

Exercise - I (Conceptual Questions)

Build Up Your Understanding

MALE REPRODUCTIVE ORGAN

1. *Capsella* is angiosperm because it possess :-
 (1) Naked Seed
 (2) Pollen grain
 (3) Vascular tissue
 (4) Fruit/Covered seeds

BSR001

2. Which part of the reproductive structure produces both enzyme & hormone?
 (1) Archegonium (2) Middle layer
 (3) Tapetum (4) Endothecium

BSR002

3. Tapetum is :-
 (1) Parietal in origin and is the inner most layer of anther wall
 (2) Modified endothecium of anther wall
 (3) Outer most layer of sporogenous tissue modification
 (4) Parietal in origin and is the inner most layer of ovule wall

BSR004

4. Example of polyploid tissue present in an angiosperm plant is:-
 (1) Perisperm (2) Embryo
 (3) Tapetum (4) Placenta

BSR005

5. Pollen grain represents:-
 (1) Female gametophyte
 (2) Male gametophyte
 (3) Sporophyte
 (4) Anther

BSR006

6. Anther is generally composed of:-
 (1) One sporangium (2) Two sporangia
 (3) Three sporangia (4) Four sporangia

BSR007

7. How many cells or nuclei are present in mature male gametophyte of angiosperm?
 (1) One (2) Two
 (3) Three (4) Many

BSR008

8. How many and what type of male gametes are produced by the male gametophyte of angiosperm?
 (1) One, multi ciliated (2) Two, biciliated
 (3) Two, multi ciliated (4) Two, non-motile

BSR009

9. Sporopollenin is found in :-
 (1) Exine (2) Intine
 (3) Cytoplasm (4) Nucleus

BSR012

10. Microsporophyll of Angiosperms is known as:
 (1) Androecium (2) Anther
 (3) Filament (4) Stamen

BSR013

11. Main function of endothecium (in anther) is :
 (1) Mechanical (2) Nutritive
 (3) Dehiscence (4) Storage

BSR014

12. Male gametes in angiosperms are formed by the division of :-
 (1) Microspore mother cell
 (2) Microspore
 (3) Generative cell
 (4) Vegetative cell

BSR096

13. Which one of the following statements is correct?
 (1) Tapetum nourishes the developing pollen
 (2) Hard outer layer of pollen is called intine
 (3) Sporogenous tissue is haploid
 (4) Endothecium produces the micorspores

BSR125

- 14.** Which one of the following is surrounded by a callose wall ?
 (1) Pollen grain
 (2) Microspore mother cell
 (3) Male gamete
 (4) Egg
BSR097
- 15.** How many pollen sacs are present in a mature anther ?
 (1) 4 (2) 1 (3) 3 (4) 2
BSR023
- 16.** The special features of the endothecium of anther :-
 (1) Radially elongated cells
 (2) Thickening of α -cellulose
 (3) Hygroscopic
 (4) All of the above
BSR025
- 17.** The vegetative cell gives rise to:-
 (1) Male gametes (2) Tube nucleus
 (3) Pollen tube (4) Exine
BSR028
- 18.** 'Callase' enzyme which dissolve callose of tetrad of microspores to separate 4 microspores is provided by:-
 (1) Pollen grains (2) Middle layer
 (3) Tapetum (4) Endothecium
BSR029
- 19.** In Angiosperms all the four microspores of tetrad are covered by a layer which is made up of :-
 (1) Pectocellulose (2) Callose
 (3) Cellulose (4) Sporopollenin
BSR032
- 20.** Monothealous anther is found in which family:-
 (1) Malvaceae (2) Liliaceae
 (3) Brassicaceae (4) Asteraceae
BSR033
- 21.** The nutritive layer of microsporangia of *Capsella* is :-
 (1) Endothecium (2) Exothecium
 (3) Sporogenous tissue (4) Tapetum
BSR037
- 22.** Microspore mother cell produce microspores by :-
 (1) Meiosis and Mitosis
 (2) Mitosis
 (3) Meiosis
 (4) Mitosis and Amitosis
BSR039
- 23.** Pollen grains are able to withstand extremes of temperature and dessication because their exine is composed of :-
 (1) Cutin (2) Suberin
 (3) Sporopollenin (4) Callose
BSR041
- FEMALE REPRODUCTIVE ORGAN**
- 24.** Essential whorls of a flowers are :-
 (1) Calyx and Corolla
 (2) Corolla and Gynoecium
 (3) Androecium and Gynoecium
 (4) All of the above
BSR011
- 25.** Which one is female gametophyte?
 (1) Embryo (2) Embryo sac
 (3) Endosperm (4) Pistil
BSR016
- 26.** The functional megaspore in *Capsella* is always:-
 (1) Micropylar (2) Chalazal
 (3) All (4) Any
BSR017
- 27.** Filiform apparatus are found in:-
 (1) Antipodal cell (2) Egg cell
 (3) Secondary nucleus (4) Synergids
BSR019

- 28.** Megasporophyll is called:-
 (1) Stamen (2) Carpel
 (3) Ovary (4) Stigma

BSR022

- 29.** Which of the following types of embryo sac is mostly found in Angiosperm?
 (1) Bisporic polygonum type
 (2) Tetrasporic type
 (3) Monosporic - onagrad type
 (4) Monosporic - polygonum type

BSR026

- 30.** Endosperm is consumed by developing embryo in the seed of :-
 (1) Pea (2) Maize
 (3) Coconut (4) Castor

BSR099

- 31.** Floriculture is related with :-
 (1) Rearing of Bees
 (2) Embryo culture
 (3) Tissue culture
 (4) Cultivation of flower

BSR031

- 32.** Nucellus is :-
 (1) Haploid (2) Polyploid
 (3) Diploid (4) Triploid

BSR036

- 33.** That haploid cell which divides by mitosis to form embryo sac is :-
 (1) Megaspore mother cell
 (2) Microspore mother cell
 (3) Functional megaspore
 (4) Non functional megaspore

BSR038

- 34.** Embryo sac is represented by :-
 (1) Megagametophyte
 (2) Megasporophyll
 (3) Microgametes
 (4) Megaspore

BSR040

- 35.** Angiosperms have covered seeds due to presence of :-

- (1) Stamen (2) Ovary
 (3) Megasporophyll (4) Pollen sac

BSR042

- 36.** The gynoecium consists of many free pistils in flowers of :-

- (1) *Papaver* (2) *Michelia*
 (3) *Aloe* (4) *Tomato*

BSR115

- 37.** Which structure of the ovule is diploid:-

- (1) Nucellus (2) Integuments
 (3) Sec. nucleus (4) All of the above

BSR045

- 38.** In angiosperms, functional megaspore develops into :-

- (1) Pollen sac (2) Embryo sac
 (3) Ovule (4) Endosperm

BSR109

- 39.** Filiform apparatus is a characteristic feature of:

- (1) Suspensor (2) Egg
 (3) Synergid (4) Zygote

BSR110

POLLINATION

- 40.** Which type of growth movement is found in pollen tube?

