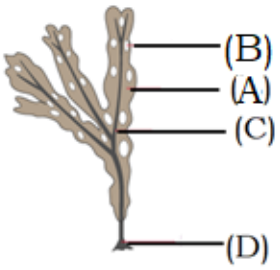
3 Plant Kingdom

1. Artificial classification system is based on – **(Pg29, E)**
   A) Mainly on vegetative character and on the androecium structure
   B) Ultrastructure, anatomical, embryological characters
   C) External and internal features
   D) Chromosome number.
2. George Bentham and Joseph Dalton Hooker gave **(Pg30, E)**
   A) Artificial classification system
   B) Phylogenetic classification
   C) Natural classification system
   D) A and B respectively
3. Choose incorrectly match option **(Pg30, E)**
   A) Numerical taxonomy – Number and code are assigned to all the character and the data are then processed
   B) Cytotaxonomy – Based on cytological information
   C) Chemotaxonomy – Based on phytochemistry
   D) Natural classification – Linnaeus
4. Phylogenetic classification – **(Pg30, E)**
   A) Based on evolutionary relationship
   B) This assume that organism belonging to some taxa haven't a common ancestor
   C) Gave equal weightage to vegetative & sexual character but not on evolutionary relationship
   D) A and B both

Paragraph – 3.1

Algae

5. Blue – green algae placed in which kingdom according to R.H. Whittaker **(Pg30, E)**
   A) Monera B) Protista
   C) Fungi D) Plantae
6. Choose the correct statement algae: **(Pg30, E)**
   A) Algae are chlorophyllous, autotrophic member of Plantae
   B) Some algae occur in association with fungi and on sloth bear
   C) The plant body of algae lack root, stem, leaf
   D) All of these
7. Colonial form alga is – **(Pg30, E)**
   A) *Ulothrix* B) *Volvox*
   C) Kelp D) *Spirogyra*
8. Zoospore is – **(Pg30, E)**
   A) Sexual spore in algae
   B) Asexual spore in algae
   C) Develop in zoosporangium in number of four
   D) Non flagellated spore
9. Fusion between one large static female gametes and smaller motile male gamete is termed as ___ as seen is ___ **(Pg30, E)**
   A) Isogamous, *Spirogyra*
   B) Oogamous, *Volvox*
   C) Anisogamous, *Fucus*
   D) Oogamous, *Ulothrix*
10. *Eudorina* show – **(Pg30, E)**
    A) Fusion of flagellate similar size gamete
    B) Fusion of non – flagellate similar size gamete
    C) Oogamous
    D) Anisogamous
11. How many of following is an example of isogamous *Ulothrix, Spirogyra, Volvox, fucus, Polysiphonia* **(Pg31, M)**
    A) 1 B) 2
    C) 3 D) 4
12. Identify organism and label A, B, C, D **(Pg31, M)**



    A) Laminaria A = leaf B = air bladder C = stripe D = holdfast
    B) *Fucus* A = frond B = air bladder C = stripe D = Hold fast
    C) *Fucus* A = air bladder B = frond, C = midrib D = holdfast
    D) *Laminaria* A = leaf C = midrib D = petiole
13. Algae are useful to man in – **(Pg32, M)**
    A) Fixation of almost half of total CO_2 on earth
    B) Primary producer
    C) Increase level of oxygen
    D) All of these
14. Hydrocolloids are produced by – **(Pg32, M)**
    A) Brown algae (algin), carrageen(red algae), Agar(brown algae)

B) Brown algae (algin), Red algae (carrageen)
C) Brown algae (algin, agar), Red algae (carrageen)
D) None of these

15. Choose correct statement – **(Pg32, E)**
A) *Chlorella*, a multicellular alga rich in protein
B) *Chlorella* & *Spirulina* are astronaut food because of their high carbohydrate, vitamin mineral but less protein
C) The product obtained by Gracilaria are used to grow microbes
D) *Laminaria, Sargassum* a member of Rhodophyceae are among 70 species of marine algae used as food

Paragraph – 3.1.1

Chlorophyceae

16. Chlorophyceae are commonly called as- **(Pg32, E)**
A) Green algae
B) Blue – green algae
C) Brown algae
D) Red algae

17. Major pigment of *Chlamydomonas* – **(Pg32, E)**
A) Chlorophyll a, b
B) Chlorophyll a, c
C) Chlorophyll a, d
D) Fucoxanthin, phycoerythrin

