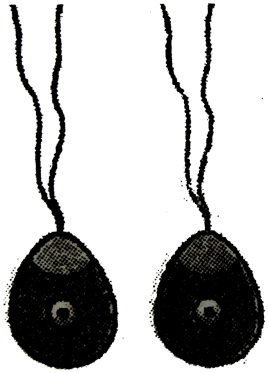
C. $\begin{matrix} i & ii \\ \text{Fucus} & \text{Cladophora} \end{matrix}$

D. $\begin{matrix} i & ii \\ \text{Cladophora} & \text{Homo sapiens} \end{matrix}$

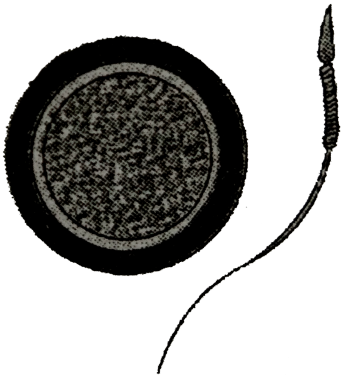
Answer: d

Watch Video Solution

54. Which of the following options is correct for the given figures ?



X



Y

A. $\begin{matrix} X & Y \\ \text{Homogamy} & \text{Isogamy} \end{matrix}$

B. $\begin{matrix} X & Y \\ \text{Anisogamy} & \text{Isogamy} \end{matrix}$

C. $\begin{matrix} X & Y \\ \text{Heterogamy} & \text{Anisogamy} \end{matrix}$

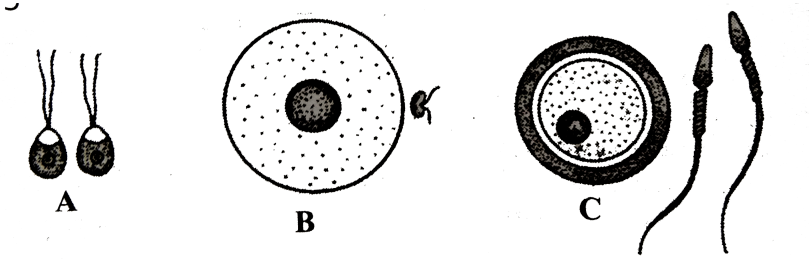
D.

X	Y
Isogamy	Oogamy

Answer: d

Watch Video Solution

55. Refer the following figures and identify the type of gametes (A, B and C) respectively.



A. Haterogametes, isogametes, homogametes

B. Isogametes, homogametes, heterogametes

C. Homogametes, isogametes, heterogametes

D. Homo/Isogametes, heterogametes, heterogametes

Answer: d

Watch Video Solution

56. If a fungal thallus has both male and female reproductive structures, it will be called

A. heterothallic

B. homothallic

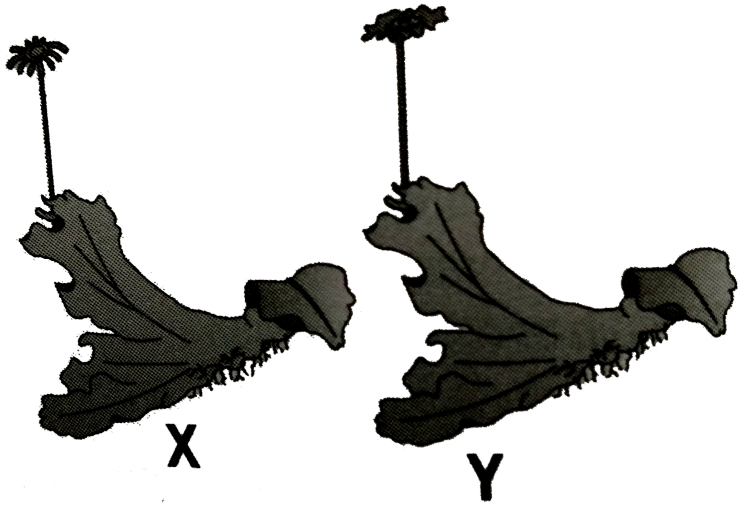
C. dioecious

D. monoecious.

Answer: b

Watch Video Solution

57. Refer to the given figures of Marchantia and identify X and Y.



A. Male Thallus " " Female Thallus

B. Female Thallus " " Male Thallus

C. Oogonium " " Antheridium

D. Antheridium " " Oogonium

Answer: b

Watch Video Solution

58. Staminate flower produce

A. eggs

B. antherozoids

C. fruits

D. all of these.

Answer: b

Watch Video Solution

59. Read the following statements and select the correct option.

Statement 1 : Unisexual flowers are either staminate flowers or pistillate flowers.

Statement 2: Both monoeious and dioeious plants have unisexual flowers.

A. Both statements 1 and 2 are correct.

B. Statement 1 is correct but statement 2 is incorrect.

C. Statement 1 is incorrect but statement 2 is correct.

D. Both statements 1 and 2 are incorrect.

Answer: b

Watch Video Solution

60. Which of the following is a unisexual organism ?

(a)

A.

(b) 

B.

C.

(d) 

D.

Answer: d

View Text Solution

61. Which of the following groups is formed only of the hermaphrodite organisms ?

A. Earthworm, tapeworm, housefly, frog

B. Earthworm, tapeworm, sea horse, housefly

C. Earthworm, leech, sponge, roundworm

D. Earthworm, tapeworm, leech, sponge

Answer: d

Watch Video Solution

62. Which of the following options shows bisexual animals only ?

A. Amoeba, sponge, leech

B. Sponge, cockroach, Amoeba

C. Earthworm, sponge, leech

D. Tapeworm, earthworm, honeybee

Answer: c

Watch Video Solution

63. Refer to the given figure and identify structure X in cockroach.

A. Testis

B. Ovary

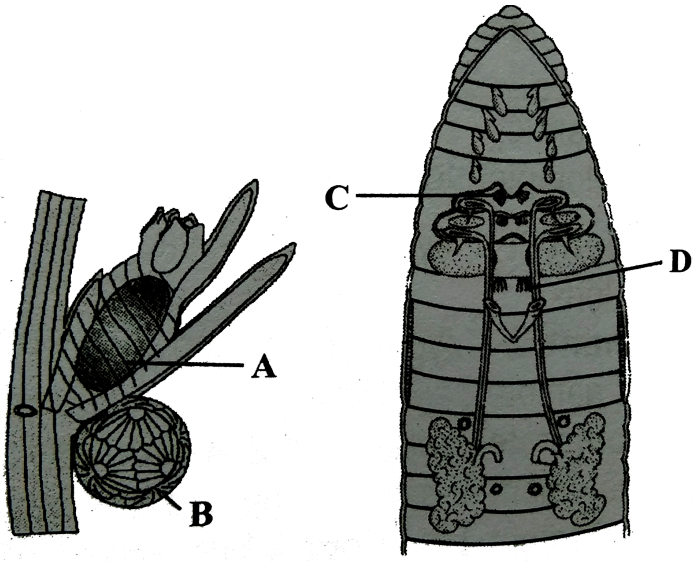
C. Sperms

D. Egg

Answer: b

Watch Video Solution

64. Figure P represents the reproductive organs of Chara plant and figure Q represents the reproductive organs of earthworm. Select the option which correctly identifies male reproductive organs of the two organisms.



A. A and D

B. B and C

C. A and C

D. B and D

Answer: b

Watch Video Solution

65. Read the following statements and select the incorrect one.

A. Cucurbits and coconuts are monoecious plants.

B. Papayas and date palms are dioecious plants.

C. Leeches and tapeworms are bisexual animals.

D. Sponges and coelenterates are unisexual animals.

Answer: d

Watch Video Solution

66. Meiosis does not occur in

A. asexually reproducing diploid individuals

B. sexually reproducing haploid individuals

C. sexually reproducing diploid individuals

D. all of these.

Answer: a

Watch Video Solution

67. A diploid parent plant body produces _____ gametes and a haploid parent plant body produces _____ gametes.

A. diploid, haploid

B. haploid, diploid

C. diploid, diploid

D. haploid, haploid

Answer: d

Watch Video Solution

68. Which of the following organisms has the higest number of chromosomes ?

A. Housefly

B. Butterfly

C. Ophioglossum

D. Onion

Answer: c

Watch Video Solution

69. In maize, a meiocyte has 20 chromosomes. What will be the number of chromosomes in its somatic cell ?

A. 40

B. 30

C. 20

D. 10

Answer: c

Watch Video Solution

70. If a butterfly has chromosome number 360 in its meiocyte (2n). What will be the chromosome number in its gametes ?

A. 380

B. 180

C. 95

D. 760

Answer: b

Watch Video Solution

71. Which of the following is an incorrect combination of organism with iots chromosome number in meiocyte and in ganete ?

A.

Name of organism	Chromosome number in meiocyte	Chromosome
Onion	24	

B.

Name of organism	Chromosome number in meiocyte	Chromosome
Ophioglossum	1260	

C.

Name of organism	Chromosome number in meiocyte	Chromosome
Human beings	46	

D.

Name of organism	Chromosome number in meiocyte	Chromosome
Fruit fly	8	

Answer: a

Watch Video Solution

72. In flowering plants, both male and female gametes are non-motile. The method to bring them together for fertillisation is

A. water

B. air

C. pollination

D. apomixis.

Answer: c

Watch Video Solution

73. Read the following statements and select the correct option.

Statement 1 : In pea plant, transfer of pollen grains to the stigma is easy.

Statement 2 : In cross pollinating plants, pollination does not take place.

A. Both statements 1 and 2 are correct.

B. Statement 1 is correct but statement 2 is incorrect.

C. Statement 1 is incorrect but statement 2 is correct.

D. Both statements 1 and 2 are incorrect.

Answer: b

Watch Video Solution

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

A. syngamy

B. embryogenesis

C. oogamy

D. parthenogenesis.

Answer: d

Watch Video Solution

75. Select the incorrect statement about external fertilisation.

A. Organisms showing external fertilisation produce a large number of male gametes only.

B. External fertilisation is very uncertain and requires synchony between release of male and female gametes.

C. It is replaced by internal fertilisation in higher organisms as it wastes energy and requires external medium like water.

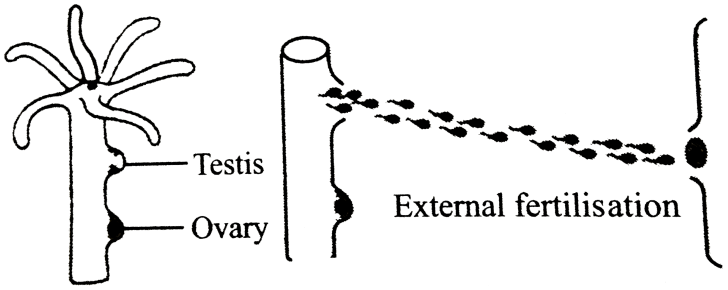
D. It occurs in most of the fishes and amphibians.

Answer: a

Watch Video Solution

76. Given figure of Hydra shows its reproductive structures and manner of fertilisation.

Observe and answer that why is it not showing self fertilisation ?



A. Distance between testis and ovary is more.

B. Sperms do not swim downwards.

C. Ovary matures earlier than testis.

D. Testis matures earlier than ovary.

Answer: d

Watch Video Solution

77. Which of the following statements is not correct regarding sexuality in organisms ?

A. When both male and female flowers are present on the same plant, the condition is said to be monoecious and is present in cucurbits and coconuts.

B. When both male and female flowers are present on the separate plants, the condition is said to be dioecious and is present in papaya and date palms.

C. In earthworm, both male and female sex organs are present in the same individual and therfore, self-fetillsation occurs in them.

D. Cockroach is a unisexual animal and exhibit sexual dimorphism.

Answer: c

Watch Video Solution

78. Which of the following statements is incorrect ?

A. Earthworms and leeches are hermaphrodite animals.

B. Young ones of animals showing external fertilisation receive little or no parental care.

C. If the egg is not fertilised, it is thrown out of the body along with the lining of the uterus as menstrual flow.

D. Sex organs in human beings are formed at puberty.

Answer: d

Watch Video Solution

79. Following table summarises the differences between self-fertilisation and cross-fertilisation. Pick out the wrong difference.

A.

Self-fertilisation	Cross-fertilisation
It is uniparental.	It is biparental.

B.

Self-fertilisation
It involves the fusion of male and female gametes of the same parent

C.