- (1) Geotropic (2) Chemotropic
 (3) Hydrotropic (4) Chemotactic

BSR046

- 41.** When pollen grains of a flower are transferred to stigma of another flower of a different plant, the process is called:-

- (1) Geitonogamy
 (2) Xenogamy
 (3) Autogamy
 (4) Homogamy

BSR047

- 42.** Autogamy means:-
 (1) Transfer of pollen from anthers to stigma of the same flowers
 (2) Transfer of pollen from one flowers to another on the different plant
 (3) Occurrence of male and female sex organ in the same flowers
 (4) Germination of pollen
BSR048
- 43.** Maize is best example of :-
 (1) Anemophily (2) Ornithophily
 (3) Entomophily (4) Hydrophily
BSR049
- 44.** Which of the following promotes pollen germination and tube growth?
 (1) Starch (2) Boron
 (3) Calcium (4) Potassium
BSR050
- 45.** Example of Epihydrophily is :-
 (1) *Vallisneria* (2) *Zostera*
 (3) *Nelumbium* (4) *Hydrilla*
BSR053
- 46.** Pollination in *Yucca* plant takes place by :-
 (1) Honey bee (2) Butter fly
 (3) Pronuba moth (4) Bird
BSR054
- 47.** In Angiosperms pollen tube liberate their male gametes into the :-
 (1) Central cell (2) Antipodal cells
 (3) Egg cell (4) Synergid
BSR074
- 48.** When the pollens of one flower falls on the stigma of another flower of the same plant then genetically it is known as :-
 (1) Cleistogamy (2) Allogamy
 (3) Autogamy (4) Dichogamy
BSR077
- 49.** Entry of pollen tube through micropyle is called:-
 (1) Porogamy (2) Syngamy
 (3) Chalazogamy (4) Mesogamy
BSR079
- 50.** Select the odd statement regarding insect pollinated flowers?
 (1) Flowers are large, colourful, fragrant
 (2) Pollen grains are sticky
 (3) Most of entomophilous plants are ornamental
 (4) Most of insect pollination occurs by moth.
BSR082
- 51.** In which one of the following pollination is autogamous ?
 (1) Geitonogamy (2) Xenogamy
 (3) Chasmogamy (4) Cleistogamy
BSR112
- 52.** Even in absence of pollinating agents seed-setting is assured in :-
 (1) *Salvia* (2) Fig
 (3) *Commellina* (4) *Zostera*
BSR117
- 53.** Plants with ovaries having only one or a few ovules, are generally pollinated by :-
 (1) Birds (2) Wind
 (3) Bees (4) Butterflies
BSR118
- 54.** Advantage of cleistogamy is :-
 (1) Vivipary
 (2) Higher genetic variability
 (3) More vigorous offspring
 (4) No dependence on pollinators
BSR123
- FERTILIZATION**
- 55.** The main embryo is developed as a result of:-
 (1) Pollination
 (2) Triple fusion
 (3) Syngamy
 (4) Fusion of two polar nuclei of an embryo sac
BSR055

56. Double fertilization is unique character of :-
 (1) *Gnetum* (2) *Adiantum*
 (3) *Lilium* (4) *Sphagnum*

BSR058

57. The fusion product of secondary nucleus and male gamete is:-
 (1) Nucellus
 (2) Primary endosperm nucleus
 (3) Zygote
 (4) Secondary nucleus

BSR060

58. The number of nuclei taking part in double fertilization are:-
 (1) Two (2) Three
 (3) Four (4) Five

BSR065

59. Endosperm is formed during the double fertilization by :-
 (1) Two polar nuclei and one male gamete
 (2) One polar nuclei and one male gamete
 (3) Ovum and male gamete
 (4) Two polar nuclei and two male gametes

BSR072

60. Anthesis is a phenomenon which refers to:-
 (1) Formation of pollen
 (2) Development of anther
 (3) Opening of flower bud
 (4) Reception of pollen by stigma

BSR076

ENDOSPERM

61. Water of coconut is:-
 (1) Endosperm (2) Nucellus
 (3) Endocarp (4) Mesocarp

BSR062

62. What is the white part of green Coconut :-
 (1) Endosperm
 (2) Female gametophyte
 (3) Nucellus
 (4) Embryo

BSR078

63. Endosperm of angiosperm is :-
 (1) $2n$ (2) $3n$ (3) n (4) $4n$

BSR081

64. Free nuclear division in an angiosperm takes place during :-
 (1) Pollen formation
 (2) Endosperm formation
 (3) Embryo formation
 (4) Flower formation

BSR086

65. The coconut water and the edible part of coconut are equivalent to :-
 (1) Mesocarp (2) Embryo
 (3) Endosperm (4) Endocarp

BSR114

EMBRYO

66. Embryo of sunflower has :-
 (1) Two cotyledons (2) One cotyledon
 (3) Eight cotyledons (4) No cotyledon

BSR071

67. Single shield shaped cotyledon of grass is known as :-
 (1) Tigellum (2) Scutellum
 (3) Coleoptile (4) Coleorrhiza

BSR083

68. Epicotyl has a shoot apex and few leaf primordia enclosed in a hollow foliar structure known as :-
 (1) Coleoptile (2) Coleorrhiza
 (3) Scutellum (4) Tigellum

BSR084

69. Which of the following is not present in embryo of gram?
 (1) Radicle (2) Hypocotyl
 (3) Epicotyl (4) Coleoptile

BSR085

70. The function of suspensor is :-
 (1) To provide water
 (2) To provide oxygen
 (3) To push the embryo towards endosperm to provide more food
 (4) To suck food

BSR087

SEED, APOMIXIS AND POYEMBRYONY

71. Outer seed coat is known as :-

- (1) Aril (2) Testa
(3) Operculum (4) Caruncle

BSR044

72. Polyembryony was first discovered by:-

- (1) Rosenberg (2) Hofmeister
(3) Leeuwenhoek (4) Guha

BSR051

73. Tegmen of the seed develops from:-

- (1) Perisperm
(2) Funiculum
(3) Inner integument
(4) Outer integument

BSR052

74. The scutellum observed in a grain of wheat or maize is comparable to which part of the seed in other monocotyledons ?