18. Choose incorrect statement about green alga- **(Pg32, E)**
A) The chlorophyll localised in definite chloroplast
B) Spirogyra have spiral chloroplast
C) Most member have one or more storage bodies i.e. pyrenoid localised in chloroplast
D) The cell wall is made of outer layer that is of cellulose and inner layer of pectose

19. Reproduction in green algae is/are – **(Pg32, E)**
A) Isogamous B) Anisogamous
C) Oogamous D) All of these

20. *Chara* is **(Pg32, E)**
A) Common stonewort
B) Marine green algae
C) Unisexual algae
D) None of these

21. Flagellation in green algae is – **(Pg32, E)**
A) 2 – 8, equal, apical
B) 2, unequal, lateral
C) 2 – 8, unequal, lateral
D) Absent

Paragraph – 3.1.2

Phaeophyceae

22. Phaeophyceae is commonly named as – **(Pg32, E)**
A) Green alga B) Brown alga
C) Red algae D) None

23. Choose the correct statement from following – **(Pg32, M)**
A) *Ectocarpus* is filamentous forms while kelps is profusely branched from
B) Kelps may reach a height of average 100cm
C) The plant body of brown algae is attached to substratum by stripe
D) Leaf – like photosynthetic organ of brown algae is stripe

24. Major pigment found in *Fucus* is/are **(Pg32, E)**
A) Chlorophyll a, c
B) Chlorophyll a, d
C) Chlorophyll a, b
D) Fucoxanthin and phycoerythrin

25. The color of brown algae depend upon **(Pg32, E)**
A) Amount of xanthophyll
B) Fucoxanthin present in them
C) Phycoerythrin and fucoxanthin ratio
D) A & B both

26. Choose the correct about cell of brown algae – **(Pg32, E)**
A) Cellulosic cell wall cover outside by align
B) Cellulosic cell wall with pectin and polysulphate esters
C) They have two flagella, equal sized and laterally inserted
D) A and C both

27. *Dictyota* is member of – **(Pg33, E)**
A) Same member of Ectocarpus, Gelidium, fucus
B) Same member those having Caminaria or mannitol as stored food
C) Same member of Laminaria, Porphyra, fucus
D) Same member those having phycoerythrin as accessory pigment

28. Gametes of *Sargassum* are- **(Pg 33, E)**
A) Pyriform B) Cup – shaped
C) Ribbon – shaped D) Discoid

Paragraph – 3.1.3

Rhodophyceae

29. Rhodopyceae is called red algae because of – **(Pg33, E)**
A) Predominance of red pigment
B) Abundance if d – phycoerythrin
C) A & B both
D) None of these

30. The stored food in *Polysiphonia* is ____A___ which is very similar to _____B_____ and _____C____ in structure **(Pg33, E)**
A) A = floridean starch B = amylopectin C = glycogen
B) A = floridean starch B = chitin C = glycogen
C) A = mannitol B = floridean starch C = amylopectin
D) None of these

31. Member of Rhodophyceae reproduce by– **(Pg33, E)**
A) Non – motile asexual spore and motile sexual gametes
B) motile asexual spore and motile sexual gametes
C) Non – motile asexual spore and non – motile sexual gametes
D) motile asexual spore and non – motile sexual gametes

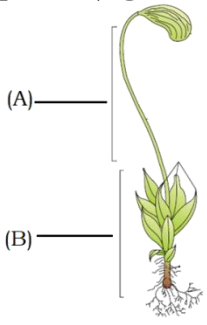
32. *Porphyra* show – **(Pg34, E)**
A) Isogamous B) Anisogamous
C) Oogamous D) All of these

Paragraph – 3.2

Bryophyta

33. Bryophyta include – **(Pg34, E)**
A) Hornwort B) Liverwort
C) Mosses D) All of these

34. Identify given plant diagram and label its parts: **(Pg34, E)**



A) *Funaria*, A = gametophyte B = sporophyte
B) *Sphagnum*, A = gametophyte B = sporophyte
C) *Funaria*, A = sporophyte B = gametophyte
D) *Sphagnum*, A = sporophyte B = gametophyte

35. Bryophytes are – **(Pg35, E)**
A) Amphibians of plant kingdom
B) Reptilians of plant kingdom
C) First vascular bundles containing plant
D) A & C both