Self-fertilisation	Cross-fertilisation
Examples : Pheretima, Periplaneta	Examples : Taenia, Rana tigrin

D. None of the above.

Answer: c

Watch Video Solution

80. In organisms showing internal fertilisation, female gamete is non-motile. Lack of motility is advantageous because it

A. faciitates less expenditure of energy

B. assists in rapid division of female gamete

C. helps the cell to store extra nutrients for rapid embryo development

D. both (a) and (c).

Answer: d

Watch Video Solution

81. Fertilisation cannot occur in absence of surface water in

A. Fucus

B. Funaria

C. Marsilea

D. all of these.

Answer: d

Watch Video Solution

82. Spirogyra is a sexually reproducing alga in which vegetative thallus is haploid. In Spirogyra, meiosis

A. never occurs

B. occurs at time of gamete production

C. occurs after fertilisation

D. occurs during vegetative growth.

Answer: c

Watch Video Solution

83. Match the column I with column II.

Column I	Column II
External fertilisation	(i) Earthworm
Internal fertilisation	(ii) Cockroach
Bisexual	(iii) Frogs and Fishes
Unisexual	(iv) Birds and mammals

A. P-(iv), Q-(iii), R-(i), S-(ii)

B. P-(iv), Q-(iii), R-(ii), S-(i)

C. P-(iii), Q-(iv), R-(ii), S-(i)

D. P-(iii), Q-(iv), R-(i), S-(ii)

Answer: d

Watch Video Solution

84. Zygote of an organism developed after syngamy undergoes meiosis to form haploid spores, which divide mitotically and form the gametophyte. The organism must have ___ life cycle.

A. haplontic

B. diplontic

C. haplodiplontic

D. either (a) and (c)

Answer: a

Watch Video Solution

85. Statement 1 : Zygote is the vital link between two generations.

Statement 2 : Zygote is formed due to fusion of two haploid gametes.

A. Both statements 1 and 2 are correct.

B. Statement 1 is correct but statement 2 is incorrect.

C. Statement 1 is incorrect but statement 2 is correct.

D. Both statements 1 and 2 are incorrect.

Answer: a

Watch Video Solution

86. Life begin in all sexually reproducing organisms as a

A. single-celled zygote

B. double-celled zygote

C. haploid zygote

D. haploid gametes.

Answer: a

Watch Video Solution

87. Read the following statements about embryogenesis and select the incorrect option.

A. It is the process of development of embryo from zygote.

B. During this process, zygote undergoes cell division and cell differentiation.

C. Cell divisions decrease the number of cells in developin embryo.

D. Cell differentiation helps groups of cells to undergo certain modification to form specialised tissues and organs.

Answer: c

Watch Video Solution

88. Which of the following is not correct regarding sexual reproduction ?

A. It is usually biparental.

B. Gametes are always formed.

C. It is a slow process.

D. It involves only mitosis.

Answer: d

Watch Video Solution

89. Offsprings of oviparous animal are at greater risk of survival as compared to those of viviparous animals because

A. proper embryonic care and protection is absent

B. embryo does not develop completely

C. progenies are of smaller size

D. genetic variations do not occur.

Answer: a

Watch Video Solution

90. Which of the following statements is not correct regarding oviparous animals ?

A. Females lay fertillised/unfertilised eggs at a safe place.

B. Development of zygote takes place outside the female's body.

C. Examples of oviparous animals are all birds, most reptiles and egg-laying mammals.

D. None of these

Answer: d

Watch Video Solution

91. Deposition of calcareous shell around zygote occurs in

A. birds and reptiles

B. birds and mammals

C. mammals and reptiles

D. all of these.

Answer: a

Watch Video Solution

92. Read the following statements and select the correct option.

Statement 1 : Viviparous animals give better protection to their offspring.

Statement 2 : In viviparous animals, young ones, after attaining a certain stage of growth, are delivered out of the body of female organism.

A. Both statements 1 and 2 are correct.

B. Statement 1 is correct but statement 2 is incorrect.

C. Statement 1 is incorrect but statement 2 is correct.

D. Both statements 1 and 2 are incorrect.

Answer: a

Watch Video Solution

93. Select the option which shows viviparous animals only.

A. Lizard, Turtle

B. Platypus, Crocodile

C. Cow, Crocodile

D. Whale, Mouse

Answer: d

Watch Video Solution

94. Which of the following animals give birth to young ones ?

A. Omithorhynchus and Echidna

B. Macropus and Pteropus

C. Balaenoptera and Homo sapiens

D. Both (b) and (c)

Answer: d

Watch Video Solution

95. Viviparity is found in

A. sharks

B. lizards

C. frogs

D. birds

Answer: a

Watch Video Solution

96. In these animals, the female retain the eggs inside its body after fertillisation and allows the development of embryo inside the body

without providing extra nourishment ot the developing embryo as the placenta is absent. Such animlas are called as

A. oviparous animals

B. viviparous animals

C. ovoviviparous animals

D. none of these.

Answer: c

Watch Video Solution

97. In which of the following plants, sepals do not fall off after fertillstion and remain attached to the fruit ?

A. Brinjal

B. Cucumber

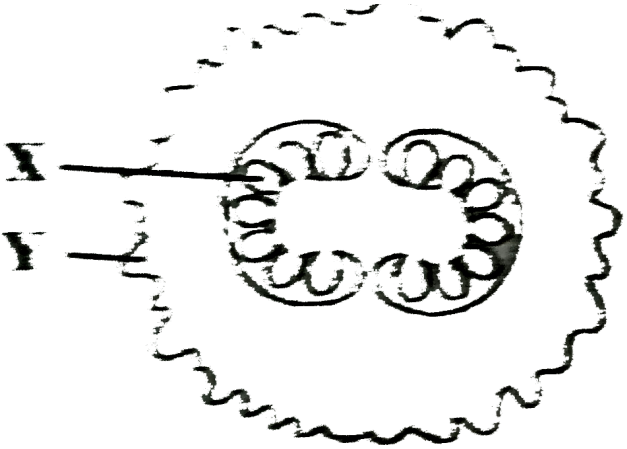
C. Papaya

D. Bitter gourd

Answer: a

Watch Video Solution

98. Which of the labelled parts in the transverse section of tomato fruit, is/are diploid ?



A. X

B. Y

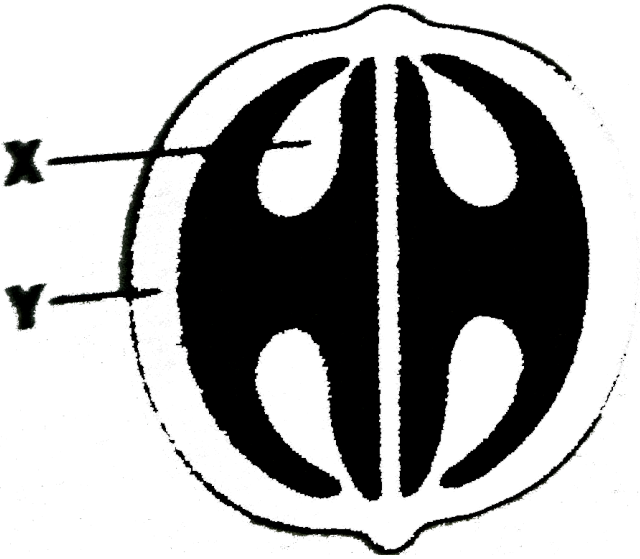
C. Both X and Y

D. None of these

Answer: c

Watch Video Solution

99. Refer to the transverse section of ovary of mustard plant identify X and Y in it.



A. $\begin{matrix} X & Y \\ \text{Seed} & \text{Locule} \end{matrix}$

B. $\begin{matrix} X & Y \\ \text{Pericarp} & \text{Seed} \end{matrix}$

C. $\begin{matrix} X & Y \\ \text{Seed} & \text{Pericarp} \end{matrix}$

D. $\begin{matrix} X & Y \\ \text{Placenta} & \text{Seed} \end{matrix}$

Answer: c

Watch Video Solution

100. The wall of the ovary forms

A. pericarp

B. fruit wall

C. fruit

D. both (a) and (b).

Answer: d

Watch Video Solution

101. Grafting is the union between two plants of closely related varieties. Following are some statements regarding different types of grafting.

(i) An oblique cut followed by a notch is given to both stock and scion.

(ii) Scion is a bud with a small piece of bark and cambium.

(iii) Both stock and scion are of same diameter.

(iv) Stock has many times more diameter than scion.

Identify the type of grafting with respect to these statements and select the correct option.

A. can be tongue grafting in which diameter of stck is larger than that of scion.

B. can be bud grafting in which stock of monocot and scion of dicot plant are usually united.

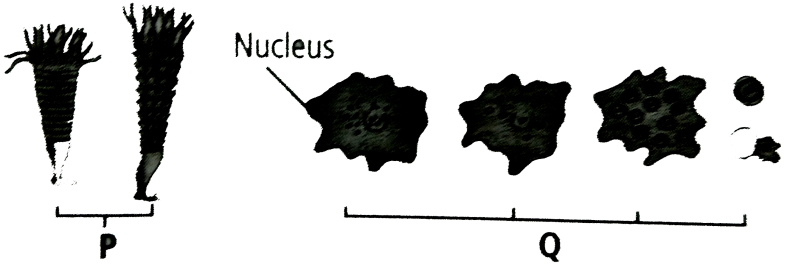
C. can be wedge grafting in which v-shaped notch is given to stock whereas wedge like cut is given to scion.

D. can be crown grafting in which many stcks are inserted in the slits made in the scions.

Answer: c

Watch Video Solution

102. Given figures illustrate.



A. P Metamerism by a cnidarian Q Multiple fission by a protist

B. P Strobilation by a cnidarian Q Multiple fission by a protist

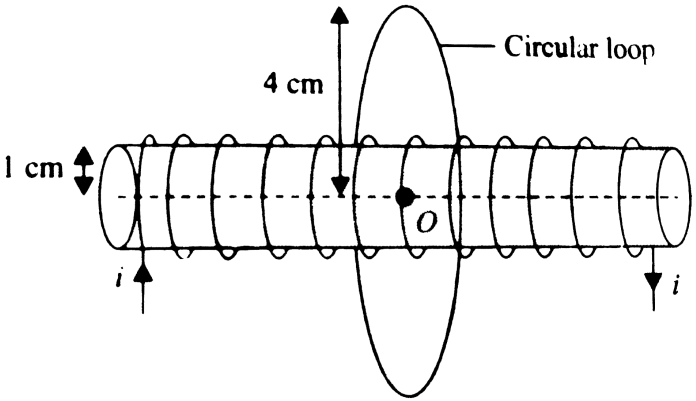
C. P Fragmentation by a platyhelminth Q Internal budding by a sponge

D. P Strobilation by a platyelminth Q Sporulation by a protis

Answer: b

Watch Video Solution

103. A long solenoid having n = 200 turns per metre has a circular cross-section of radius $a_1 = 1cm$. A circular conducting loop of radius $a_2 = 4cm$ and resistance $R = 5(\Omega)$ encircles the solenoid such that the centre of circular loop coincides with the midpoint of the axial line of the solenoid and they have the same axis as shown in Fig.



A current 't' in the solenoid results in magnetic field along its axis with magnitude $B = (\mu)ni$ at points well inside the solenoid on its axis. We can neglect the insignificant field outside the solenoid. This results in a magnetic flux $(\phi)_B$ through the circular loop. If the current in the winding of solenoid is changed, it will also change the magnetic field $B = (\mu)_0 ni$ and hence also the magnetic flux through the circular loop. Obvisouly, it will result in an induced emf or induced electric field in the

circular loop and an induced current will appear in the loop. Let current in the winding of solenoid be reduced at a rate of $75A/\sec.$

When the current in the solenoid becomes zero so that external magnetic field for the loop stops changing, current in the loop will follow a differenctial equation given by [You may use an approximation that field at all points in the area of loop is the same as at the centre

A. parthenogenesis, which is a form of apomixis

B. parthenogenesis, which is a form of amphimixis

C. adventive embryony, which is a form of apomixis

D. agamospermy, which is a form of amphimixis.

Answer: a

Watch Video Solution

104. Which of the following is wheat fruit?

A. Viviparity which is characteristic of reptiles.

B. Viviparity which is characteristic of amphibians.

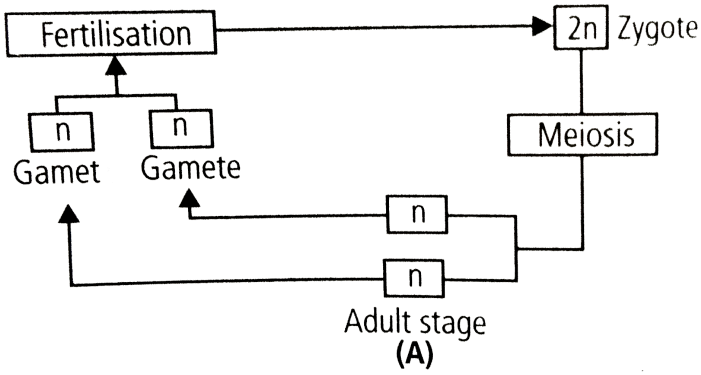
C. Oviparity which is characteristic of hen.