- (1) Plumule (2) Cotyledon
(3) Endosperm (4) Aleurone layer

BSR104

75. In albuminous seed, the food is stored in:-

- (1) Testa (2) Plumule
(3) Cotyledon (4) Endosperm

BSR066

76. In epigeal germination cotyledons come up above the soil due to growth of :-

- (1) Radicle (2) Plumule
(3) Epicotyl (4) Hypocotyl

BSR068

77. In which part of embryo maximum growth takes place in hypogeal germination :-

- (1) Plumule (2) Radicle
(3) Epicotyl (4) Hypocotyl

BSR069

78. In seeds, characterised by hypogeal germination, cotyledons generally do not become green because :-

- (1) They lack mitochondria
(2) They developed very early
(3) They contain inhibitor
(4) They remain below the soil

BSR070

79. Adventive embryony in *mango* is due to :-

- (1) Nucellus (2) Integuments
(3) Zygotic embryo (4) Fertilized egg

BSR073

80. The aleurone layer in maize grain is specially rich in :-

- (1) Protein (2) Starch
(3) Lipids (4) Auxins

BSR075

81. Nucellar polyembryony is reported in species of :

- (1) *Citrus* (2) *Gossypium*
(3) *Triticum* (4) *Brassica*

BSR111

82. Seed dormancy allows the plants to :-

- (1) Overcome unfavourable climatic condition
(2) Develop healthy plants
(3) Reduce viability
(4) Prevent deterioration of seeds

BSR089

83. Which are the external conditions required for seed germination?

- (1) Oxygen, carbon dioxide and suitable temperature
(2) Oxygen, light and suitable temperature, and CO₂
(3) Light, moisture and suitable temperature
(4) Oxygen, moisture and suitable temperature

BSR090

84. What is the function of germ pore?

- (1) Initiation of pollen tube
- (2) Release of male gametes
- (3) Emergence of radicle
- (4) Absorption of water for seed germination

BSR120

85. Perisperm differs from endosperm in:-

- (1) Its formation by fusion of secondary nucleus with several sperms
- (2) Being a haploid tissue
- (3) Having no reserve food
- (4) Being a diploid tissue

BSR121

86. Seed coat is **not** thin, membranous in :-

- (1) Gram
- (2) Maize
- (3) Coconut
- (4) Groundnut

BSR124

87. After fertilization the integument of ovule changes into :-

- (1) Seed coat
- (2) Tegmen
- (3) Fruit
- (4) Testa

BSR056

88. After fertilization the seed is developed from:

- (1) Ovule
- (2) Ovary
- (3) Nucellus
- (4) Endosperm

BSR057

89. After fertilization seed coat is formed by :-

- (1) Chalaza
- (2) Ovule
- (3) Integument
- (4) Embryo sac

BSR059

90. Tigellum represents :-

- (1) Testa
- (2) Tegmen
- (3) Both of the above
- (4) Main axis of the embryo

BSR064

91. Endosperm is completely consumed by developing embryo before the seed maturation of ex-albuminous/non-endospermic seeds, are found in:-

- (1) Pea, ground nut, beans
- (2) Coconut, castor
- (3) Maize, wheat, pea
- (4) Coconut, wheat

BSR088

EXERCISE-I (Conceptual Questions)

ANSWER KEY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	4	3	1	3	2	4	3	4	1	4	3	3	1	2	4
Question	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Answer	4	3	3	2	1	4	3	3	3	2	2	4	2	4	1
Question	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Answer	4	3	3	1	2	2	4	2	3	2	2	1	1	2	1
Question	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Answer	3	4	3	1	4	4	3	2	4	3	3	2	4	1	3
Question	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Answer	1	1	2	2	3	1	2	1	4	3	2	3	3	2	4
Question	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
Answer	4	3	4	1	1	1	1	4	1	4	3	1	1	3	4
Question	91														
Answer	1														

Exercise - II (Previous Year Questions)

AIPMT/NEET

AIPMT 2014

1. Geitonogamy involves :-
 (1) fertilization of a flower by the pollen from another flower of the same plant.
 (2) fertilization of a flower by the pollen from the same flower.
 (3) fertilization of a flower by the pollen from a flower of another plant in the same population.
 (4) fertilization of a flower by the pollen from a flower of another plant belonging to a distant population.

BSR126

2. Male gametophyte with least number of cell is present in :-

- (1) *Pteris* (2) *Funaria*
 (3) *Lilium* (4) *Pinus*

BSR127

3. Pollen tablets are available in the market for:-

- (1) In vitro fertilization
 (2) Breeding programmes
 (3) Supplementing food
 (4) Ex situ conservation

BSR128

4. Function of filiform apparatus is to :-

- (1) Recognize the suitable pollen at stigma
 (2) Stimulate division of generative cell
 (3) Produce nectar
 (4) Guide the entry of pollen tube

BSR129

5. Non-albuminous seed is produced in :-

- (1) Maize (2) Castor
 (3) Wheat (4) Pea

BSR130

AIPMT 2015

6. Transmission tissue is characteristic feature of :-

- (1) Solid style (2) Dry stigma
 (3) Wet stigma (4) Hollow style

BSR131

7. Which one of the following may require pollinators, but is genetically similar to autogamy?

- (1) Xenogamy (2) Apogamy
 (3) Cleistogamy (4) Geitonogamy

BSR132

8. Which one of the following statements is not true?

- (1) Pollen grains of some plants cause severe allergies and bronchial afflictions in some people
 (2) The flowers pollinated by flies and bats secrete foul odour to attract them
 (3) Honey is made by bees by digesting - pollen collected from flowers
 (4) Pollen grains are rich in nutrients, and they are used in the form of tablets and syrups

BSR133

9. The hilum is a scar on the :-

- (1) Fruit, where it was attached to pedicel
 (2) Fruit, where style was present
 (3) Seed, where micropyle was present
 (4) Seed, where funicle was attached

BSR134

10. Which of the following are the important floral rewards to the animal pollinators?

- (1) Nectar and pollen grains
 (2) Floral fragrance and calcium crystals
 (3) Protein pellicle and stigmatic exudates
 (4) Colour and large size flower

BSR135

RE-AIPMT 2015	NEET-I 2016
11. Male gametophyte in angiosperms produces:- (1) Three sperms (2) Two sperms and a vegetative cell (3) Single sperm and a vegetative cell (4) Single sperm and two vegetative cells BSR136	18. The coconut water from tender coconut represents:- (1) Endocarp (2) Fleshy mesocarp (3) Free nuclear proembryo (4) Free nuclear endosperm BSR143
12. Coconut water from a tender coconut is :- (1) Degenerated nucellus (2) Immature embryo (3) Free nuclear endosperm (4) Innermost layers of the seed coat BSR137	19. Proximal end of the filament of stamen is attached to the:- (1) Anther (2) Connective (3) Placenta (4) Thalamus or petal BSR144
13. Filiform apparatus is characteristic feature of: (1) Synergids (2) Generative cell (3) Nucellar embryo (4) Aleurone cell BSR138	20. Which one of the following statements is not true? (1) Tapetum helps in the dehiscence of anther (2) Exine of pollen grains is made up of sporopollenin (3) Pollen grains of many species cause severe allergies (4) Stored pollen in liquid nitrogen can be used in the crop breeding programmes BSR145
14. The wheat grain has an embryo with one large, shield-shaped cotyledon known as:- (1) Coleoptile (2) Epiblast (3) Coleorrhiza (4) Scutellum BSR139	21. Cotyledon of maize grain is called :- (1) plumule (2) coleorrhiza (3) coleoptile (4) scutellum BSR146
15. Which one of the following fruits is parthenocarpic? (1) Banana (2) Brinjal (3) Apple (4) Jackfruit BSR140	22. Seed formation without fertilization in flowering plants involves the process of :- (1) Sporulation (2) Budding (3) Somatic hybridization (4) Apomixis BSR147
16. In angiosperms, microsporogenesis and megasporogenesis :- (1) occur in ovule (2) occur in anther (3) form gametes without further divisions (4) involve meiosis BSR141	
17. Flowers are unisexual in :- (1) Onion (2) Pea (3) Cucumber (4) China rose BSR142	

23. Which of the following statements is **not** correct?

- (1) Pollen grains of many species can germinate on the stigma of a flower, but only one pollen tube of the same species grows into the style.
- (2) Insects that consume pollen or nectar without bringing about pollination are called pollen/nectar robbers.
- (3) Pollen germination and pollen tube growth are regulated by chemical components of pollen interacting with those of the pistil.
- (4) Some reptiles have also been reported as pollinators in some plant species.