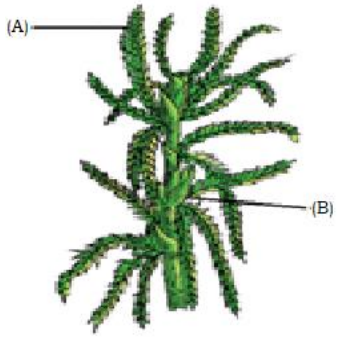
36. The body organization of bryophytes have – **(Pg35, E)**
A) Unicellular or multicellular rhizoid
B) Less differentiation than algae
C) They have true root stem and leaves
D) A & C both

37. The main plant body of bryophyte is ___A___ that produce ____B____ **(Pg35, E)**
A) A = diploid B = gametes
B) A = haploid B = gametes
C) A = haploid B = spores
D) A = diploid B = spores

38. Choose the correct statement
A) Sex organs in bryophytes are unicellular and jacketed
B) Male sex organ is antheridium that produce flagellate (four flagella) antherozoids
C) Female sex organ is archegonium i.e. flask – shaped and produce single egg
D) Water is required for travelling of egg from archegonium to antheridium

39. In bryophyta, meiosis occur – **(Pg35, E)**
A) During development of gametes
B) Immediately after zygote formation
C) After sometime of zygote formation
D) In gameophytic stage

40. Identify the given diagram and label **(Pg34, E)**



A) *Sphagnum*, a liverwort A = archegonia branch B = antheridial branch
B) *Sphagnum*, a moss A = archegonia branch B = antheridial branch
C) *Funaria*, a moss A = antheridial branch B = archegonia branch
D) *Sphagnum*, a liverwort A = antheridial branch B = archegonia branch

41. Choose the correct statement with regard to bryophyta **(Pg35, E)**

A) Sporophyte is free – living but attached to photosynthetic gametophyte derives nourishment from it
B) Sporophyte is not free – living but attached to photosynthetic gametophyte and derives nourishment from it
C) Gametophyte is not free – living but attached to photosynthetic sporophyte and derives nourishment from it
D) Gametophyte is free living but attached to photosynthetic sporophyte and derives nourishment from it

42. First organism to colonize rock are – **(Pg35, E)**
A) Mosses B) Lichen
C) Liverwort D) A & B both

43. For trans – shipment of living material which of following is more suitable to use **(Pg35, E)**
A) *Marchantia* B) *Funaria*
C) *Sphagnum* D) Riccia

44. Which of the following is obtained from *Sphagnum* as coal: **(Pg35, E)**
A) Bituminous B) Peat
C) Lignite D) Anthracite

Paragraph – 3.2.1

Liverwort

45. Choose the correct statement : **(Pg35, E)**
A) The thalloid plant body of liverwort is dorsiventrally appressed closely to substrate
B) The leafy members have tiny true leaf in two rows on the stem like structure
C) The leafy membrane have tiny leaf like appendage in four rows on the stem like structure
D) The thalloid plant body of liverwort is isobilaterally appressed closely to substrate

46. Asexual reproduction in bryophytes is not take place by – **(Pg35, E)**
A) Fragmentation
B) Gemmae
C) Budding in secondary protonema
D) Oogamous

47. Gemmae are – **(Pg35, E)**
A) Green, unicellular, asexual bud, develop in small receptacles i.e. gemma cup
B) Green, multicellular, asexual bud develop in small receptacles i.e. gemma cup
C) Non – green unicellular, asexual bud, develop in small receptacles i.e. gemma cup
D) Green, multicellular, sexual bud develop in small receptacles i.e. gemma cup n

48. In *Marchantia* **(Pg35, E)**
A) Male and Female sex organs are produced on same thalli
B) Male and female sex organs are produced on different thalli
C) Gametophytes is differentiated into foot seta and capsule
D) Spores geminates to form free – living sporophyte

Paragraph – 3.2.2

Mosses:

49. The predominant stage of life cycle of a moss is- **(Pg36, E)**
A) Gametophytes
B) Sporophytes
C) Protonema stage
D) Frothallus stage

50. The gametophyte of moss is divided into- **(Pg36, E)**
A) Two stage, first protonema stage which develops directly from gamete.
B) Two stage, second leafy stage which develop from secondary protonema as a lateral bud.
C) Two stage, first leafy stage and second protonema stage
D) Two stage, first protenema stage which develops directly from spore and second leafy stage which develop from spore germination as terminal bud.