D. Ovoviviparity which is characteristic of some amphibians.

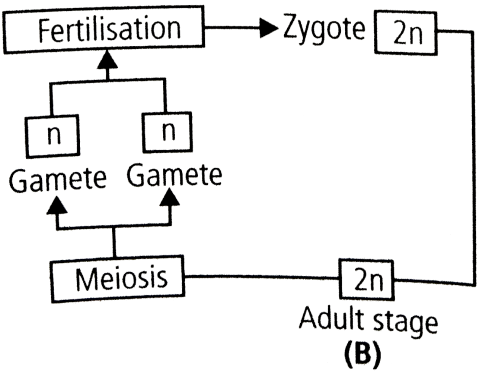
Answer: c

Watch Video Solution

105. In these figures, two life-cycles are described. Mark the correct option.



(A)



(B)

A. A represents primitive life forms and B represents more advnced life forms.

B. A represents terrestrial life forms and B represents aquatic life forms.

C. A rrepresents asexual reproduction and B represents sexual reproduction.

D. Both flow charts basically represent the same life-cycle.

Answer: a

Watch Video Solution

106. In the figure given below, two particles of masses m and 2m are fixed in place on an axis. Where on the axis can a third particle of mass 3m be placed (other than at infinity) so that the gravitational force on it from the first two particles is zero?

A. (i) and (ii)

B. (ii) and (iii)

C. (ii) and (iv)

D. (i) and (iii)

Answer: c

Watch Video Solution

107. The term "Linkage" was coined by

A. offspring do not possess exact copies of parental DNA

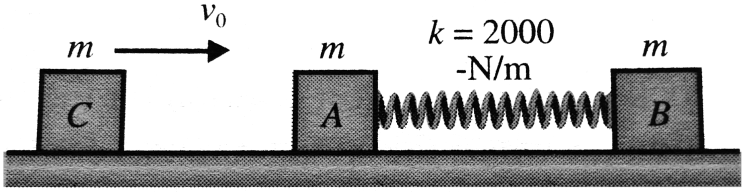
B. DNA of only one parent is copied and passed on to the offspring

C. offspring are formed at different times

D. DNA of parent and offspring are completely different.

Answer: a

Watch Video Solution



108.

Two identical blocks A and B, each of mass $m = 3kg$, are connected with

the help of an ideal spring and placed on a smooth horizontal surface as shown in Fig. Another identical blocks C moving velocity $v_0 = 0.6\frac{m}{s}$ collides with A and sticks to it, as a result, the motion of system takes place in some way

Based on this information answer the following questions:

Q. Oscillation energy of the system i.e., part of the energy which is oscillation (changing) between potention and kinetic forms is

A. (i) and (ii)

B. (ii) and (iii)

C. (i) and (iii)

D. (iii) and (iv)

Answer: c

Watch Video Solution

109. 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

Watch Video Solution

110. The rate of formation of new organic matter by rabbit in a grass land is called ,

A. haploid vegetative cells and diploid gametangia

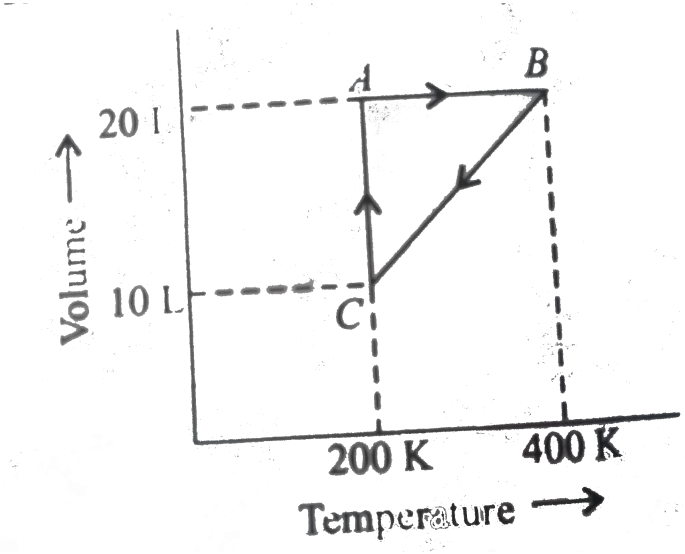
B. diploid vegetative cells and diploid gemtangia

C. diploid vegetative cells and haploid gametangia

D. haploid vegetative cells and haploid gemetangia.

Answer: d

Watch Video Solution



111.

The pressures at A and B in the atmosphere are, respectively,

A. 12,24,12

B. 24,12,12

C. 12,24,24

D. 24,12,24

Answer: c

Watch Video Solution

112. Select the correct statements.

A. (iii) and (iv)

B. (i) and (iii)

C. (ii) and (iv)

D. (i) and (iv)

Answer: b

Watch Video Solution

113. Fill in blanks (w.r.t. experimental material used by Morgan)

(i) Females are easily distinguishable from the male by the _____ body size.

(ii) It has many type of hereditaly variations that can be seen with ____ power microscope.

(iii) Male individuals have hetromorphic_____ .

A. (i) and (ii)

B. (i) and (iii)

C. (ii) and (iv)

D. (iii) and (iv)

Answer: a

Watch Video Solution

114. If three uniform spheres, each having mass M and radius R, are kept in such a way that each touches the other two, the magnitude of the

gravitational force on any sphere due to the other two is:

A. (ii) and (iv)

B. (iv) only

C. (iii) and (iv)

D. (i) and (iv)

Answer: b

Watch Video Solution

115. The value of escape speed from the surface of earth is

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

Watch Video Solution

116. 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), (ii) and (iii)

B. (i), (iii) and (iv)

C. (i), (ii) and (iv)

D. (ii), (iii) and (iv)

Answer: c

Watch Video Solution

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

A. sexual reproduction is a lengthy 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

Watch Video Solution

118. Pick out the correct statement from the following

A. Dioecious organisms are seen only in animals.

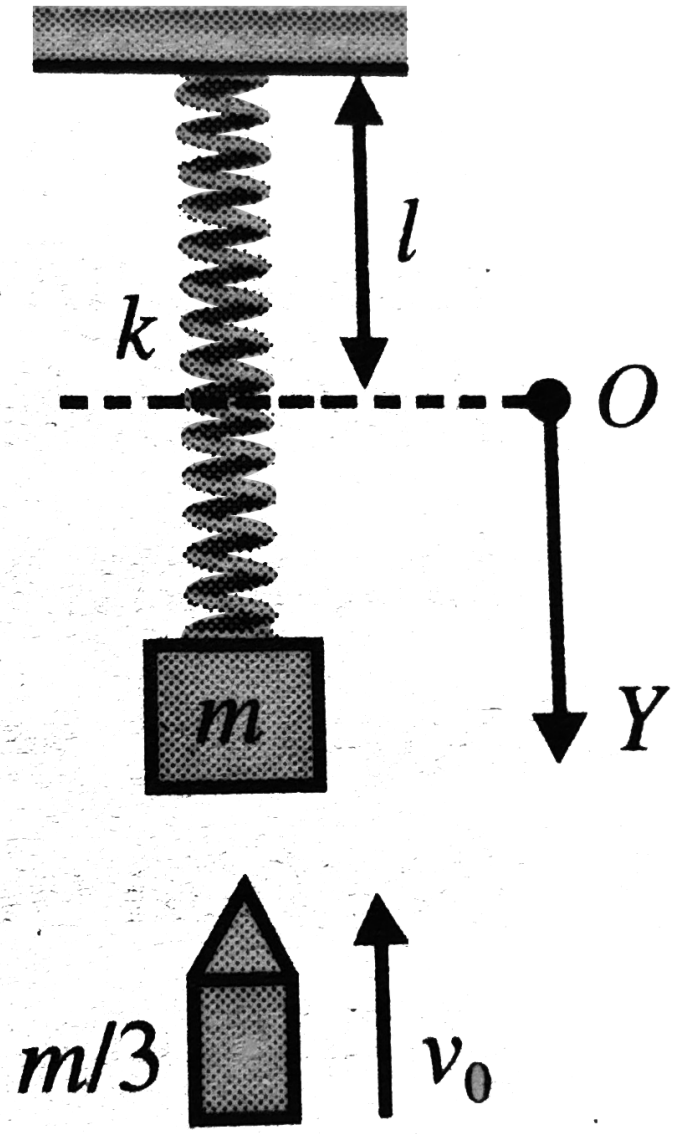
B. Dioecious organisms are seen only in plants.

C. Dioecious organisms are seen in both plants and animals.

D. Dioecious organisms are seen only in vertebrates.

Answer: c

Watch Video Solution



119.

A block of mass m is suspended from one end of a light spring as shown. The origin O is considered at distance equal to natural length of the spring from the ceiling and vertical downwards direction as positive y-

axis. When the system is in equilibrium a bullet of mass $\frac{m}{3}$ moving in vertical up wards direction with velocity v_0 strikes the block and embeds into it. As a result, the block (with bullet embedded into it) moves up and start oscillating. Based on the given information, answer the following question:

Q. The time taken by the block bullet system to move from $y = \frac{mg}{k}$ (initial equilibrium position) to $y = 0$ (natural length of spring) is (A represents the amplitude of motion)

A. they cannot reproduce sexually

B. they reproduce by binary fission

C. parental body is distributed among the offspring

D. they are microsocpic.

Answer: c

Watch Video Solution

120. Phenotype of an organism is the result of

A. the habitat and morphology of the organism

B. morphology of the organism

C. morphology and physiology of the organism

D. the organisms habitat, physiology and genetic makeup.

Answer: d

Watch Video Solution

121. Find out the incorrect statement w.r.t. frog-

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

B. Zoospores are sexual repoductive structures.

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

D. Conidia are asexual structures in Penicillium.

Answer: b

Watch Video Solution

122. Which of the following is wheat fruit?

A. Transfer of pollen grains

B. Embryo development

C. Formation of flower

D. Formation of pollen grains

Answer: b

Watch Video Solution

123. In the hexaploid wheat, the haploid (n) and basic (x) numbers of chromosomes are

A. 20

B. 10

C. 40

D. 15

Answer: A

Watch Video Solution

124. Explain why the following reasoning is wrong :

"The Sun attracts all bodies on the Earth. At mid-night, when the sun is directly below, it pulls on an object in the same direction as the pull of the Earth on that object, at noon, when the Sun is directly above, it pulls on an object in a direction opposite to the pull of the Earth, Hence all objects should be heavier at mid-night (or night) than they are at noon (or day)."

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: a

Watch Video Solution

125. Assertion (A): The electrolysis of $NaCl$ solution gives $H_2(g)$ at cathode and $Cl_2(g)$ at anode.

Reason (R): Cl_2 has higher oxidation potential than H_2O

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: b

Watch Video Solution

126. Assertion: The properties of paramagnetic and ferromagnetic substances are not affected by heating.

Reason: As tmeperature rises, the alignment of molecular magnets gradually decreases.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: d

Watch Video Solution

127. Assertion : Asparagus can be vegetatively propagated by the stem.

Reason : Aspargus has unbranched swollen, underground stem having circular nodes that have buds for growth of daughter plants.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: d

Watch Video Solution

128. Assertion : Water hyacinth is an invasive aquatic plant which speads all over the water in a short period of time.

Reason : Water hyacinth can reproduce vegetatively.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: a

Watch Video Solution

129. Assertion : Algae and fungi switch to asexual method of reproduction before the onset of adverse conditions.

Reason : Asexual reproduction may introduce variations and leads to the formation of many clones.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: d

Watch Video Solution

130. Assertion : In perennial plant species, it is difficult to define vegetative, reproductive and senescent phases.

Reason : Perennial plants have very short life span.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: c

Watch Video Solution

131. Assertion : Some female animals permit copulation only during oestrous cycle.

Reason : Oestrous cycle is observed in non-primate mammals.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: b

Watch Video Solution

132. Assertion : Isogametes are formed in majority of sexually reproducing organisms.

Reason : Morphologically distinct type of gametes are called isogametes.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: d

Watch Video Solution

133. Assertion : Cucurbita is a monoecious plant.

Reason : In Cucrbita, both male and femle flowers are present on the same plant.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: a

Watch Video Solution

134. Assertion : Parthenogenesis does not play any role in organic evolution.

Reason : In parthenogenesis females develop into new organisms without fertilisation.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: b

Watch Video Solution

135. Assertion $(A): Cu$ liberates $H_2(g)$ from a dilute solution of HCl.

Reason $(R):$ Hydrogen is below Cu in the electrochemical series.

(a)If both (A) and (R) are correct, and (R) is the correct explanation of (A).

(b)If both (A) and (R) are correct, but (R) is not the correct explanation of (A).

(c)If (A) is correct, but (R) is incorrect.

(d)If both (A) and (R) are incorrect.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: c

Watch Video Solution

136. Assertion (A) : Cu liberates $H_2(g)$ from a dilute solution of HCl.

Reason (R) : Hydrogen is below Cu in the electrochemical series.

(a)If both (A) and (R) are correct, and (R) is the correct explanation of (A).

(b)If both (A) and (R) are correct, but (R) is not the correct explanation of (A).

(c)If (A) is correct, but (R) is incorrect.