BSR148

NEET-II 2016

24. Which one of the following generates new genetic combinations leading to variation ?

- (1) Sexual reproduction
- (2) Nucellar polyembryony
- (3) Vegetative reproduction
- (4) Parthenogenesis

BSR149

25. In majority of angiosperms: -

- (1) Reduction division occurs in the megaspore mother cells
- (2) A small central cell is present in the embryo sac
- (3) Egg has a filiform apparatus
- (4) There are numerous antipodal cells

BSR150

26. Pollination in water hyacinth and water lily is brought about by the agency of :-

- (1) Birds
- (2) Bats
- (3) Water
- (4) Insects or wind

BSR151

27. The ovule of an angiosperm is technically equivalent to :-

- (1) Megaspore mother cell
- (2) Megaspore
- (3) Megasporangium
- (4) Megasporophyll

BSR152

28. Match **column-I** with **column-II** and select the correct option using the codes given below :-

Column-I		Column-II	
(a)	Pistils fused together	(i)	Gametogenesis
(b)	Formation of gametes	(ii)	Pistillate
(c)	Hyphae of higher Ascomycetes	(iii)	Syncarpous
(d)	Unisexual female flower	(iv)	Dikaryotic

- | | a | b | c | d |
|-----|-----|-----|----|-----|
| (1) | i | ii | iv | iii |
| (2) | iii | i | iv | ii |
| (3) | iv | iii | i | ii |
| (4) | ii | i | iv | iii |

BSR153

NEET(UG) 2017

29. Functional megaspore in an angiosperm develops into ?

- (1) Endosperm
- (2) Embryo sac
- (3) Embryo
- (4) Ovule

BSR154

30. Attractants and rewards are required for :-

- (1) Entomophily
- (2) Hydrophily
- (3) Cleistogamy
- (4) Anemophily

BSR155

31. Plants which produce characteristic pneumatophores and show vivipary belong to:

- (1) Halophytes (2) Psammophytes
(3) Hydrophytes (4) Mesophytes

BSR156

32. Flowers which have single ovule in the ovary and are packed into inflorescence are usually pollinated by:-

- (1) Bee (2) Wind (3) Bat (4) Water

BSR157

33. A dioecious flowering plant prevents both :-

- (1) Autogamy and geitonogamy
(2) Geitonogamy and xenogamy
(3) Cleistogamy and xenogamy
(4) Autogamy and xenogamy

BSR158

34. Double fertilization is exhibited by :-

- (1) Algae (2) Fungi
(3) Angiosperms (4) Gymnosperms

BSR159

NEET(UG) 2018

35. Which of the following flowers only once in its life-time ?

- (1) Bamboo species (2) Jackfruit
(3) Mango (4) Papaya

BSR160

36. Pollen grains can be stored for several years in liquid nitrogen having a temperature of:-

- (1) -120°C (2) -80°C
(3) -196°C (4) -160°C

BSR161

37. Double fertilization is :-

- (1) Fusion of two male gametes of a pollen tube with two different eggs
(2) Fusion of one male gamete with two polar nuclei
(3) Fusion of two male gametes with one egg
(4) Syngamy and triple fusion

BSR162

38. Which one of the following plants shows a very close relationship with a species of moth, where none of the two can complete its life cycle without the other?

- (1) *Hydrilla* (2) *Yucca*
(3) Banana (4) *Viola*

BSR163

NEET(UG) 2019

39. In some plants, the female gamete develops into embryo without fertilization. This phenomenon is known as :-

- (1) Autogamy (2) Parthenocarpy
(3) Syngamy (4) Parthenogenesis

BSR164

40. Which one of the following statements regarding post-fertilization development in flowering plants is **incorrect** ?

- (1) Ovary develops into fruit
(2) Zygote develops into embryo
(3) Central cell develops into endosperm
(4) Ovules develop into embryo sac

BSR165

41. Persistent nucellus in the seed is known as :-

- (1) Chalaza (2) Perisperm
(3) Hilum (4) Tegmen

BSR166

42. What is the fate of the male gametes discharged in the synergid?

- (1) One fuses with the egg, other(s) degenerate(s) in the synergid.
(2) All fuse with the egg.
(3) One fuses with the egg, other(s) fuse(s) with synergid nucleus.
(4) One fuses with the egg and other fuses with central cell nuclei.

BSR167

NEET(UG) 2019 (Odisha)

43. Which is the most common type of embryo sac in angiosperms ?

- (1) Tetrasporic with one mitotic stage of divisions
- (2) Monosporic with three sequential mitotic divisions
- (3) Monosporic with two sequential mitotic divisions
- (4) Bisporic with two sequential mitotic divisions

BSR168

44. What type of pollination takes place in *Vallisneria*?

- (1) Pollination occurs in submerged condition by water
- (2) Flowers emerge above surface of water, and pollination occurs by insects.
- (3) Flowers emerge above water surface, and pollen is carried by wind.
- (4) Male flowers are carried by water currents to female flowers at surface of water

BSR169

45. In which one of the following, both autogamy and geitonogamy are prevented?

- (1) Wheat (2) Papaya
- (3) Castor (4) Maize

BSR170

NEET(UG) 2020

46. In water hyacinth and water lily, pollination takes place by :-

- (1) insects and water
- (2) insects or wind
- (3) water currents only
- (4) wind and water

BSR171

47. The body of the ovule is fused within the funicle at:-

- (1) Chalaza (2) Hilum
- (3) Micropyle (4) Nucellus

BSR172

48. The plant parts which consist of two generations one within the other :-

- (a) Pollen grains inside the anther
- (b) Germinated pollen grain with two male gametes
- (c) Seed inside the fruit
- (d) Embryo sac inside the ovule

- (1) (a) and (d) (2) (a) only
- (3) (a), (b) and (c) (4) (c) and (d)

BSR173

NEET(UG) 2020 (COVID-19)

49. Which of the following is **incorrect** for wind-pollinated plants ?

- (1) Well exposed stamens and stigma
- (2) Many ovules in each ovary
- (3) Flowers are small and not brightly coloured
- (4) Pollen grains are light and non-sticky

BSR174

50. Vegetative propagules in Agave is termed as:-

- (1) Rhizome (2) Bulbil
- (3) Offset (4) Eye

BSR175

51. Male and female gametophytes do not have an independent free living existence in :-

- (1) Pteridophytes
- (2) Algae
- (3) Angiosperms
- (4) Bryophytes

BSR176

NEET(UG) 2021

52. The term used for transfer of pollen grains from anthers of one plant to stigma of a different plant which, during pollination, brings genetically different types of pollen grains to stigma, is :-

- (1) Xenogamy (2) Geitonogamy
(3) Chasmogamy (4) Cleistogamy

BSR177

53. A typical angiosperm embryo sac at maturity is :-

- (1) 8-nucleate and 7-celled
(2) 7-nucleate and 8-celled
(3) 7-nucleate and 7-celled
(4) 8-nucleate and 8-celled

BSR178

54. In some members of which of the following pairs of families, pollen grains retain their viability for months after release ?