51. Protonema stage is – **(Pg36, E)**
A) Creeping, green unbranched and frequently filamentous stage
B) Prostate, green, branched and frequently filamentous stage
C) Creeping, green, branched and frequently filamentous stage
D) Prostate, non – green, unbranched and frequently stage

52. Choose the correct statement about leafy stage of mosses **(Pg36, E)**
A) They consist, upright, slender axes bearing spirally arranged leaves.
B) They are attached to soil through multicellular and branched rhizoid
C) This stage bear sex organ
D) All of these

53. In sexual reproduction which of following is not seen in mosses **(Pg36, E)**
A) Sex organ are produced at apex of leafy stage
B) After fertilization zygote develop into sporophyte
C) Development of embryo
D) All of these

54. The sporophyte of mosses – **(Pg36, E)**
I) Is more elaborate than that is liverwort
II) Consisting of foot, seta and capsule
III) Spores present in capsule
IV) Spore produce after meiosis
V) Elaborate mechanism of spore dispersal
VI) Presence of peristomic teeth.
A) All are correct
B) I), II), III) only
C) IV), V), VI) only
D) I), III), V) only

55. Choose incorrect matched **(Pg36, M)**

	Column – A		**Column – B**
A)	Hornwort	i)	*Marchantia*
B)	Bryopsida	ii)	*Polytrichum*
C)	Liverwort	iii)	*Marchantia*
D)	Mosses	iv)	*Sphagnum*

Paragraph – 3.3

Pteridophytes

56. Pteridophytes includes – **(Pg36, E)**
A) Horsetail B) Ferns
C) Polytrichum D) A & B both

57. First terrestrial vascular plant is – **(Pg36, E)**
A) Algae
B) Bryophyta (liverwort & hornwort)
C) Pteridophyta
D) Bryophyta (Mosses)

58. Choose the correct statement from following **(Pg36, E)**
A) The plant body is differentiated into true root, only true prostrate stem as in Selaginella and true leaf
B) The leaves of pteridophytes are small as in Selaginella or macrophyll in ferns.
C) Pteridophytes possess xylem, phloem
D) All of these

59. In pteridophyta – **(Pg36, E)**
A) The main plant body is a sporophyte
B) The main plant body is a gametophyte
C) The main plant body is a gametophyte on which sporophytic phase is partially dependent
D) A & C

60. Choose the correct with regard to reproduction in pteridophyte **(Pg36, E)**
A) Sporophyte bear sporangia that are subtended by sporophyll
B) Gametophyte bear sporangia that are subtended by sporophyll
C) Sporophyll compact to form strobili as in fern
D) The sporangia produce spores by mitosis in spore mother cell

61. Gametophyte of pteridophyte is – **(Pg36, E)**
A) Small but multicellular, free living, mostly photosynthetic, differentiated into root, stemand leaf
B) Small inconspicuous but multicellular dependent mostly photosynthetic thalloid body
C) Small but multicellular, free living mostly photosynthetic thalloid structure
D) Small inconspicuous but multicellular free – living mostly non – photosynthetic thalloid body

62. Water needed for fertilization in – **(Pg36, E)**
A) Eucalyptus B) Bryophytes
C) Pteridophyptes D) B & C both

63. Sex organ bear on – **(Pg36, E)**
A) Sporophytes
B) Gametophyte
C) On both gametophytes & sporophyte
D) None

64. Heterosporous pteridophytes is/are- **(Pg36, E)**
A) Selaginella B) Salvinia
C) Psilotum D) A & B both

65. Pteridophytes with all similar kind of spores is in **(Pg36, E)**
A) Terror of Kashmir
B) Psilotum
C) Selaginella
D) A & B both

66. Seed habit reported for first time is **(Pg36, E)**
A) Blue – green algae
B) Pteridophyte
C) Angiosperm
D) Bryophyta

67. Pteridophyte classification into – **(Pg36, E)**
A) 4 classes B) 4 orders
C) 4 families D) All of these

68. *Adiantum* is member with – **(Pg36, E)**
A) *Pteris* B) *Equisetum*
C) *Lycopodium* D) *Selaginella*