(d)If both (A) and (R) are incorrect.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: a

Watch Video Solution

137. Assertion : Embryogenesis is the development of embryo from the zygote.

Reason : Cell division increase the number of cells in the developing embryo.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: b

Watch Video Solution

138. Explain why the following reasoning is wrong :

"The Sun attracts all bodies on the Earth. At mid-night, when the sun is directly below, it pulls on an object in the same direction as the pull of the Earth on that object, at noon, when the Sun is directly above, it pulls on an object in a direction opposite to the pull of the Earth, Hence all objects should be heavier at mid-night (or night) than they are at noon (or day)."

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: c

Watch Video Solution

Others

1. Single celled animals are said to be immortal because

A. they grow indefinitely in size

B. they can tolerate any degree of change in temperature

C. they can reproduce throughtout their life span

D. they continue to live as their daughter cells.

Answer: d

Watch Video Solution

2. Which of the following statements are correct?

A. All the individuals of a species have exactly the same life span.

B. Smaller organisms always have shorter life span and vice versa.

C. Life span of an organism is the time period from its birth to its natural death.

D. No organism may have a life span of several hundred years.

Answer: c

Watch Video Solution

3. Which of the following has the longest life span ? a) Banyan Tree b) Tortoise c) Parrot d) Elephant

A. Banyan tree

B. Tortoise

C. Parrot

D. Elephant

Answer: a

Watch Video Solution

4. Select the option which arranges the given organisms in ascending order of their life span.

A. $\text{Parrot} < \text{Crow} < \text{Butterfly} < \text{Banyan tree}$

B. $\text{Butterfly} < \text{Crow} < \text{Parrot} < \text{Crocodile}$

C. $\text{Fruit fly} < \text{Crocodile} < \text{Parrot} < \text{Banyan tree}$

D. Parrot $<$ Tortoise $<$ Dog $<$ Crow

Answer: c

Watch Video Solution

5. Identify the given organism and find its maximum life span.

A. Sparrow, 25 years

B. Crow, 30 years

C. Crow, 15 years

D. Eagle, 40 years

Answer: c

Watch Video Solution

6. Read the following statements about reproduction and select the incorrect one.

A. It is a biolgical process in which an organism gives rise to young ones.

B. It eneables the continuity of the species.

C. It produces genetic variations in organisms.

D. It maintains populations of the yound and adult persons only.

Answer: d

Watch Video Solution

7. _____ is a life process that is not essential for an individual's survival but for survival of the species.

A. Growth

B. Reproduction

C. Respiration

D. Nutrition

Answer: b

Watch Video Solution

8. Read the following statements about asexual reproduction and select the correct ones.

(i) It involves a single parent.

(ii) It is slower than sexual reproduction.

(iii) It produces progeny that are genetically identical with the parent but

not with one another.

(iv) The progeny of asexual reproduction can be termed as clones.

A. (i) and (ii)

B. (ii) and (iii)

C. (i) and (iv)

D. (i), (iii) and (iv)

Answer: c

Watch Video Solution

9. Refer to the given figures and select the correct option.

a) binary

fission b) multiple fission c) mitosis d) budding

A. It is a type of parthenogenesis.

B. It is a type of asexual reproduction.

C. This offspring produced can also be called clones.

D. Both (b) and (c)

Answer: d

Watch Video Solution

10. 'Clones' are individuals that have exactly the same a) lifespan b) physiology c) growth rate d) genetic makeup

A. lifespan

B. physiology

C. growth rate

D. genetic makeup.

Answer: d

Watch Video Solution

11. Which one of the following processes results in the formation of clone of bacteria ?

A. Regeneration

B. Budding

C. Binary fission

D. Fragmentation

Answer: c

Watch Video Solution

12. Asexual reproduction is seen in members of Kingdom

A. Monera

B. Plantae

C. Animalia

D. all of these

Answer: d

Watch Video Solution

13. During binary fission in Amoeba which of the following organelles is duplicated ? a) plasma membrane b) nucleus c) contractile vacuole d) all of these

A. Palsma membrane

B. Nucleus

C. Contractile vacuole

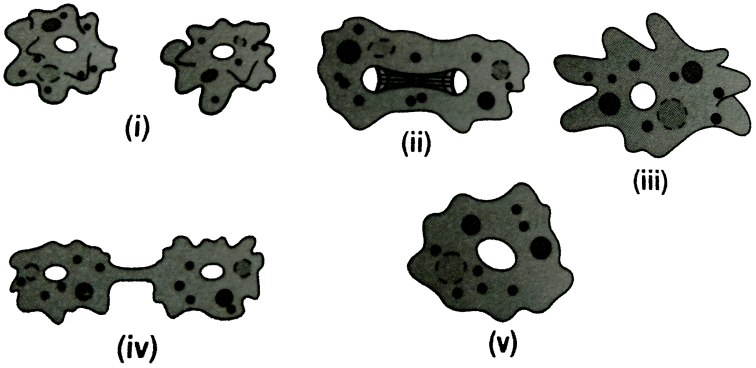
D. All of these

Answer: b

Watch Video Solution

14. Study the given figures representing the process of binary fission in Amoeba.

Arrange the figures in the correct sequence and select the correct answer.



A. $(iv) \rightarrow (iii) \rightarrow (i) \rightarrow (ii) \rightarrow (v)$

B. $(iii) \rightarrow (iv) \rightarrow (i) \rightarrow (ii) \rightarrow (v)$

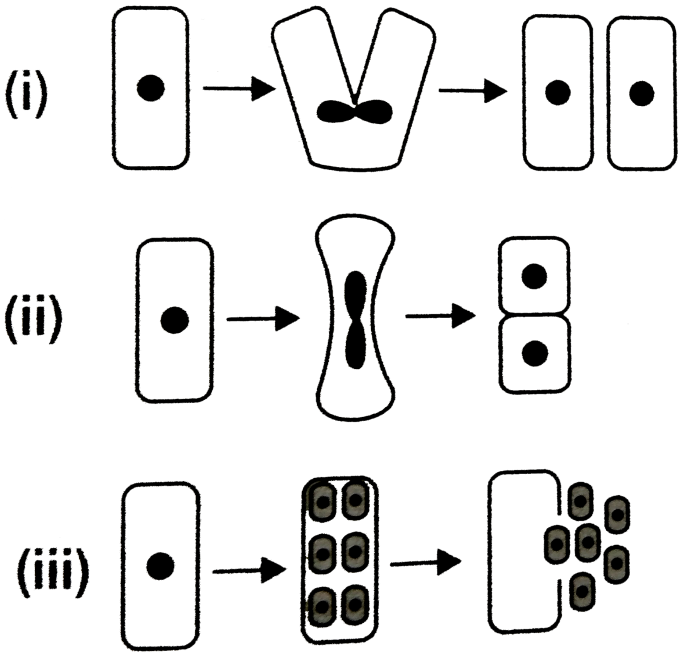
C. $(v) \rightarrow (iii) \rightarrow (ii) \rightarrow (iv) \rightarrow (i)$

D. $(iv) \rightarrow (iii) \rightarrow (ii) \rightarrow (v) \rightarrow (i)$

Answer: c

Watch Video Solution

15. Refer to the given figures which show three different types of fission. Select the option which correctly matches them with the organism is which they occur.



A. $\underset{\text{Euglena}}{i}$ $\underset{\text{Plasmodium}}{ii}$ $\underset{\text{Amoeba}}{iii}$

B. $\underset{\text{Plasmodium}}{i}$ $\underset{\text{Paramecium}}{ii}$ $\underset{\text{Euglena}}{iii}$

C. $\begin{matrix} i & ii & iii \\ \text{Euglena} & \text{Paramecium} & \text{Escherichia} \end{matrix}$

D. $\begin{matrix} i & ii & iii \\ \text{Euglena} & \text{Paramecium} & \text{Amoeba} \end{matrix}$

Answer: d

Watch Video Solution

16. Select the incorrect statement.

A. Amoeba and Paramecium reproduce by binary fission.

B. Buds are produced due to unequal divison in parent body

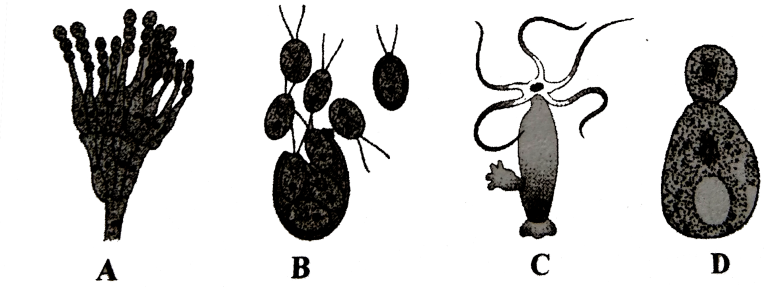
C. Encystation refers to the formation of two layered hard covering around Amoeba during unfavourable condition.

D. Spores are formed due to multiple fission in sporulation.

Answer: c

Watch Video Solution

17. Refer to the given figures and select the correct option.



A. C and D reproduce by budding that includes nuclear division only.

B. All of these reproduce by the asexual mode of reproduction.

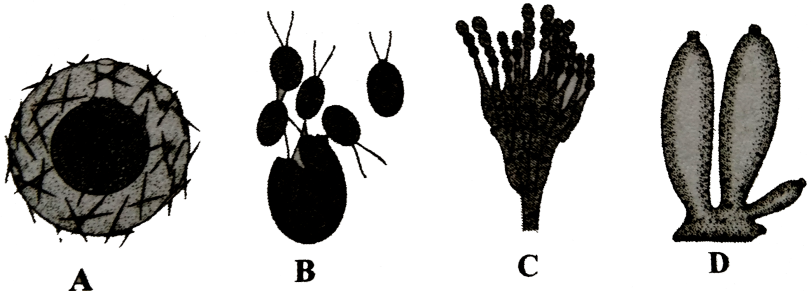
C. B represents multiple fission in an alga.

D. A shows spore formation in a moneran.

Answer: b

Watch Video Solution

18. Study the following figures and select the correct statements regarding these.



(i)A shows mode of asexual reproduction in sponges through internal buds.

(ii)B shows sexual reprodction through zoospores in Chlamydomonas.

(iii) C shows asexual reproduction through fragmentation in Penicullium.

(iv) D shows external budding in Sycon.

A. (i) and (ii)

B. Smaller organisms always have shorter life span and vice versa.

C. (ii), (iii), and (iv)

D. (i) and (iv)

Answer: d

Watch Video Solution

19. Which of the following is not used for vegetative propagation ?

A. Bud

B. Bulbil

C. Turion

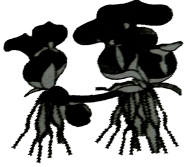
D. Antherozoid

Answer: d

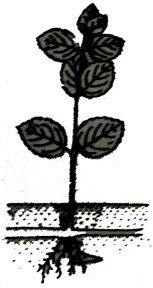
Watch Video Solution

20. This plant was introduced in India because of its beautiful flowers and shape of leaves but it became a notorious weed in Indain water bodies. Identify this plant.

A. (a)

B. (b) 

C. (c) 

D. (d) 

Answer: b

Watch Video Solution

21. Read the following statements about 'Terror of Bengal' and select the correct ones.

(i) 'Terror of Bengal' is the name given to water hyacinth (Eichhornia), an algae.

(ii) Eichhornia was introduced in India due to its aesthetic value.

(iii) Eichhornia drains oxygen from the water which leads to death of fishes.

A. (i) and (ii)

B. (i) and (iii)

C. (ii) and (iii)

D. (i), (ii) and (iii)

Answer: c

Watch Video Solution

22. Match column I with column II and select the correct option from the codes given below.

Column I	Column II
Sponge	(i) Tuber
Yeast	(ii) Offset
Potato	(iii) Gemmules
Water hyacinth	(iv) Budding

A. A-(iv), B-(i), C-(ii),D-(iii)

B. A-(iii), B-(i), C-(iv),D-(ii)

C. A-(iii),B-(iv), C-(i),D-(ii)

D. A-(iv),B-(ii),C-(i),D-(iii)

Answer: c

Watch Video Solution

23. Read the following statements and select the correct option,

Statement 1 : Many pants are propagated vegetatively even though they bear seeds.

Statement 2 : Sweet potatoes multiply vegetatively by root tubers.