- (1) Poaceae ; Rosaceae
(2) Poaceae; Leguminosae
(3) Poaceae; Solanaceae
(4) Rosaceae ; Leguminosae

BSR179

NEET-(UG) 2022

55. Identify the incorrect statement related to Pollination:-

- (1) Pollination by wind is more common amongst abiotic pollination
(2) Flowers produce foul odours to attract flies and beetles to get pollinated
(3) Moths and butterflies are the most dominant pollinating agents among insects
(4) Pollination by water is quite rare in flowering plants

BSR180

56. Given below are two statements:-

Statement I : Cleistogamous flowers are invariably autogamous

Statement II :

Cleistogamy is disadvantageous as there is no chance for cross pollination.

In the light of the above statements, choose the correct answer from the options given below:

- (1) Both Statement I and Statement II are incorrect
(2) Statement I is correct but Statement II is incorrect
(3) Statement I is incorrect but Statement II is correct
(4) Both Statement I and Statement II are correct

BSR181

Re-NEET-(UG) 2022

57. The residual persistent part which forms the perisperm in the seeds of beet is :-

- (1) Calyx
(2) Endosperm
(3) Nucellus
(4) Integument

BSR182

58. Which of the following can be expected if scientists succeed in introducing apomictic gene into hybrid varieties of crops ?

- (1) Polyembryony will be seen and each seed will produce many plantlets
(2) Seeds of hybrid plants will show longer dormancy
(3) Farmers can keep on using the seeds produced by the hybrids to raise new crop year after year
(4) There will be segregation of the desired characters only in the progeny

BSR183

NEET-(UG) 2023

59. What is the function of tassels in the corn cob?

- (1) To trap pollen grains
- (2) To disperse pollen grains
- (3) To protect seeds
- (4) To attract insects

BSR275

60. Large, colourful, fragrant flowers with nectar are seen in:

- (1) bird pollinated plants
- (2) bat pollinated plants
- (3) wind pollinated plants
- (4) insect pollinated plants

BSR276

61. In angiosperm, the haploid, diploid and triploid structures of a fertilized embryo sac sequentially are:

- (1) Antipodals, synergids, and primary endosperm nucleus
- (2) Synergids, Zygote and Primary endosperm nucleus
- (3) Synergids, antipodals and Polar nuclei
- (4) Synergids, Primary endosperm nucleus and zygote

BSR277

NEET-(UG) 2023 (Manipur)

62. Transfer of pollen grains from anther to stigma of another flower of same plant is known as :

- (1) Geitonogamy
- (2) Xenogamy
- (3) Autogamy
- (4) Cleistogamy

BSR278

63. In angiosperms the correct sequence of events in formation of female gametophyte in the ovule is :

- (A) 3 successive free nuclear divisions functional megaspore.
- (B) Degeneration of 3 megaspores.
- (C) Meiotic division in megaspore mother cell.
- (D) Migration of 3 nuclei towards each pole.
- (E) Formation of wall resulting in seven celled embryo sac.

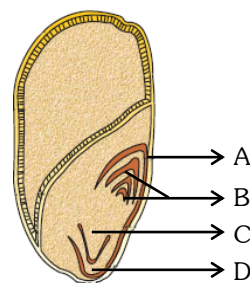
Choose the **correct** answer from the options given below :

- (1) (A), (B), (C), (D), (E)
- (2) (C), (E), (A), (D), (B)
- (3) (B), (C), (A), (D), (E)
- (4) (C), (B), (A), (D), (E)

BSR279

NEET-(UG) 2024

64. Identify the part of the seed from the given figure which is destined to form root when the seed germinates.



- (1) A
- (2) B
- (3) C
- (4) D

BSR280

65. Identify the set of correct statements :

- A. The flowers of *Vallisneria* are colourful and produce nectar.
- B. The flowers of waterlily are not pollinated by water.
- C. In most of water-pollinated species, the pollen grains are protected from wetting.
- D. Pollen grains of some hydrophytes are long and ribbon like.
- E. In some hydrophytes, the pollen grains are carried passively inside water.

Choose the correct answer from the options given below :

- (1) C, D and E only
- (2) A, B, C and D only
- (3) A, C, D and E only
- (4) B, C, D and E only

BSR281

66. Identify the correct description about the given figure :



- (1) Wind pollinated plant inflorescence showing flowers with well exposed stamens.
- (2) Water pollinated flowers showing stamens with mucilaginous covering.
- (3) Cleistogamous flowers showing autogamy
- (4) Compact inflorescence showing complete autogamy.

BSR282

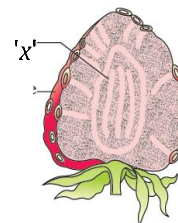
RE-NEET-(UG) 2024

67. Which part of the ovule stores reserve food materials ?

- (1) Nucellus
- (2) Integument
- (3) Placenta
- (4) Funicle

BSR283

68. The part marked as 'x' in the given figure is:



- (1) Endosperm
- (2) Thalamus
- (3) Endocarp
- (4) Mesocarp

BSR284

EXERCISE-II (Previous Year Questions)

ANSWER KEY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	1	3	3	4	4	1	4	3	4	1	2	3	1	4	1
Question	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Answer	4	3	4	4	1	4	4	1	1	1	4	3	2	2	1
Question	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Answer	1	2	1	3	1	3	4	2	4	4	2	4	2	4	2
Question	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Answer	2	2	1	2	2	3	1	1	4	3	4	3	3	1	4
Question	64	62	63	64	65	66	67	68							
Answer	2	1	4	3	4	1	1	2							

Exercise - III

Master Your Understanding

(A) NCERT BASED QUESTIONS

1. Each cell of sporogenous tissue is potential pollen or microspore mother cell; Division taking place in sporogenous cell is :-
 (1) Meiosis (2) Mitosis
 (3) Endomitosis (4) Amitosis

BSR185

2. In over 60% of angiosperms pollen grains are shed at :-
 (1) One celled stage
 (2) Three nuclei stage
 (3) Two celled stage
 (4) Three celled stage

BSR186

3. Pollen grains of many species cause severe allergies & bronchial afflictions in some people often leading to chronic respiratory disorder such as :-
 (1) Asthma (2) Bronchitis
 (3) Both (1) & (2) (4) Emphysema

BSR187

4. In a pollen grain the small cell is spindle shaped with dense cytoplasm is :-
 (1) Vegetative cell
 (2) Generative cell
 (3) Tube cell
 (4) All

BSR188

5. The innermost wall layer of anther is tapetum; the main function of tapetum is :-
 (1) Division (2) Support
 (3) Nutrition (4) Protection