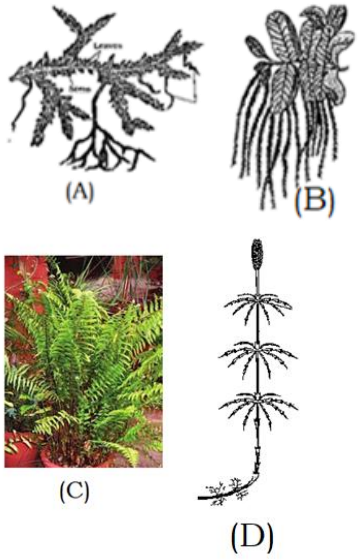
69. Match the following: **(Pg36, M)**

Column – I **Column – II**

i)	Sphenopsida	A)	*Dryopteris*
ii)	Lycopsida	B)	*Selaginella*
iii)	Psilopsida	C)	*Psilotum*
iv)	Pteropsida	D)	*Equisetum*

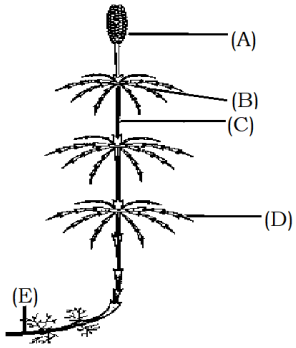
A) A – iv, B – ii, C – iii, D – i
B) A – iii, B – ii, C – iv, D – i
C) A – ii, B – iii, C – i, D – iv
D) A – i, B – iv, C – ii, D – iii

70. Identify following pteridophytes – **(Pg37, E)**



A) A = Salvinia, B = horsetail, C = fern, D = Selaginella
B) A = Selaginella, B = Salvinia, C = fern, D = horsetail
C) A = Equisteum, B = fern, C = Selaginella, D = horsetail
D) A = Selaginella, B = Salvia, C = Dryopteris, D = Equisteum

71. Label A, B, C, D, E in following diagram: **(Pg37, E)**



A) A = strobilus, B = rhizome,
B) A = cone, C = Node, D = internode
C) A = strobilus, B = rhizome, C = node, D = internode, E = branch
D) None of these

Paragraph - 3.4

Gymnosperm:

72. Gymnosperms are plants in which – **(Pg38, E)**

A) Ovules are enclosed by any ovary wall both before and after fertilization
B) Ovules are not enclosed by any ovary wall both before and after fertilization
C) Ovules are enclosed by any ovary wall before fertilization but not after fertilization
D) Ovules are not enclosed by any ovary wall before fertilization but after fertilization

73. Tallest tree species belongs to – **(Pg38, E)**

A) Angiosperm B) Gymnosperm
C) Pteridophyte D) Algae

74. Fungi show symbiotic association with gymnosperm in form of – **(Pg38, E)**

A) Mycorrhiza in *Pinus*
B) Mycorrhiza in *cycas*
C) Coralloid rest in *Pinus*
D) Coralloid rest in *cycas*

75. The stem of – **(Pg38, E)**

A) *Cycas* is unbranched
B) *Pinus* is branched
C) *Cedrus* is branched
D) All of these

76. Needle-like leaves, thick cuticle, sucken stomata are character of – **(Pg38, E)**

A) *Cycas* B) *Pinus*
C) *Gnetum* D) *Ginkgo*

77. Gymnosperms are – **(Pg38, E)**

A) Heterosporous, haploid microspores and haploid megaspore
B) Homosporous, both spores are haploid
C) Heterosporous, both spores(microspores & megaspores) are diploid
D) None of these

78. Choose the correct statement – **(Pg38, E)**

A) The male and female cones borne on same plant as in Cycas
B) The male and female cones borne on different plant as in Cycas
C) The male and female cones borne on same plant as in Pinus
D) Both A & C

79. Choose the correct about female cone of gymnosperm: **(Pg38, E)**

A) The nucleus is protected by bitegmic structure
B) The megaspore mother call divides mitotically to form four megaspores
C) One of four megaspores, enclosed within the megasporangium which develop into a multicellular female gametophyte that bear one archegonia
D) Ovule is unitegmic

80. Statement-I : The cones bearing megasporophyll with ovules are female cone
Statement-II : The strobili bearing microsporangia are called male cone **(Pg38, E)**
A) Both stated statement are correct
B) Both stated statement are incorrect
C) Statement-I is correct while statement-II is incorrect
D) Statement-I is incorrect while statement-II is correct

81. Identify given plant diagram and choose correct response **(Pg39, E)**

A) *Ginkgo*, a living fossil
B) *Cycas*, a living fossil
C) *Taxus*
D) *Gnetum*

82. What is difference between bryophytic and gymnospermous & gametophytes **(Pg39, M)**
A) Bryophytic gametophytes is independent free-living structure while gametophytes of gymnosperm is dependent
B) Gametophyte of gymnosperm remain within the sporangia retained on sporophytes
C) Both A & B
D) None of these