A. Both statements 1 and 2 are correct.

B. Statement 1 is correct but statement 2 is incorrect.

C. Statement 1 is incorrect but statement 2 is correct.

D. Both statements 1 and 2 are incorrect.

Answer: a

Watch Video Solution

24. Which of the following options shows two plants in which new plantlets arise from the same organ ?

A. Dahlia and ginger

B. Potato and sweet potato

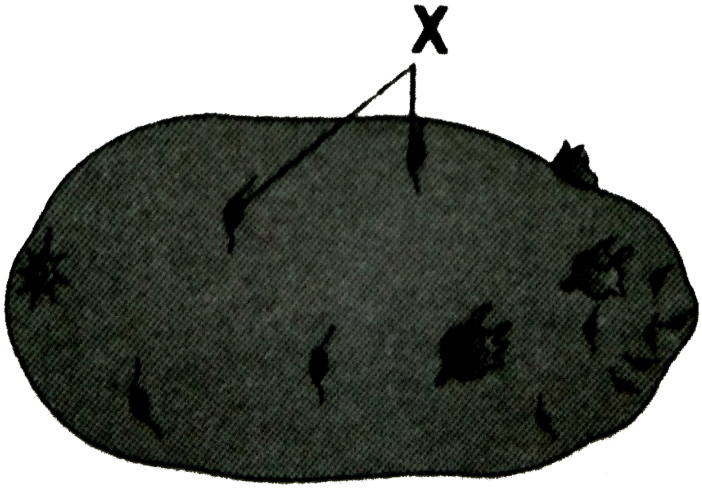
C. Dahlia and rose

D. Potato and sugarcane

Answer: d

Watch Video Solution

25. Refer to the given figure and identify X in it.



A. Offset

B. Eyes

C. Runner

D. Bulb

Answer: b

Watch Video Solution

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

A. bulbs

B. bulbils

C. tubers

D. offsets.

Answer: b

Watch Video Solution

27. In which of the following plants, vegetative propagation occurs by adventitious buds ?

A. 

(b)

B.

C.

D. None of these

Answer: b

Watch Video Solution

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

A. Bryophyllum and Kalanchoe

B. Chryansanthemum and Agave

C. Agave and Dioscorea

D. Bryophyllum and Asparagus

Answer: a

Watch Video Solution

29. Read the following statements and select the correct ones.

(i) Conidia are the asexual propagules restricted to Kingdom Fungi.

(ii) Apiece of potato tuber having at least one eye (or node) is capable of giving rise to a new plant.

(iii) Ginger propagates vegetatively with the help of its underground roots.

(iv) Fleshy buds which take part in vegetative propagation are called bulbilsm present in Dioscorea, Agave, etc.

A. (i) and (iii)

B. (i) and (iv)

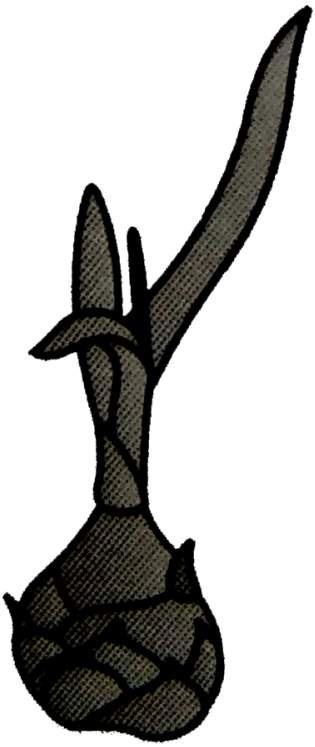
C. (i),(ii) and (iv)

D. (i), (ii) and (iii)

Answer: C

Watch Video Solution

30. Identify the given vegetative propagule.



A. Bulb

B. Runner

C. Rhizome

D. Bulbil

Answer: d

Watch Video Solution

31. If a leaf cell of Agave has x chromosomes then what will be the number of chromosomes in a cell of its bulbil ?

A. 2x

B. $x/2$

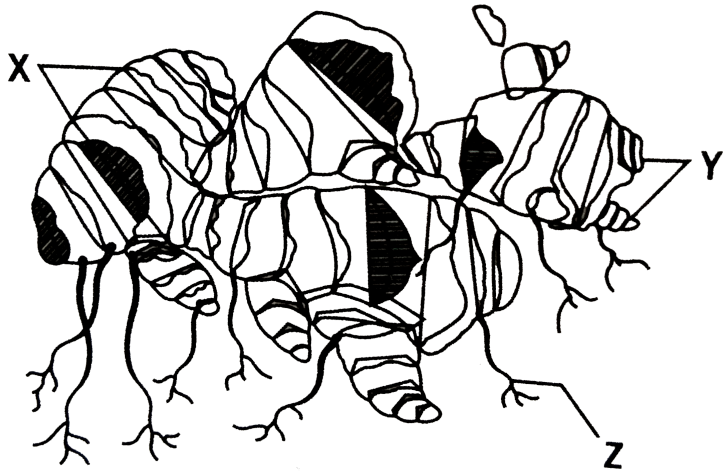
C. $x/4$

D. x

Answer: d

Watch Video Solution

32. Refer to the given figure and identify X, Y and Z in it.



A. X-Buds, " "Y-Nodes, " "Z-Adventitious Root

B. X-Nodes, " Y-Buds, " "Z-Adventitious Root

C. X-Nodes, " "Y-Adventitious Root, " " Z-Buds

D. X-Buds, " " Y-Adventitious Root, " " Z-Nodes

Answer: b

Watch Video Solution

33. Select the mismatched pair of organism and its mode of multiplication.

Watch Video Solution

34. Which of the following cannot serve as a vegetative propagule ?

A. Organism — Mode of multiplication
Agave, Oxalis — Bulbils

B. Organism — Mode of multiplication
Amoeba, Paramecium — Binary fission

C. Organism — Mode of multiplication
Chlamydomones, Ulothrix — Sporangiospores

D. Organism — Mode of multiplication
Adiantum caudatum — Adventitou buds present at leaf tips

Answer: b

Watch Video Solution

35. It is a common method of vegetative propagation in which 20-30 cm long pieces of one year old stems are cut, their lower ends are dipped in

root promoting hormones and are then planted in the soil, which then develop adventitious roots. This method of vegetative propagation is performed in

A. A piece of potato tuber with eyes

B. A middle piece of sugarcane internode

C. A piece of ginger rhizome

D. A marginal piece of Bryophyllum leaf

Answer: d

Watch Video Solution

36. Which of the following options correctly identifies artificial and natural methods of vegetative propagation ?

A. rose and sugarcane

B. lemon and orange

C. Begonia and Bryophyllum

D. all of these

Answer: b

Watch Video Solution

37. Match the organisms given in column I with their mode of reproduction in column II and select the correct answer from the codes given below.

Column I	Column II
Potato	(i) Zoospores
Spirogyra	(ii) Stem cuttings
Rose	(iii) Conidiospores
Penicillium	(iv) Stem tubers

A.	Artificial methods	Natural methods
	Grafting	Cutting
B.	Artificial methods	Natural methods
	Layering	Bulbils
C.	Artificial methods	Natural methods
	Offset	Tissue culture
D.	Artificial methods	Natural methods
	Tubers	Rhizomes

Answer: b

Watch Video Solution

38. Asexual reproduction is the _____ method of reproduction in organisms that have a relativeluy simple organisation like _____ and _____.

Fill in the blanks in the above statement.

A. A-(i), B-(iii), C-(ii), D-(iv)

B. A-(iv), B-(i), C-(ii), D-(iii)

C. A-(iv),(B-(i),C-(iii),D-(ii)

D. A-(ii), B-(i), C-(iv), D-(iii)

Answer: c

Watch Video Solution

39. The uniparental reproduction is called _____ reproduction while biparental reproduction is termed _____ reproduction. Higher organisms

mostly show_____ reproduction.

A. rare, plant, bacteria

B. common, plant, bacteria

C. common, algae, fungi

D. rare, algae, fungi

Answer: c

Watch Video Solution

40. It is observed that simple organisms like algae and fungi normally reproduce asexually but before the onset of adverse conditions they shift to sexual reprodction, It is so because sexual reproduction

A. sexual, asexual, sexual

B. asexual, sexual, asexual

C. asexual, sexual, sexual

D. sexual, asexul, asexual

Answer: c

Watch Video Solution

41. Sexual reproduction is considered more beneficial than asexual reproduction because

A. it is not affected by adverse environmental conditions

B. fertilisation is a chance factor

C. it rapidly multiplies the population

D. it assists in evolution by producing variations.

Answer: d

Watch Video Solution

42. The growth phase of an organism before attaining sexual maturity is referred to as

A. juvenile phase

B. vegetative phase

C. both (a) and (b)

D. none of these.

Answer: c

Watch Video Solution

43. Select the monocarpic plant out of the following .

A. Bamboo

B. Litchi

C. Mango

D. All of these

Answer: a

Watch Video Solution

44. Clear cut vegetative, reproductive and senescent phases cannot be observed in

A. annual plants

B. perennial plants

C. biennial plants

D. ephemeral plants.

Answer: b

Watch Video Solution

45. Strobilanthus kunthiana flowers once in

A. 5 years

B. 12 years

C. 20 years

D. 50 years.

Answer: b

Watch Video Solution

46. Strobilanthus kunthiana differs from bamboo in

A. being monocarpic

B. length of juvenile phase

C. being polycarpic

D. none of these.

Answer: b

Watch Video Solution

47. Oestrous cyle is reported in

A. cows and sheep

B. humans and monkeys

C. chimpanzees and gorillas

D. none of these.

Answer: a

Watch Video Solution

48. Which of the following animals show menstrual cycle ?

A. Gorillas and chimpanzees

B. Monkeys and humans

C. Orangutans and monkeys

D. All of these

Answer: d

Watch Video Solution

49. Read the following statements about the reproductive cycles in mammals and select the correct ones.

(i) Oestrous cycle occurs in primate mammals.

(ii) In species with oestrous cycle, females are generally sexually active during oestrous phase.

(iii)Both the cycles show monthly recurrence.

A. (i) and (ii)

B. (ii) and (iii)

C. (ii) only

D. (i), (ii) and (iii)

Answer: c

Watch Video Solution

50. Organisms reproducing throughout the year are called _____ breeders e.g., _____ , and those who show recurring sexual activity are called _____ breeders e.g., _____ .

A. continuous, sparrow, seasonal, hen

B. seasonal, lizard, continuous, hen

C. continuous, man, seasonal, tiger

D. seasonal, hen, continuous, tiger

Answer: c

Watch Video Solution

51. Senescent phase of an organism's life span can be recognised by

A. slow metabolism

B. cessation of reproduction

C. decreased immunity `

D. all of these

Answer: d

Watch Video Solution

52. The events in sexual reproduction are

(i) pre-fertilisation

(ii)fertilisation

(iii) post-fertilisation

The sequential order of their occurrence is

A. (ii)-(i)-(i)

B. (iii)-(ii)-(i)

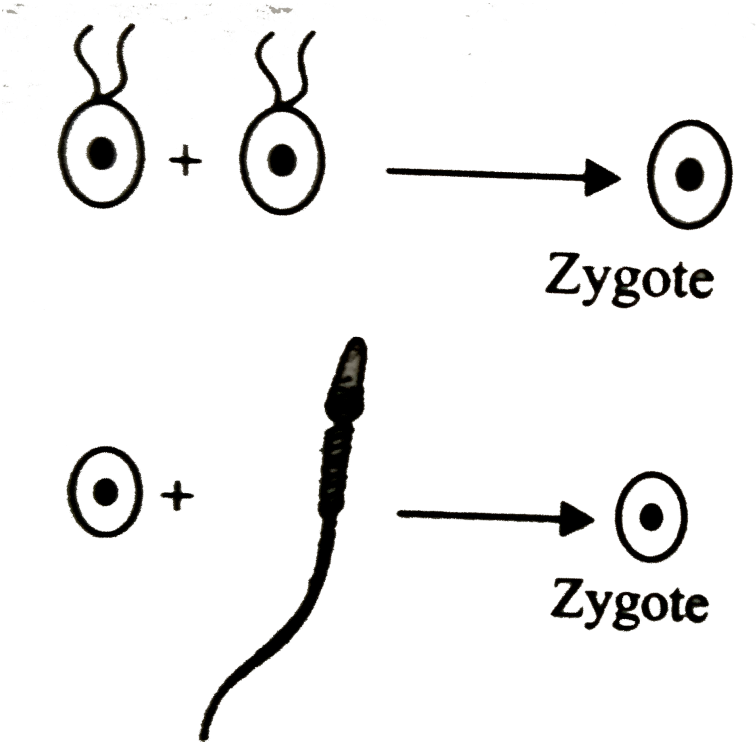
C. (i)-(ii)-(iii)

D. (i)-(iii)-(iv)

Answer: c

Watch Video Solution

53. Refer to the given diagrams showing different types of syngamy and select the option that gives correct example of each of these.