BSR189

6. Two non motile male gametes in angiosperms are produced by :-
 (1) Generative cell
 (2) Microspore mother cell
 (3) Vegetative cell
 (4) Tube cell

BSR190

7. Which of the following haploid structure is present in male plant of papaya?
 (1) Antipodal cell
 (2) Microspore mother cell
 (3) Generative cell
 (4) Both (1) & (3)

BSR191

8. Pollen grain represents:-
 (1) Female gametophyte
 (2) Megasporangium
 (3) Male gametophyte
 (4) Sporophyte

BSR192

9. A typical angiosperm embryo sac at maturity is:
 (1) 7 celled - 8 nucleated
 (2) 9 celled - 7 nucleated
 (3) 3 celled - 3 nucleated
 (4) 2 celled - 2 nucleated

BSR193

10. Arising from placenta is megasporangium which is commonly known as :-
 (1) Ovule (2) Ovary
 (3) Ovarian cavity (4) Stamen

BSR194

11. Transfer of pollen grains from the anther to the stigma of another flower of same plant is called :-
 (1) Xenogamy (2) Autogamy
 (3) Geitonogamy (4) Allogamy
BSR195
12. The part of pistil which acts as landing platform for pollen grain is :-
 (1) Stigma (2) Style
 (3) Ovule (4) Ovary
BSR196
13. In angiosperms functional megaspore is generally situated at :-
 (1) Micropylar end (2) Chalazal end
 (3) Both (4) None
BSR197
14. Micropyle in seed helps in the entry of:-
 (1) Male gamete (2) Pollen tube
 (3) Water & air (4) All
BSR198
15. The type of cells undergoing meiosis in the flowers are:-
 (1) Microspore mother cells & megaspore mother cell
 (2) Epidermal cells
 (3) Tapetal cells
 (4) Placental cells
BSR199
16. Synergids help in:-
 (1) Pollen tube entry into embryo sac
 (2) Endosperm formation
 (3) Embryo sac nutrition
 (4) Both 1 & 3
BSR200
17. Chasmocleistogamous flowers are present in:-
 (1) *Viola* (common pansy)
 (2) *Oxalis*
 (3) *Commelina*
 (4) All of the above
BSR201
18. Although in most of species fruits are result of fertilisation, there are a few species in which fruit develops without fertilisation - process is known as:-
 (1) Parthenocarp (2) Parthenogenesis
 (3) Amphimixis (4) Apomixis
BSR202
19. One of the male gamete moves towards the egg cell & fuses with it, the process is known as:
 (1) Syngamy
 (2) Triple fusion
 (3) Double fertilization
 (4) Autogamy
BSR203
20. Nucellar polyembryony is reported in species of:-
 (1) *Citrus* (2) Mango
 (3) Both (1) & (2) (4) *Capsella*
BSR204
21. When embryo develops from a haploid cell of embryosa, other than egg cell, the process is known as:-
 (1) Apogamy
 (2) Apospory
 (3) Adventive embryony
 (4) Diplospory
BSR205
- (B) ANALYTICAL QUESTIONS**
22. Which of the following are crucial for the storage of seeds ?
 (1) Rehydration
 (2) Dehydration
 (3) Seed dormancy
 (4) Both (2) & (3)
BSR206

- 23.** Transfer of pollen grains from the anther to the stigma of another flower of the same plant is called :-
 (1) Autogamy (2) Xenogamy
 (3) Geitonogamy (4) Karyogamy
BSR107
- 24.** What is common between vegetative reproduction and Apomixis ?
 (1) Both produces progeny identical to the parent.
 (2) Both are applicable to only dicot plants.
 (3) Both bypass the flowering phase.
 (4) Both occur round the year.
BSR108
- 25.** What would be the number of chromosomes of the aleurone cells of a plant with 42 chromosomes in its *root tip* cells ?
 (1) 42 (2) 63 (3) 84 (4) 21
BSR113
- 26.** Non albuminous seeds are present in :-
 (1) *Pisum* (Pea)
 (2) *Arachis* (Ground nut)
 (3) Both
 (4) Maize
BSR210
- 27.** The coconut water from tender coconut that you are familiar with is :-
 (1) Nuclear endosperm
 (2) Cellular endosperm
 (3) Helobial endosperm
 (4) All of the above
BSR211
- 28.** Endosperm development precedes embryo development, the endosperm of angiospermic plant is :-
 (1) Triploid (2) Diploid
 (3) Haploid (4) Tetraploid
BSR212
- 29.** Which of the following structure is not present in embryo of gram?
 (1) Radicle (2) Hypocotyl
 (3) Epicotyl (4) Coleoptile
BSR213
- 30.** The portion of embryonal axis below the level of cotyledon is known as :-
 (1) Coleoptile (2) Hypocotyl
 (3) Epicotyl (4) Coleorrhiza
BSR214
- 31.** Double fertilization is essential for the formation of:-
 (1) Perisperm (2) Seed coat
 (3) Endosperm (4) Nucellus
BSR215
- 32.** Remnant of nucellus is known as :-
 (1) Scutellum (2) Pericarp
 (3) Tigellum (4) Perisperm
BSR216
- 33.** Perisperm is present in :-
 (1) Beet (2) Black pepper
 (3) Both (1) & (2) (4) All angiosperms
BSR217
- 34.** Which one of the following pairs of plant structures has haploid number of chromosomes?
 (1) Nucellus and antipodal cells
 (2) Egg nucleus and secondary nucleus
 (3) Megaspore mother cell and antipodal cells
 (4) Egg cell and antipodal cells
BSR102
- 35.** Seeds are produced without fertilization in some members of :-
 (1) Grasses and pulses (2) Asteraceae
 (3) Fabaceae (4) Orchidaceae
BSR219

- 36.** Parthenogenesis occurs when :-
 (1) Embryo is formed without the fusion of egg and sperm
 (2) Embryo is formed by the fusion of egg and sperm
 (3) Embryo is formed from nucellar cell
 (4) Sperm produces the embryo directly
BSR220
- 37.** In a type of apomixis which is known as adventive embryony, embryos develop directly from the :-
 (1) Nucellus or integuments
 (2) Synergids or antipodals of an embryo sac
 (3) Accessory embryo sacs in the ovule
 (4) Zygote
BSR221
- 38.** Development of male gametophyte is :-
 (1) In-vivo (2) In-situ
 (3) Both (4) In-vitro
BSR222
- 39.** Apomictic embryos in *Citrus* arise from :-
 (1) Diploid egg,
 (2) Synergids
 (3) Maternal sporophytic tissue in ovule
 (4) Antipodal cells
BSR105
- 40.** Just before fertilization the diploid structure in the ovule of *Capsella* is :-
 (1) Pollen tube
 (2) Nucellus/ Sec. nucleus
 (3) Synergids
 (4) Antipodals
BSR224
- 41.** Free nuclear division in an angiosperm takes place during:-
 (1) Pollen formation
 (2) Endosperm formation
 (3) Embryo formation
 (4) Flower formation
BSR225
- 42.** Wind pollinated flowers are :-
 (1) Small, producing nectar and dry pollen
 (2) Small, brightly coloured, producing large number of pollen grains
 (3) Small, producing large number of dry pollen grains
 (4) Large, producing abundant nectar and pollen
BSR106
- 43.** The anterior end of pollen tube burst by the process of _____ in embryo sac:-
 (1) Imbibition (2) Exosmosis
 (3) Enzymatic action (4) Endosmosis
BSR227
- 44.** In angiosperms Haploid, diploid and triploid conditions respectively can be traced in :-
 (1) Egg, Nucellus, Endosperm
 (2) Antipodal, Egg, Endosperm
 (3) Endosperm, Nucellus, Synergids
 (4) Antipodal, Synergids & Integuments
BSR228
- 45.** If the leaf of *Capsella* has 46 number of chromosomes then how many chromosomes number will be there in endosperm :-
 (1) 46 (2) 23 (3) 69 (4) 138
BSR229
- 46.** If the nucellus cell of an Angiosperm contains 24 chromosomes the number of chromosomes present in pollen grain, endosperm & embryo will be:-
 (1) 24, 36, 24 (2) 12, 36, 24
 (3) 12, 24, 36 (4) 24, 12, 12
BSR230