83. Choose the correct set about given figure: **(Pg39, E)**

i) Pinnate leaves
ii) Palmate leaf
iii) Branched stem
iv) Branching is same as in Cedrus
v) Unbranched
vi) Bear male cone and female cone on same plant
vii) Bear male cone & female cone on different plant
viii) It is living fossil along with Ginkgo
A) i, iii, vi, viii B) i, v, vii, viii
C) ii, v, vi D) i, iv, vii, viii

84. *Anthoceros* thallus and coralloid root of *Cycas* are **(Pg39, E)**
A) Similar in morphological structure
B) Performing N_2-fixing
C) Presence of vascular bundle
D) B & C

85. Gametophytes is parasitic over sporophytes is **(Pg39, E)**
A) Cycadales B) Coniferales
C) Monocot D) All of these

86. The endosperm of gymnosperm represent **(Pg39, E)**
A) Female gametophyte
B) Triploid structure
C) Diploid structure
D) A & C

87. Read the following statements and choose the incorrect response with respect to gymnospermous reproduction **(Pg39, E)**
A) Pollen grains are carried by air currents
B) Pollen tube carries the male gametes to archegonia
C) Following fertilization, zygote develop but embryo stage is lacking
D) Ovule develops into seed

88. All the given structure of *Pinus* and *Cycas* are haploid, except **(Pg39, E)**
A) Pollen grain B) Egg
C) Nucellus D) Endosperm

89. Gymnosperm is example of – **(Pg39, E)**
A) Vascular, embryophyte with ovule enclosed is ovary
B) Vascular, non-embryophyte
C) Non-vascular, non-embryophyte
D) Vascular, embryophyte

90. Vascular archegoniates with diplontic lifecycle are – **(Pg39, E)**
A) Bryophytes B) Gymnosperm
C) Pteridophytes D) B & C

Paragraph - 3.5

Angiosperm:

91. Tallest and smallest plant species belonging to angiosperm is – **(Pg40, E)**
A) Sequoia and Wolffia
B) Eucalyptus and Wolffia
C) Sequoia and duck-weed

D) None of these

92. Dicotyledons and monocotyledons are two _____ of angiosperm **(Pg40, E)**
A) Family B) Class
C) Order D) Division

93. How many of following is correct about dicotyledons and monocotyledons respectively **(Pg40, E)**
Seed with two cotyledons, trimerous, pentamerous, parallel veination
Seed with one cotyledons, tetramerous, reticulate veination
A) 4, 3 B) 3, 4
C) 2, 5 D) 5, 2

94. A group of plant flower with having three members in each whorl is placed is- **(Pg40, E)**
A) Monocot B) Dicot
C) Tetramerous D) Both B & C

95. Choose the correct statement **(Pg40, M)**
A) Embryo sac develop from one functional megaspore(diploid) which result from mitosis and degeneration of megaspore mother cell
B) Embryo sac of consist of one egg apparatus, three antipodal cell and two polar nuclei
C) Polar nuclei, antipodal cells, egg are diploid structure of embryo sac of angiosperm
D) Secondary nuclei is haploid

96. Secondary nuclei result from fusion is **(Pg40, E)**
A) Polar nuclei and 1st male gamete
B) Polar nuclei and 2nd male gamete
C) Both nuclei of polar nuclei
D) Egg apparatus and polar nuclei

97. Choose the correct sequence **(Pg40, M)**
A) Gamete formation → pollination → fertilization → embryo → new plant
B) Gamete formation → transfer of gamete → fertilization → pollination → embryo → new plant
C) Pollination → gametogenesis → fertilization → embryo → new plant
D) None of these

98. Microspore of angiosperm represent- **(Pg40, E)**
A) Sporophytic phase
B) Gametophytic phase
C) Both A & B
D) Female gamete

99. Pollen tube in angiosperm discharge- **(Pg40, E)**
A) One male gamete is embryo sac
B) Two male gamete is embryo sac
C) Three male gamete is embryo sac
D) More than one option is correct

100. Syngamy is- **(Pg41, E)**
A) Fusion of egg and 1st male gamete
B) Fusion of egg and 2nd male gamete
C) Fusion of polar nuclei & 1st male gamete
D) Both B & C