A. $\underset{\text{Fucus}}{i}$ $\underset{\text{Chlamydomonas}}{ii}$

B. $\underset{\text{Homo sapiens}}{i}$ $\underset{\text{Fucus}}{ii}$

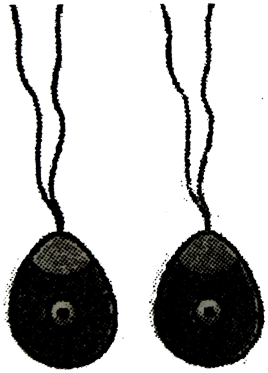
C. $\underset{\text{Fucus}}{i}$ $\underset{\text{Cladophora}}{ii}$

D. $\underset{\text{Cladophora}}{i}$ $\underset{\text{Homo sapiens}}{ii}$

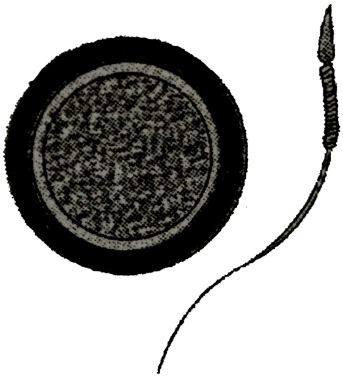
Answer: d

Watch Video Solution

54. Which of the following options is correct for the given figures ?



X



Y

A. $\underset{\text{Homogamy}}{X}$ $\underset{\text{Isogamy}}{Y}$

B. $\underset{\text{Anisogamy}}{X}$ $\underset{\text{Isogamy}}{Y}$

C. $\underset{\text{Heterogamy}}{X}$ $\underset{\text{Anisogamy}}{Y}$

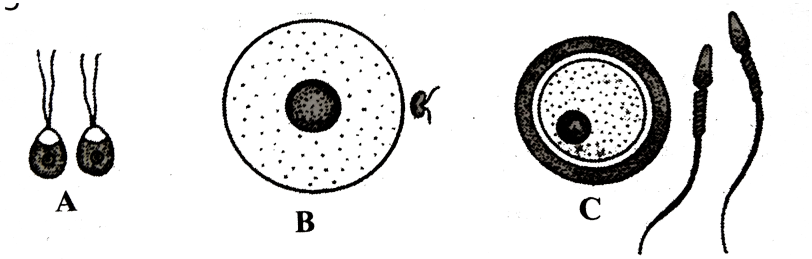
D.

X	Y
Isogamy	Oogamy

Answer: d

Watch Video Solution

55. Refer the following figures and identify the type of gametes (A, B and C) respectively.



A. Heterogametes, isogametes, homogametes

B. Isogametes, homogametes, heterogametes

C. Homogametes, isogametes, heterogametes

D. Homo/Isogametes, heterogametes, heterogametes

Answer: d

Watch Video Solution

56. If a fungal thallus has both male and female reproductive structures, it will be called

A. heterothallic

B. homothallic

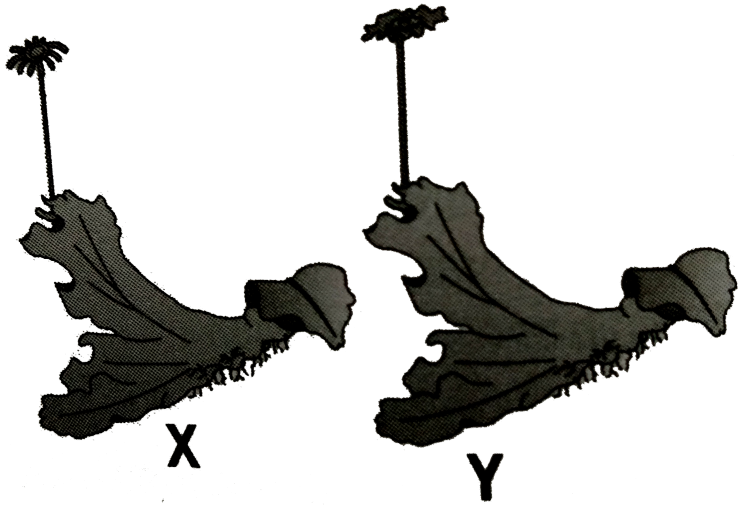
C. dioecious

D. monoecious.

Answer: b

Watch Video Solution

57. Refer to the given figures of Marchantia and identify X and Y.



A. Male Thallus " " Female Thallus

B. Female Thallus " " Male Thallus

C. Oogonium " " Antheridium

D. Antheridium " " Oogonium

Answer: b

Watch Video Solution

58. Staminate flower produce

A. eggs

B. antherozoids

C. fruits

D. all of these.

Answer: b

Watch Video Solution

59. Read the following statements and select the correct option.

Statement 1 : Unisexual flowers are either staminate flowers or pistillate flowers.

Statement 2: Both monoeious and dioeious plants have unisexual flowers.

A. Both statements 1 and 2 are correct.

B. Statement 1 is correct but statement 2 is incorrect.

C. Statement 1 is incorrect but statement 2 is correct.

D. Both statements 1 and 2 are incorrect.

Answer: b

Watch Video Solution

60. Which of the following is a unisexual organism ?

(a)

A.

(b) 

B.

C.

(d) 

D.

Answer: d

View Text Solution

61. Which of the following groups is formed only of the hermaphrodite organisms ?

A. Earthworm, tapeworm, housefly, frog

B. Earthworm, tapeworm, sea horse, housefly

C. Earthworm, leech, sponge, roundworm

D. Earthworm, tapeworm, leech, sponge

Answer: d

Watch Video Solution

62. Which of the following options shows bisexual animals only ?

A. Amoeba, sponge, leech

B. Sponge, cockroach, Amoeba

C. Earthworm, sponge, leech

D. Tapeworm, earthworm, honeybee

Answer: c

Watch Video Solution

63. Refer to the given figure and identify structure X in cockroach.

A. Testis

B. Ovary

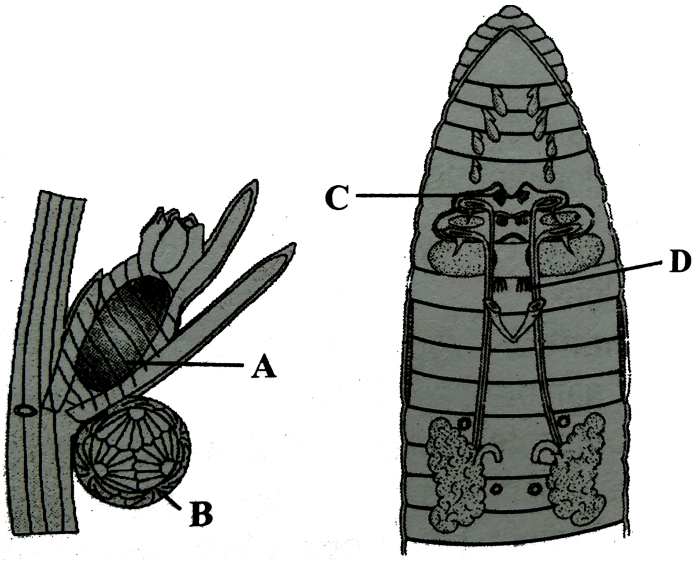
C. Sperms

D. Egg

Answer: b

Watch Video Solution

64. Figure P represents the reproductive organs of Chara plant and figure Q represents the reproductive organs of earthworm. Select the option which correctly identifies male reproductive organs of the two organisms.



A. A and D

B. B and C

C. A and C

D. B and D

Answer: b

Watch Video Solution

65. Read the following statements and select the incorrect one.

A. Cucurbits and coconuts are monoecious plants.

B. Papayas and date palms are dioecious plants.

C. Leeches and tapeworms are bisexual animals.

D. Sponges and coelenterates are unisexual animals.

Answer: d

Watch Video Solution

66. Meiosis does not occur in

A. asexually reproducing diploid individuals

B. sexually reproducing haploid individuals

C. sexually reproducing diploid individuals

D. all of these.

Answer: a

Watch Video Solution

67. A diploid parent plant body produces _____ gametes and a haploid parent plant body produces _____ gametes.

A. diploid, haploid

B. haploid, diploid

C. diploid, diploid

D. haploid, haploid

Answer: d

Watch Video Solution

68. Which of the following organisms has the higest number of chromosomes ?

A. Housefly

B. Butterfly

C. Ophioglossum

D. Onion

Answer: c

Watch Video Solution

69. In maize, a meiocyte has 20 chromosomes. What will be the number of chromosomes in its somatic cell ?

A. 40

B. 30

C. 20

D. 10

Answer: c

Watch Video Solution

70. If a butterfly has chromosome number 360 in its meiocyte (2n). What will be the chromosome number in its gametes ?

A. 380

B. 180

C. 95

D. 760

Answer: b

Watch Video Solution

71. Which of the following is an incorrect combination of organism with iots chromosome number in meiocyte and in ganete ?

A.

Name of organism	Chromosome number in meiocyte	Chromosome
Onion	24	

B.

Name of organism	Chromosome number in meiocyte	Chromosome
Ophioglossum	1260	

C.

Name of organism	Chromosome number in meiocyte	Chromosome
Human beings	46	

D.

Name of organism	Chromosome number in meiocyte	Chromosome
Fruit fly	8	

Answer: a

Watch Video Solution

72. In flowering plants, both male and female gametes are non-motile. The method to bring them together for fertillisation is

A. water

B. air

C. pollination

D. apomixis.

Answer: c

Watch Video Solution

73. Read the following statements and select the correct option.

Statement 1 : In pea plant, transfer of pollen grains to the stigma is easy.

Statement 2 : In cross pollinating plants, pollination does not take place.

A. Both statements 1 and 2 are correct.

B. Statement 1 is correct but statement 2 is incorrect.

C. Statement 1 is incorrect but statement 2 is correct.

D. Both statements 1 and 2 are incorrect.

Answer: b

Watch Video Solution

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

A. syngamy

B. embryogenesis

C. oogamy

D. parthenogenesis.

Answer: d

Watch Video Solution

75. Select the incorrect statement about external fertilisation.

A. Organisms showing external fertilisation produce a large number of male gametes only.

B. External fertilisation is very uncertain and requires synchony between release of male and female gametes.

C. It is replaced by internal fertilisation in higher organisms as it wastes energy and requires external medium like water.

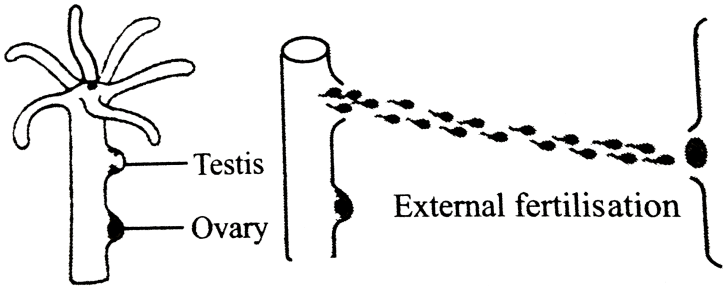
D. It occurs in most of the fishes and amphibians.

Answer: a

Watch Video Solution

76. Given figure of Hydra shows its reproductive structures and manner of fertilisation.

Observe and answer that why is it not showing self fertilisation ?



A. Distance between testis and ovary is more.

B. Sperms do not swim downwards.

C. Ovary matures earlier than testis.

D. Testis matures earlier than ovary.

Answer: d

Watch Video Solution

77. Which of the following statements is not correct regarding sexuality in organisms ?

A. When both male and female flowers are present on the same plant, the condition is said to be monoecious and is present in cucurbits and coconuts.

B. When both male and female flowers are present on the separate plants, the condition is said to be dioecious and is present in papaya and date palms.

C. In earthworm, both male and female sex organs are present in the same individual and therfore, self-fetillsation occurs in them.

D. Cockroach is a unisexual animal and exhibit sexual dimorphism.

Answer: c

Watch Video Solution

78. Which of the following statements is incorrect ?

A. Earthworms and leeches are hermaphrodite animals.

B. Young ones of animals showing external fertilisation receive little or no parental care.

C. If the egg is not fertilised, it is thrown out of the body along with the lining of the uterus as menstrual flow.

D. Sex organs in human beings are formed at puberty.

Answer: d

Watch Video Solution

79. Following table summarises the differences between self-fertilisation and cross-fertilisation. Pick out the wrong difference.

A.

Self-fertilisation	Cross-fertilisation
It is uniparental.	It is biparental.

B.

Self-fertilisation
It involves the fusion of male and female gametes of the same parent

C.

Self-fertilisation	Cross-fertilisation
Examples : Pheretima, Periplaneta	Examples : Taenia, Rana tigrin

D. None of the above.

Answer: c

Watch Video Solution

80. In organisms showing internal fertilisation, female gamete is non-motile. Lack of motility is advantageous because it

A. faciitates less expenditure of energy

B. assists in rapid division of female gamete

C. helps the cell to store extra nutrients for rapid embryo development

D. both (a) and (c).

Answer: d

Watch Video Solution

81. Fertilisation cannot occur in absence of surface water in

A. Fucus

B. Funaria

C. Marsilea

D. all of these.

Answer: d

Watch Video Solution

82. Spirogyra is a sexually reproducing alga in which vegetative thallus is haploid. In Spirogyra, meiosis

A. never occurs

B. occurs at time of gamete production

C. occurs after fertilisation

D. occurs during vegetative growth.

Answer: c

Watch Video Solution

83. Match the column I with column II.

Column I	Column II
External fertilisation	(i) Earthworm
Internal fertilisation	(ii) Cockroach
Bisexual	(iii) Frogs and Fishes
Unisexual	(iv) Birds and mammals

A. P-(iv), Q-(iii), R-(i), S-(ii)

B. P-(iv), Q-(iii), R-(ii), S-(i)

C. P-(iii), Q-(iv), R-(ii), S-(i)

D. P-(iii), Q-(iv), R-(i), S-(ii)

Answer: d

Watch Video Solution

84. Zygote of an organism developed after syngamy undergoes meiosis to form haploid spores, which divide mitotically and form the gametophyte. The organism must have ___ life cycle.