47. In Angiosperm, if haploid number of chromosome is 12 then what will be the no. of chromosomes in integuments and synergids:-

- (1) 12, 12 (2) 24, 12
(3) 24, 24 (4) 12, 24

BSR231

48. In Angiosperm, if number of chromosomes in endosperm is 30, what will be the no. of chromosomes in nucellus :-

- (1) 15 (2) 30 (3) 20 (4) 40

BSR232

49. How many meiotic divisions are necessary for the formation of 100 functional megaspores:-

- (1) 25 (2) 50 (3) 100 (4) 200

BSR233

50. The seeds of which type of plant have no dormancy:-

- (1) Xerophytes
(2) Mesophytes
(3) Halophytes and hydrophyte
(4) Mangroves

BSR234

51. Identify the correct set of statements with respect to angiosperms:-

- (a) A microsporophyll contains stigma, style and ovary
(b) All megaspores produced from megaspore mother cell take part in embryo sac formation.
(c) Hilum is the place where ovule joins with funicle
(d) Basal part of an ovule is represented as micropylar end
(e) Perisperm is present in black pepper.

Choose the correct answer from the options given below

- (1) only c and e are correct
(2) a, b, c and e are correct
(3) c, d and e are correct
(4) only c is correct

BSR273

52. Anemophily type of pollination is found in :-

- (1) *Salvia* (2) Bottle brush
(3) *Vallisneria* (4) Coconut

BSR236

53. In grass what happens in microspore mother cell for the formation of mature pollen grain:-

- (1) One meiotic and two mitotic divisions
(2) One meiotic and one mitotic division
(3) One meiotic division only
(4) One mitotic division only

BSR237

54. What would be the number of chromosomes in the cells of the aleurone layer in a plant species with 8 chromosomes in its synergids?

- (1) 16 (2) 24 (3) 32 (4) 8

BSR091

55. When a diploid female plant is crossed with a tetraploid male plant, the ploidy of endosperm cells in the resulting seed will be:-

- (1) Pentaploid (2) Diploid
(3) Triploid (4) Tetraploid

BSR239

56. If diploid female plant is crossed with tetraploid male plant. What would be ploidy level of seed coat: -

- (1) 3n (2) n (3) 2n (4) 4n

BSR240

- 57.** Perispermic and endospermic seeds are found in :-
 (1) Castor (2) Maize
 (3) Wheat (4) Rice
BSR241
- 58.** Double fertilization involves: -
 (1) Fertilization of the egg by two male gametes
 (2) Fertilization of two eggs in the same embryo sac by two sperms brought by one pollen tube
 (3) Fertilization of the egg and the central cell by two sperms (male gametes) brought by different pollen tubes
 (4) Fertilization of the egg and the central cell by two sperms (male gametes) brought by the same pollen tube
BSR242
- 59.** The arrangement of the nuclei in a normal embryo sac in the dicot plants is:-
 (1) 2 + 4 + 2 (2) 3 + 2 + 3
 (3) 2 + 3 + 3 (4) 3 + 3 + 2
BSR092
- 60.** Which part of the reproductive structure produces both enzyme & hormone :-
 (1) Archegonium (2) Middle layer
 (3) Tapetum (4) Endothecium
BSR244
- 61.** Ubisch bodies are produced in :-
 (1) Embryosac (2) Endothecium
 (3) Pollen grain (4) Tapetum
BSR245
- 62.** Tapetum is :-
 (1) Parietal in origin and is the inner most layer of anther wall.
 (2) Modified endothecium of anther wall
 (3) Outer most layer of sporogenous tissue modification
 (4) Parietal in origin and is the inner most layer of ovule wall
BSR246
- 63.** Ubisch bodies are associated with the development of :-
 (1) Embryo (2) Pollen grains
 (3) Endosperm (4) Embryo sac
BSR247
- 64.** Identify the correct set of statements for angiosperms:-
 (a) Development of angiosperm seed occur inside the ovary / fruit
 (b) Typical embryo sac in angiosperms is seven celled and eight nucleated
 (c) Free nuclear divisions occur during embryogenesis in angiosperms
 (d) Filliform apparatus present in ovule secretes chemicals, which attract pollen tube toward synergids
 (e) Development of female gametophyte in typical angiosperms is monosporic.
 Choose the correct answer from the given options below.
 (1) a, d and e (2) b, d and e
 (3) a, b, d and e (4) b, c, d and e
BSR274
- 65.** How many cells or nuclei are present in mature male gametophyte of *Capsella* :-
 (1) One (2) Two
 (3) Three (4) Many
BSR249
- 66.** Which one of the following is resistant to enzyme action?
 (1) Pollen exine (2) Leaf cuticle
 (3) Cork (4) Wood fibre
BSR100
- 67.** Pollen tube develops from :-
 (1) Generative cell
 (2) Male gametes
 (3) Vegetative cell
 (4) Vegetative nucleus
BSR251