101. Zygote is result of- **Pg 41, E)**
A) Syngamy
B) Double fertilization
C) Triple fusion
D) Both A & C

102. Fusion of 2nd male gamete with diploid secondary nucleus result in formation of- **(Pg41, E)**
A) PEN B) Embryo
C) Both A & B D) Sporophyte

103. Double fertilization is- **(Pg 41, E)**
A) Fusion of two nuclei of polar nuclei
B) Fusion of male gamete with egg
C) Fusion of male gamete with secondary nuclei
D) Both B & C

104. PEN provide- **(Pg 41, E)**
A) Protection of embryo
B) Nourishment to embryo
C) Anchorage to embryo
D) None of these

105. Which of following structure degenerate after fertilization- **(Pg 41, E)**
A) Synergid B) Antipodal cell
C) A & B D) Embryo

106. Angiosperm differ with gymnosperm- **(Pg 41, E)**
A) In presence of true root, stem & leaf
B) Seed enclosed in fruit
C) Ovary enclosed in ovule
D) Both B & C

107. Ovule develop into _____ and ovaries develop into _____ of angiosperm **(Pg 41, E)**
A) Seed, fruit B) Fruit, seed
C) Fruit, fruit D) Seed, seed

108. Pistil is- **Pg 41, E)**
A) Female sex organ of flower
B) Male sex organ of flower
C) Non-reproductive organ of flower
D) Divided into two part that are anther and filament.

Paragraph - 3.5

Angiosperm:

109. Kelp, Polysiphonia, *Ectocarpus,* Fucus, Wolffian, Volvox

How many of following are show haplontic, haplodiplontic and diplontic life cycle respectively **(Pg42, E)**

A) 1, 3, 2 B) 3, 1, 2
C) 1, 2, 3 D) 2, 3, 1

110. Mitosis is observed in- **(Pg42, E)**
A) Haploid plant cell
B) Diploid plant cell
C) Both A & B
D) Only vegetative cell

111. Choose correct statement about haplontic life cycle- **(Pg42, E)**
i) Sporophytic generation is represented by single cell zygote
ii) Free-living sporophyte
iii) Sporophyte is parasite on gametophyte
iv) Gametophyte arise from gametes after mitotical division
v) Example are Spirogyra and some species of Chlamydomonas
vi) Gametophyte arise from meiosis occur in spore-

A) i, ii, v, vi B) i, iii, v, vi
C) iii, iv, v D) i, iii, iv

112. *Eucalyptus* show- **(Pg42, E)**
A) Diploid dominant sporophyte that is photosynthetic and independent phase
B) Gametophyte is represent by few diploid cell
C) Dominant phase is gametophyte
D) All of these

113. Gymnosperms are- **(Pg42, E)**
A) Haplontic B) Diplontic
C) Haplo-diplontic D) Diplo-haplontic

114. Bryophytes and Pteridophyte exhibit- **(Pg42, E)**
A) Multicellualr sporophyte
B) Multicellular gametophyte
C) Unicellular sporophyte
D) A & B both

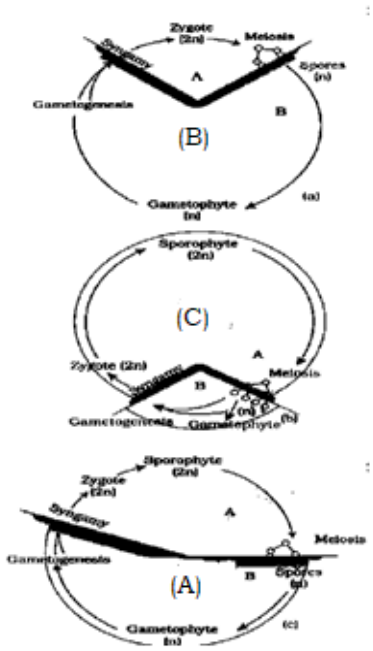
115. Bryophytes and pteridophytes differ in their – **(Pg42, E)**
A) Stage of meiosis
B) Dominant phases
C) Stage of syngamy
D) Stage of gametogenesis

116. In bryophytes – **(Pg42, E)**
A) Sporophyte totally or partially dependent on the gametophyte for its anchorage and nutrition
B) Gametophyte totally or partially dependent on the sporophyte for its anchorage and nutrition
C) A dominant, independent, photosynthetic, thalloid haploid Sporophyte alternate with gametophyte
D) A & C both