A. haplontic

B. diplontic

C. haplodiplontic

D. either (a) and (c)

Answer: a

Watch Video Solution

85. Statement 1 : Zygote is the vital link between two generations.

Statement 2 : Zygote is formed due to fusion of two haploid gametes.

A. Both statements 1 and 2 are correct.

B. Statement 1 is correct but statement 2 is incorrect.

C. Statement 1 is incorrect but statement 2 is correct.

D. Both statements 1 and 2 are incorrect.

Answer: a

Watch Video Solution

86. Life begin in all sexually reproducing organisms as a

A. single-celled zygote

B. double-celled zygote

C. haploid zygote

D. haploid gametes.

Answer: a

Watch Video Solution

87. Read the following statements about embryogenesis and select the incorrect option.

A. It is the process of development of embryo from zygote.

B. During this process, zygote undergoes cell division and cell differentiation.

C. Cell divisions decrease the number of cells in developin embryo.

D. Cell differentiation helps groups of cells to undergo certain modification to form specialised tissues and organs.

Answer: c

Watch Video Solution

88. Which of the following is not correct regarding sexual reproduction ?

A. It is usually biparental.

B. Gametes are always formed.

C. It is a slow process.

D. It involves only mitosis.

Answer: d

Watch Video Solution

89. Offsprings of oviparous animal are at greater risk of survival as compared to those of viviparous animals because

A. proper embryonic care and protection is absent

B. embryo does not develop completely

C. progenies are of smaller size

D. genetic variations do not occur.

Answer: a

Watch Video Solution

90. Which of the following statements is not correct regarding oviparous animals ?

A. Females lay fertillised/unfertilised eggs at a safe place.

B. Development of zygote takes place outside the female's body.

C. Examples of oviparous animals are all birds, most reptiles and egg-laying mammals.

D. None of these

Answer: d

Watch Video Solution

91. Deposition of calcareous shell around zygote occurs in

A. birds and reptiles

B. birds and mammals

C. mammals and reptiles

D. all of these.

Answer: a

Watch Video Solution

92. Read the following statements and select the correct option.

Statement 1 : Viviparous animals give better protection to their offspring.

Statement 2 : In viviparous animals, young ones, after attaining a certain stage of growth, are delivered out of the body of female organism.

A. Both statements 1 and 2 are correct.

B. Statement 1 is correct but statement 2 is incorrect.

C. Statement 1 is incorrect but statement 2 is correct.

D. Both statements 1 and 2 are incorrect.

Answer: a

Watch Video Solution

93. Select the option which shows viviparous animals only.

A. Lizard, Turtle

B. Platypus, Crocodile

C. Cow, Crocodile

D. Whale, Mouse

Answer: d

Watch Video Solution

94. Which of the following animals give birth to young ones ?

A. Omithorhynchus and Echidna

B. Macropus and Pteropus

C. Balaenoptera and Homo sapiens

D. Both (b) and (c)

Answer: d

Watch Video Solution

95. Viviparity is found in

A. sharks

B. lizards

C. frogs

D. birds

Answer: a

Watch Video Solution

96. In these animals, the female retain the eggs inside its body after fertillisation and allows the development of embryo inside the body

without providing extra nourishment ot the developing embryo as the placenta is absent. Such animlas are called as

A. oviparous animals

B. viviparous animals

C. ovoviviparous animals

D. none of these.

Answer: c

Watch Video Solution

97. In which of the following plants, sepals do not fall off after fertillstion and remain attached to the fruit ?

A. Brinjal

B. Cucumber

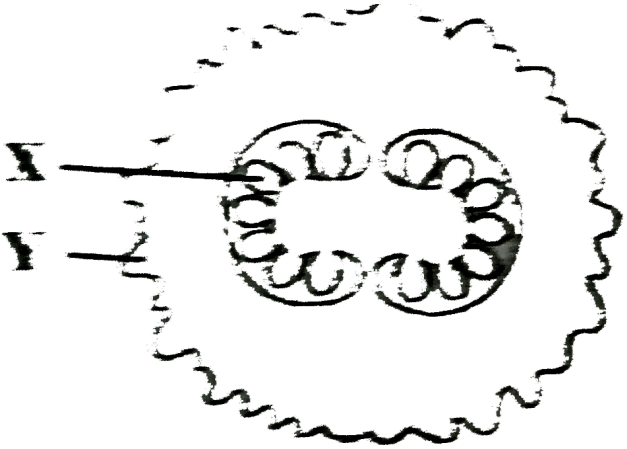
C. Papaya

D. Bitter gourd

Answer: a

Watch Video Solution

98. Which of the labelled parts in the transverse section of tomato fruit, is/are diploid ?



A. X

B. Y

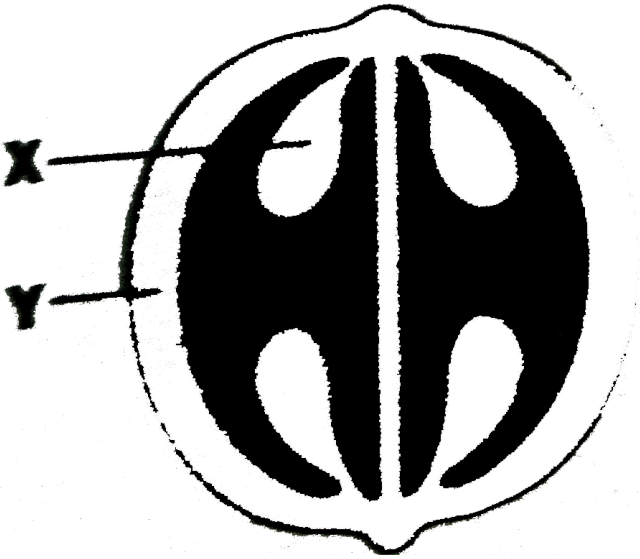
C. Both X and Y

D. None of these

Answer: c

Watch Video Solution

99. Refer to the transverse section of ovary of mustard plant identify X and Y in it.



A. $\underset{\text{Seed}}{X} \quad \underset{\text{Locule}}{Y}$

B. $\underset{\text{Pericarp}}{X} \quad \underset{\text{Seed}}{Y}$

C. $\begin{matrix} X & Y \\ \text{Seed} & \text{Pericarp} \end{matrix}$

D. $\begin{matrix} X & Y \\ \text{Placenta} & \text{Seed} \end{matrix}$

Answer: c

Watch Video Solution

100. The wall of the ovary forms

A. pericarp

B. fruit wall

C. fruit

D. both (a) and (b).

Answer: d

Watch Video Solution

101. Grafting is the union between two plants of closely related varieties. Following are some statements regarding different types of grafting.

(i) An oblique cut followed by a notch is given to both stock and scion.

(ii) Scion is a bud with a small piece of bark and cambium.

(iii) Both stock and scion are of same diameter.

(iv) Stock has many times more diameter than scion.

Identify the type of grafting with respect to these statements and select the correct option.

A. can be tongue grafting in which diameter of stock is larger than that of scion.

B. can be bud grafting in which stock of monocot and scion of dicot plant are usually united.

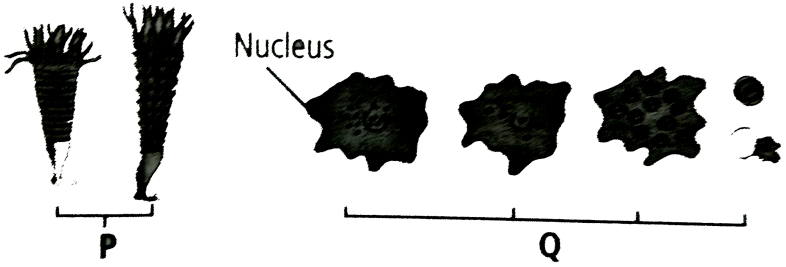
C. can be wedge grafting in which v-shaped notch is given to stock whereas wedge like cut is given to scion.

D. can be crown grafting in which many stocks are inserted in the slits made in the scions.

Answer: c

Watch Video Solution

102. Given figures illustrate.



A. P Metamerism by a cnidarian Q Multiple fission by a protist

B. P Strobilation by a cnidarian Q Multiple fission by a protist

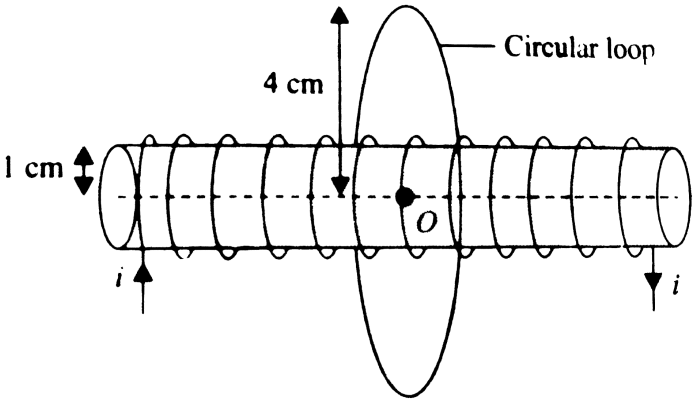
C. P Fragmentation by a platyhelminth Q Internal budding by a sponge

D. P Strobilation by a platyelminth Q Sporulation by a protis

Answer: b

Watch Video Solution

103. A long solenoid having n = 200 turns per metre has a circular cross-section of radius $a_1 = 1cm$. A circular conducting loop of radius $a_2 = 4cm$ and resistance $R = 5(\Omega)$ encircles the solenoid such that the centre of circular loop coincides with the midpoint of the axial line of the solenoid and they have the same axis as shown in Fig.



A current 't' in the solenoid results in magnetic field along its axis with magnitude $B = (\mu)ni$ at points well inside the solenoid on its axis. We can neglect the insignificant field outside the solenoid. This results in a magnetic flux $(\phi)_B$ through the circular loop. If the current in the winding of solenoid is changed, it will also change the magnetic field $B = (\mu)_0 ni$ and hence also the magnetic flux through the circular loop. Obvisouly, it will result in an induced emf or induced electric field in the

circular loop and an induced current will appear in the loop. Let current in the winding of solenoid be reduced at a rate of $75A/\sec.$

When the current in the solenoid becomes zero so that external magnetic field for the loop stops changing, current in the loop will follow a differenctial equation given by [You may use an approximation that field at all points in the area of loop is the same as at the centre

A. parthenogenesis, which is a form of apomixis

B. parthenogenesis, which is a form of amphimixis

C. adventive embryony, which is a form of apomixis

D. agamospermy, which is a form of amphimixis.

Answer: a

Watch Video Solution

104. Which of the following is wheat fruit?

A. Viviparity which is characteristic of reptiles.

B. Viviparity which is characteristic of amphibians.

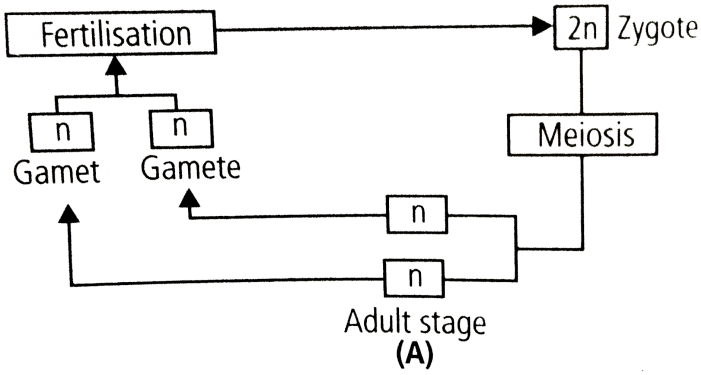
C. Oviparity which is characteristic of hen.

D. Ovoviviparity which is characteristic of some amphibians.

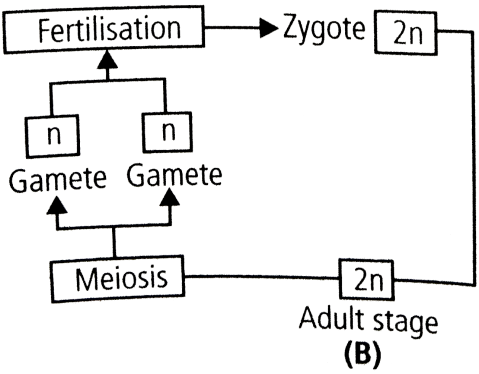
Answer: c

Watch Video Solution

105. In these figures, two life-cycles are described. Mark the correct option.



(A)



(B)

A. A represents primitive life forms and B represents more advnced life forms.

B. A represents terrestrial life forms and B represents aquatic life forms.

C. A rrepresents asexual reproduction and B represents sexual reproduction.

D. Both flow charts basically represent the same life-cycle.

Answer: a

Watch Video Solution

106. In the figure given below, two particles of masses m and 2m are fixed in place on an axis. Where on the axis can a third particle of mass 3m be placed (other than at infinity) so that the gravitational force on it from the first two particles is zero?