- 68.** What does the filiform apparatus do at the entrance into ovule?
 (1) It brings about opening of the pollen tube
 (2) It guides pollen tube from a synergid to egg
 (3) It helps in the entry of pollen tube into a synergid
 (4) It prevents entry of more than one pollen tube into the embryo sac
BSR101
- 69.** Pollen grains are able to withstand extremes of temperature and dessication because their exine is composed of :-
 (1) Cutin (2) Suberin
 (3) Sporopollenin (4) Callose
BSR253
- 70.** Go through the following statements:-
 I. Flowers are small. They are often packed in inflorescence
 II. Flowers are colourless, nectar less and odourless
 III. Well exposed stamens
 IV. Pollen grains are produced in large numbers which are light and non-sticky
 V. Flower often have a single ovule in each ovary.
 VI. Stigma is large and often feathery.
 The above contrivances favour
 (1) Cross pollination
 (2) Anemophily (pollination by wind)
 (3) Ornithophily (pollination by birds)
 (4) Entomophily (pollination by insects)
BSR254
- 71.** Which of the following is the tallest flower?
 (1) *Vallisneria* (2) *Rafflesia*
 (3) *Amorphophallus* (4) *Zostera*
BSR255
- 72.** Endosperm is formed during the double fertilization by :-
 (1) Two polar nuclei and one male gamete
 (2) One polar nuclei and one male gamete
 (3) Ovum and male gamete
 (4) Two polar nuclei and two male gametes
BSR256
- 73.** In Angiosperms pollen tube liberate their male gametes into the :-
 (1) Central cell (2) Antipodal cells
 (3) Egg cell (4) Synergid
BSR257
- 74.** In which part of embryo maximum growth takes place in hypogeal germination: -
 (1) Plumule (2) Radicle
 (3) Epicotyl (4) Hypocotyl
BSR258
- 75.** In seeds, characterised by hypogeal germination, cotyledons generally do not becomes green because :-
 (1) They lack mitochondria
 (2) They developed very early
 (3) They contain inhibitor
 (4) They remain below the soil
BSR259
- 76.** Which of the following will lose its economic value if fruits are produced through parthenocarpy?
 (1) Citrus (2) Banana
 (3) Grapes (4) Pomegranate
BSR260
- 77.** In which method megaspore mother cell directly gives rise to an embryo sac without meiosis?
 (1) Diplospory
 (2) Adventive embryony
 (3) Apospory
 (4) Apogamy
BSR261

78. Given below are two statements: -

Statement-I : When pollen grains are released from pollen sac and they land on stigma of pistil, it is called pollination.

Statement-II : Pollen tube enters into embryo sac where two male gametes fuse with female gamete.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (1) Both Statement-I and II are correct.
- (2) Statement-I is correct but statement-II is incorrect.
- (3) Statement-I is incorrect and Statement-II is correct.
- (4) Both Statement-I and Statement-II are incorrect.

BSR262

79. Given below are two statements: -

Statement-I : A typical anther is tetrasporangiate.

Statement-II : A typical anther is dithecous.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (1) Both Statement-I and II are correct.
- (2) Statement-I is correct but statement-II is incorrect.
- (3) Statement-I is incorrect and Statement-II is correct.
- (4) Both Statement-I and Statement-II are incorrect.

BSR263

80. Given below are two statements:-

Statement-I : Exine of pollen grain is made up of sporopollenin.

Statement-II : Intine helps in germination of pollen grain.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (1) Both Statement-I and Statement-II are correct.
- (2) Statement-I is correct but statement-II is incorrect.
- (3) Statement-I is incorrect and Statement-II is correct.
- (4) Both Statement-I and II are incorrect.

BSR264

81. Given below are two statements:-

Statement-I : To some extent viability of pollen grains depends upon prevailing temperature and humidity.

Statement-II : Viability is lost in few minutes only of the pollen grains of Solanaceae family.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (1) Both Statement-I and II are correct.
- (2) Statement-I is correct but statement-II is incorrect.
- (3) Statement-I is incorrect and Statement-II is correct.
- (4) Both Statement-I and Statement-II are incorrect.

BSR265

82. Given below are two statements (for angiosperm plants) :-

Statement-I : A mature male gametophyte possess two male gametes.

Statement-II : A mature female gametophyte is 7-celled and 8 nucleated in typical angiosperms.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (1) Both Statement-I and II are correct.
- (2) Statement-I is correct but statement-II is incorrect.
- (3) Statement-I is incorrect and Statement-II is correct.
- (4) Both Statement-I and Statement-II are incorrect.

BSR266

83. Given below are two statements; one is labelled as Assertion (A) and the other is labelled as Reason(R) :-

Assertion (A) : Geitonogamy is genetically same as autogamy.

Reason (R) : In Geitonogamy transfer of pollen grains occur from one plant to another plant.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) If (A) & (R) both are correct but (R) is not the correct explanation of (A).
- (2) (A) is correct but (R) is incorrect.
- (3) (A) is not correct but (R) is correct.
- (4) If (A) & (R) both are correct and (R) is the correct explanation of (A).

BSR267

84. Given below are two statements; one is labelled as Assertion (A) and the other is labelled as Reason(R) :-

Assertion (A) : Homogamy in receptivity by stigma and pollen release is essential for autogamy.

Reason (R) : Heterogamy increases the opportunities for successful allogamy.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) If (A) & (R) both are correct but (R) is not the correct explanation of (A).
- (2) (A) is correct but (R) is incorrect.
- (3) (A) is not correct but (R) is correct.
- (4) If (A) & (R) both are correct and (R) is the correct explanation of (A).

BSR268

85. Given below are two statements; one is labelled as Assertion (A) and the other is labelled as Reason(R) .

Assertion (A) : Loss of pollen grain occur maximum in anemophily.

Reason (R) : In this type of pollination, pollen grains move completely in non-directional form.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) If (A) & (R) both are correct but (R) is not the correct explanation of (A).
- (2) (A) is correct but (R) is incorrect.
- (3) (A) is not correct but (R) is correct.
- (4) If (A) & (R) both are correct and (R) is the correct explanation of (A).

BSR269

86. Given below are two statements; one is labelled as Assertion (A) and the other is labelled as Reason(R) :-

Assertion (A) : In angiosperm plants, nuclear endosperm is most common.

Reason (R) : When formation of endosperm occur due to free nuclear division, is called cellular endosperm.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) If (A) & (R) both are correct but (R) is not the correct explanation of (A).
- (2) (A) is correct but (R) is incorrect.
- (3) (A) is not correct but (R) is correct.
- (4) If (A) & (R) both are correct and (R) is the correct explanation of (A).

BSR270

87. Identify the correct set of statements :-

- (a) Wolfia is a microscopic plant belongs to angiosperms.
- (b) Double fertilization is an unique event seen in gymnosperms.
- (c) Male sex organs in angiosperm are called stamens, present in flowers.
- (d) Total three male gametes participate in double fertilization.

Choose the correct answer from the given option below.

- (1) all a, b, c, d are correct
- (2) b, c and d are correct
- (3) a, c and d are correct
- (4) only a and c are correct

BSR271

88. Identify the correct set of statements :-

- (a) In gymnosperms seeds are not enclosed by fruits.
- (b) Angiosperm plant's possess diplontic life cycle.
- (c) Flower is the structure in which sexual reproductive organs of angiosperm are present.
- (d) Endosperm formation in angiosperm is not a pre-fertilization event.

Choose the correct answer from the given options below :

- (1) only b, c & d are correct
- (2) b and c are correct
- (3) a, b, c and d all are correct
- (4) only a and c are correct

BSR272

Exercise - III
ANSWER KEY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	1	3	3	2	3	1	3	3	1	1	3	1	2	3	1
Question	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Answer	4	4	1	1	3	1	4	3	1	2	3	1	1	4	2
Question	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Answer	3	4	3	4	2	1	1	3	3	2	2	3	4	1	3
Question	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Answer	2	2	3	3	4	1	4	2	2	4	3	1	4	2	3
Question	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Answer	4	1	2	3	3	1	3	3	3	2	3	1	4	3	4
Question	76	77	78	79	80	81	82	83	84	85	86	87	88		
Answer	4	1	2	1	1	2	1	2	1	4	2	4	3		