117. Choose the correct response with respect to pteridophyte lifecycle **(Pg42, E)**
A) Diploid gametophyte alternate with sporophyte
B) Sporophyte and gametophyte are independent
C) Sporophyte show saprophytic
D) Meiosis occur in gametophyte

118. The sporophyll of gymnosperms arranged ____ on axis to from cones **(Pg42, E)**
A) Spirally B) Alternately
C) Decussate D) Superposed

119. Identify life cycle pattern **(Pg42, E)**



A) A = haplontic, B =haplo – diplontic, C = diplontic
B) A = haplontic, B = diplontic, C = haplo – diplontic
C) A = haplo – diplontic, B =haplontic, C = diplontic
D) A = as in *Volvox* and angiosperm, B = as in *Ectocarpus*, C = as in gymnosperm

120. Bryophyte attached to substratum by – **(Pg42, E)**
A) Holdfast B) Rhizoid
C) Root D) A & C

121. Brown algae focus attached to substratum by – **(Pg42, E)**
A) Holdfast B) Stipe
C) Frond D) Rhizoid

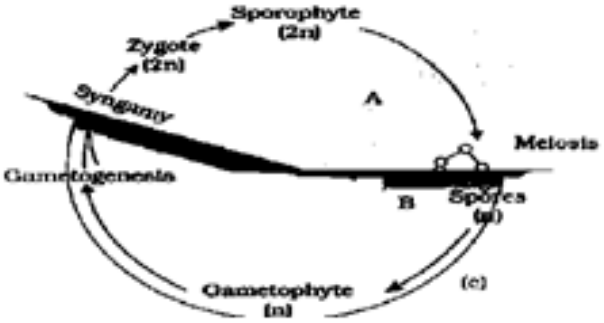
122. The plant body of liverwort is ___A__ whereas mosses have ____B___ bearing ____C___ arranged leaves **(Pg42, E)**

A) A = dorsiventral, B = upright, slender axes, C = alternally
B) A = isobilateral, B = upright, slender axes, C = spirally
C) A = dorsiventral, B = isobilateral axes, C = alternately
D) A = dorsiventral, B = upright, slender axes, C = spirally

123. Embryophytes doesn't includes
A) Algae, Bryophytes **(Pg42, E)**
B) Bryophyte, Pteridophytes
C) Gymnosperm, angiosperm
D) Algae only

124. Double fertilization does not occur in – **(Pg42, E)**
A) Pteridophyte, some gymnosperm,
B) Monocot, dicot
C) Dicot, some gymnosperm
D) Bryophytes, pteridophyte, some gymnosperm & monocot

125. Identify following life cycle pattern and that pattern shown in **(Pg42, E)**



A) Haplontic life cycle eg: Volvox
B) Haplodiplontic lifecycle eg: Ectocarpus, Psilotum
C) Haplodiplontic lifecycle eg: Fucus, Marchantia
D) Diplontic lifecycle eg: Bryophytes, Pteridophytes

Answer key

PLANT KINGDOM

Q	01	02	03	04	05	06	07	08	09	10
Ans	A	C	D	D	A	D	B	B	B	D
Q	11	12	13	14	15	16	17	18	19	20
Ans	B	B	D	B	D	A	A	D	D	A
Q	21	22	23	24	25	26	27	28	29	30
Ans	A	B	A	A	D	D	B	A	A	A
Q	31	32	33	34	35	36	37	38	39	
Ans	C	C	D	C	A	A	B	C	C	
Q	40	41	42	43	44	45	46	47	48	49
Ans	B	B	D	C	B	A	D	B	B	A
Q	50	51	52	53	54	55	56	57	58	59
Ans	B	C	D	C	A	A	D	C	D	A
Q	60	61	62	63	64	65	66	67	68	69
Ans	A	C	D	B	D	D	B	A	A	A
Q	70	71	72	73	74	75	76	77	78	79
Ans	B	D	B	B	A	D	B	A	B	D
Q	80	81	82	83	84	85	86	87	88	89
Ans	A	A	C	B	B	D	D	C	C	D
Q	90	91	92	93	94	95	96	97	98	99
Ans	B	B	B	A	A	B	C	A	B	B
Q	100	101	102	103	104	105	106	107	108	109
Ans	A	A	A	D	B	C	B	A	A	A
Q	110	111	112	113	114	115	116	117	118	119
Ans	C	B	A	B	D	B	A	B	A	C
Q	120	121	122	123	124	125				
Ans	B	A	D	A	A	B				