A. (i) and (ii)

B. (ii) and (iii)

C. (ii) and (iv)

D. (i) and (iii)

Answer: c

Watch Video Solution

107. The term "Linkage" was coined by

A. offspring do not possess exact copies of parental DNA

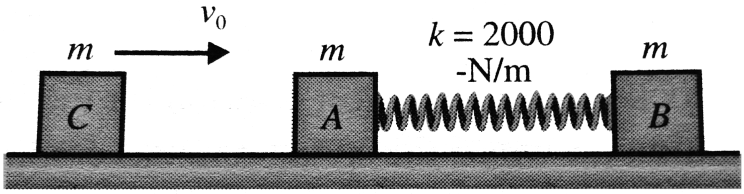
B. DNA of only one parent is copied and passed on to the offspring

C. offspring are formed at different times

D. DNA of parent and offspring are completely different.

Answer: a

Watch Video Solution



108.

Two identical blocks A and B, each of mass $m = 3kg$, are connected with

the help of an ideal spring and placed on a smooth horizontal surface as shown in Fig. Another identical blocks C moving velocity $v_0 = 0.6\frac{m}{s}$ collides with A and sticks to it, as a result, the motion of system takes place in some way

Based on this information answer the following questions:

Q. Oscillation energy of the system i.e., part of the energy which is oscillation (changing) between potention and kinetic forms is

A. (i) and (ii)

B. (ii) and (iii)

C. (i) and (iii)

D. (iii) and (iv)

Answer: c

Watch Video Solution

109. 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

Watch Video Solution

110. The rate of formation of new organic matter by rabbit in a grass land is called ,

A. haploid vegetative cells and diploid gametangia

B. diploid vegetative cells and diploid gemtangia

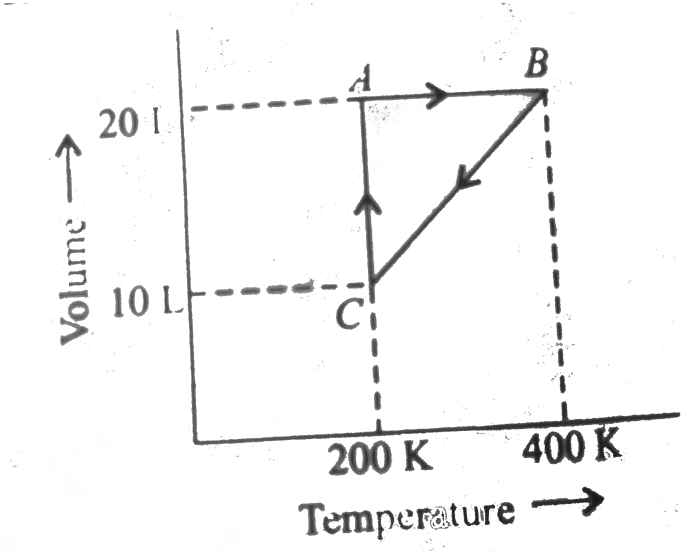
C. diploid vegetative cells and haploid gametangia

D. haploid vegetative cells and haploid gemetangia.

Answer: d

Watch Video Solution

111.



The pressures at A and B in the atmosphere are, respectively,

A. 12,24,12

B. 24,12,12

C. 12,24,24

D. 24,12,24

Answer: c

Watch Video Solution

112. Select the correct statements.

A. (iii) and (iv)

B. (i) and (iii)

C. (ii) and (iv)

D. (i) and (iv)

Answer: b

Watch Video Solution

113. Fill in blanks (w.r.t. experimental material used by Morgan)

(i) Females are easily distinguishable from the male by the _____ body size.

(ii) It has many type of hereditaly variations that can be seen with ____ power microscope.

(iii) Male individuals have hetromorphic_____ .

A. (i) and (ii)

B. (i) and (iii)

C. (ii) and (iv)

D. (iii) and (iv)

Answer: a

Watch Video Solution

114. If three uniform spheres, each having mass M and radius R, are kept in such a way that each touches the other two, the magnitude of the

gravitational force on any sphere due to the other two is:

A. (ii) and (iv)

B. (iv) only

C. (iii) and (iv)

D. (i) and (iv)

Answer: b

Watch Video Solution

115. The value of escape speed from the surface of earth is

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

Watch Video Solution

116. 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), (ii) and (iii)

B. (i), (iii) and (iv)

C. (i), (ii) and (iv)

D. (ii), (iii) and (iv)

Answer: c

Watch Video Solution

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

A. sexual reproduction is a lengthy 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

Watch Video Solution

118. Pick out the correct statement from the following

A. Dioecious organisms are seen only in animals.

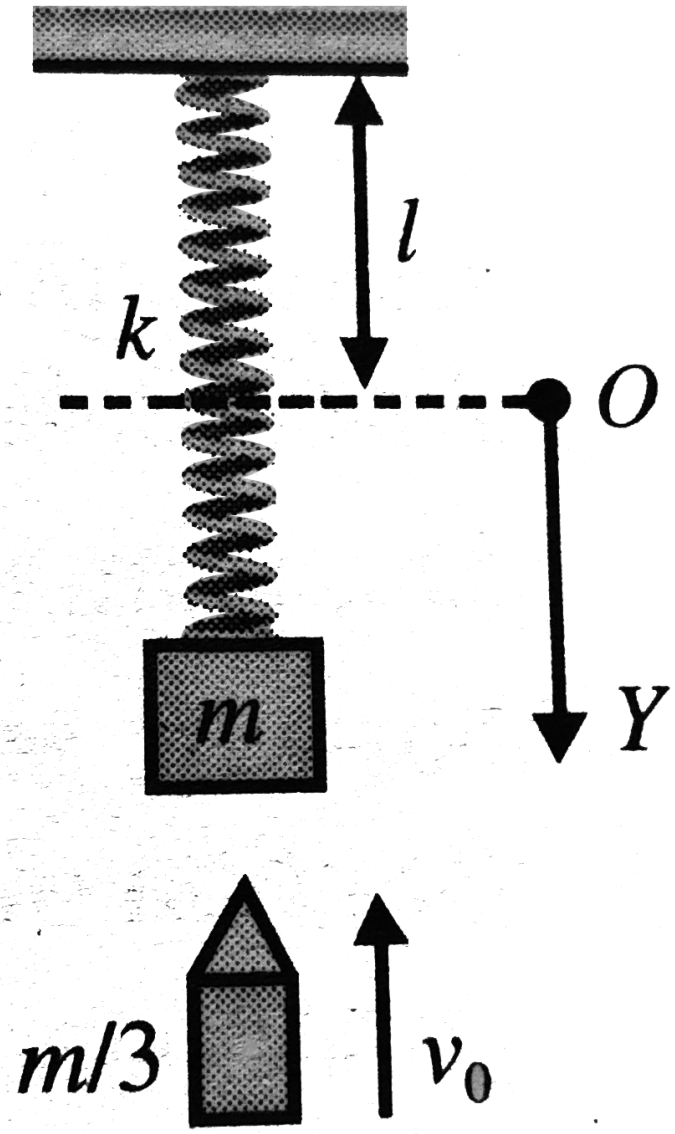
B. Dioecious organisms are seen only in plants.

C. Dioecious organisms are seen in both plants and animals.

D. Dioecious organisms are seen only in vertebrates.

Answer: c

Watch Video Solution



119.

A block of mass m is suspended from one end of a light spring as shown. The origin O is considered at distance equal to natural length of the spring from the ceiling and vertical downwards direction as positive y-

axis. When the system is in equilibrium a bullet of mass $\frac{m}{3}$ moving in vertical up wards direction with velocity v_0 strikes the block and embeds into it. As a result, the block (with bullet embedded into it) moves up and start oscillating. Based on the given information, answer the following question:

Q. The time taken by the block bullet system to move from $y = \frac{mg}{k}$ (initial equilibrium position) to $y = 0$ (natural length of spring) is (A represents the amplitude of motion)

A. they cannot reproduce sexually

B. they reproduce by binary fission

C. parental body is distributed among the offspring

D. they are microsocpic.

Answer: c

Watch Video Solution

120. Phenotype of an organism is the result of

A. the habitat and morphology of the organism

B. morphology of the organism

C. morphology and physiology of the organism

D. the organisms habitat, physiology and genetic makeup.

Answer: d

Watch Video Solution

121. Find out the incorrect statement w.r.t. frog-

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

B. Zoospores are sexual repoductive structures.

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

D. Conidia are asexual structures in Penicillium.

Answer: b

Watch Video Solution

122. Which of the following is wheat fruit?

A. Transfer of pollen grains

B. Embryo development

C. Formation of flower

D. Formation of pollen grains

Answer: b

Watch Video Solution

123. In the hexaploid wheat, the haploid (n) and basic (x) numbers of chromosomes are

A. 20

B. 10

C. 40

D. 15

Answer: A

Watch Video Solution

124. Explain why the following reasoning is wrong :

"The Sun attracts all bodies on the Earth. At mid-night, when the sun is directly below, it pulls on an object in the same direction as the pull of the Earth on that object, at noon, when the Sun is directly above, it pulls on an object in a direction opposite to the pull of the Earth, Hence all objects should be heavier at mid-night (or night) than they are at noon (or day)."

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: a

Watch Video Solution

125. Assertion (A): The electrolysis of $NaCl$ solution gives $H_2(g)$ at cathode and $Cl_2(g)$ at anode.

Reason (R): Cl_2 has higher oxidation potential than H_2O

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: b

Watch Video Solution

126. Assertion: The properties of paramagnetic and ferromagnetic substances are not affected by heating.

Reason: As tmeperature rises, the alignment of molecular magnets gradually decreases.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: d

Watch Video Solution

127. Assertion : Asparagus can be vegetatively propagated by the stem.

Reason : Aspargus has unbranched swollen, underground stem having circular nodes that have buds for growth of daughter plants.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: d

Watch Video Solution

128. Assertion : Water hyacinth is an invasive aquatic plant which speads all over the water in a short period of time.

Reason : Water hyacinth can reproduce vegetatively.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: a

Watch Video Solution

129. Assertion : Algae and fungi switch to asexual method of reproduction before the onset of adverse conditions.

Reason : Asexual reproduction may introduce variations and leads to the formation of many clones.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: d

Watch Video Solution

130. Assertion : In perennial plant species, it is difficult to define vegetative, reproductive and senescent phases.

Reason : Perennial plants have very short life span.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: c

Watch Video Solution

131. Assertion : Some female animals permit copulation only during oestrous cycle.

Reason : Oestrous cycle is observed in non-primate mammals.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: b

Watch Video Solution

132. Assertion : Isogametes are formed in majority of sexually reproducing organisms.

Reason : Morphologically distinct type of gametes are called isogametes.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: d

Watch Video Solution

133. Assertion : Cucurbita is a monoecious plant.

Reason : In Cucrbita, both male and femle flowers are present on the same plant.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: a

Watch Video Solution

134. Assertion : Parthenogenesis does not play any role in organic evolution.

Reason : In parthenogenesis females develop into new organisms without fertilisation.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: b

Watch Video Solution

135. Assertion $(A): Cu$ liberates $H_2(g)$ from a dilute solution of HCl.

Reason $(R):$ Hydrogen is below Cu in the electrochemical series.

(a)If both (A) and (R) are correct, and (R) is the correct explanation of (A).

(b)If both (A) and (R) are correct, but (R) is not the correct explanation of (A).

(c)If (A) is correct, but (R) is incorrect.

(d)If both (A) and (R) are incorrect.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: c

Watch Video Solution

136. Assertion (A) : Cu liberates $H_2(g)$ from a dilute solution of HCl.

Reason (R) : Hydrogen is below Cu in the electrochemical series.

(a)If both (A) and (R) are correct, and (R) is the correct explanation of (A).

(b)If both (A) and (R) are correct, but (R) is not the correct explanation of (A).

(c)If (A) is correct, but (R) is incorrect.

(d)If both (A) and (R) are incorrect.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: a

Watch Video Solution

137. Assertion : Embryogenesis is the development of embryo from the zygote.

Reason : Cell division increase the number of cells in the developing embryo.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: b

Watch Video Solution

138. Explain why the following reasoning is wrong :

"The Sun attracts all bodies on the Earth. At mid-night, when the sun is directly below, it pulls on an object in the same direction as the pull of the Earth on that object, at noon, when the Sun is directly above, it pulls on an object in a direction opposite to the pull of the Earth, Hence all objects should be heavier at mid-night (or night) than they are at noon (or day)."

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

Answer: c

Watch Video Solution