PINNUS EXERCISE

1. Which of the following is commonly known as "Blue pine" -
(1) ***Pinus roxburghii***
(2) ***P.Strobus*** (White pine)
(3) ***P.Wallichiana***
(4) ***P.Sylvestris*** (Scoth pine)

2. which is commonly known as "Khais pine" :
(1) ***Pinus stobus***
(2) ***P.wallichiana***
(3) ***P.salvestris***
(4) ***P.inslries***

3. Why **Pinus** seeding do not grow on places after fire. This is because the soil becomes
(1) Hard
(2) Devoid of bacteria
(3) Dry
(4) Devoid of fungi

4. Foliage leaves of Pinus are borne on :
(1) Branches of unlimited growth
(2) Branches of limited growth
(3) Both of above
(4) None of these

5. Which type of resin canal are found in cortex and secondary xylem of the stem of Pinus :
(1) Schizogenous cavities
(2) Lysigenous cavities
(3) Schizolysigenous cavities
(4) None of these

6. Dimorphic branches and leaves are found in -
(1) Pea
(2) Cycas
(3) Pinus
(4) Fern

7. Sclerenchymtous hypodermis is Pinus needle helps in
(1) Mechanical support
(2) Checking transpiration
(3) Photosynthesis
(4) Increasing the absorptive surface of the cell

8. The mesophyll tissue of **Pinus** needle is -
(1) Collenchyma
(2) Spongy parenchyma
(3) Armed parenchyma
(4) Transfusion tissue

9. In pinus roxburghii, the common pine tree Microsporophyll are having : **[AMU]**
(1) 2 microsporangia on adaxial side
(2) 4 microsporangia on adaxial side
(3) 2 microsporangia on adaxial side
(4) 4 microsporangia on adaxial side

10. Vascular bundles in leaves of Pinus needle are :
(1) Collateral & closed
(2) Collateral & open
(3) Radial
(4) None of above

11. Foliar spur of **Pinus sylvestris** is called :
(1) Unifoliar
(2) Bifoliar
(3) Trifoliar
(4) Pentafoliar

12. Vascular bundle in stem of Pinus is :
(1) Conjoint, Collateral and Endarch
(2) Conjoint, Collateral and Exarch
(3) Radial and Diarch
(4) Conjoint Bicollateral and Endadrch

13. Pinus armandi is known as :
(1) Unifoliar (2) Bifoliar
(3) Trifoliar (4) Penta foliar

14. Pinus is cold xerophyte, its adaptation is/are -
(1) Thick cuticle & sunken stomata
(2) Sclerenchymtous hypodermis in leaves
(3) Comapt mesophyll of armed parenchyma
(4) All the above

15. Male cone of **Pinus** is modification of
(1) Long shoot
(2) Dwarf shoot
(3) Megasporophylls
(4) Vegetative leaves

16. What causes sulphur colouds in spring season of temperate climate :
(1) Male gametophytes of pine
(2) Male gametes of Pine
(3) Volatine resin & turpentine
(4) Sulphur bacteria

17. The male gametophyte of gymnosperms differ from angiosperms in having -
(1) One or more prothallial cells
(2) No prothallial cells
(3) One male gamete
(4) One tube nucleus

18. Wings of **Pinus** pollen grains are -
(1) Multicellular
(2) Unicellular
(3) Acellular
(4) Coenocytic

19. If the chromosome number of cells of nucellus of emgasporangium of Pinus is 16 (sixteen) what would be the chromosome number of endosperm cells :
(1) 32 (2) 16
(3) 48 (4) 08

20. Female cone of **Pinus** is considered a modified
(1) Flower
(2) Dwarf shoot
(3) Long shoot
(4) Sporophyll

21. The ovuliferous scale of **Pinus** is part of -
(1) Microsporophyll
(2) Ovule
(3) Dwarf shoot
(4) Megasporophyll

22. In **Pinus** the megaspore after germination develops into -
(1) Endosperm with naked egg
(2) Endosperm with embryo sac
(3) Endosperm with archegonia
(4) Pollen tube with motile male gamates

23. In **Pinus** oospore develops into
(1) Compound suspensor with a single embryonal mass
(2) No suspensor but single embryo mass
(3) Compound coild suspensor with four embryo masses formed by cleavage polyembryony
(4) Simple suspensor with single embryo

24. What is the intermediate state in the development of embryo of Pinus -
(1) Protonema
(2) Polyembryony
(3) Proembryo
(4) Protocorm

25. The development of embryo is **Pinus** is
(1) Discoblastic
(2) Meroblastic
(3) Periblatic
(4) Mesoblastic

26. Gymnosperm produce seed in -
(1) Pericarp
(2) Cones
(3) Flowers
(4) Ovary

27. Seed of Pinus contain several embryos with a compound suspensor. They are developed through
(1) Adventive polyembryony
(2) Normal polyembryony
(3) Cleavage polyembryony
(4) both 2 & 3

28. Which of the following is not applicable to Pinus ?
(1) Sessile ovules
(2) Motile sperm
(3) Embryo with many cotyledons
(4) Resin ducts

29. Which is true for Pinus -
(1) Haploid endosperm
(2) Biflagellate sperms
(3) Occurence of double fertilization
(4) Presence of antheridia

30. Ovule in gymnosperm is generally :
(1) Anatropous and bitegmic
(2) Orthotropous and bitegmic
(3) Anatropous and unitegmic
(4) Orthotropous and unitegmic

31. In gymnosperm “pollen drop” is :
(1) pollen dropped by wind
(2) water drop
(3) Secretion of nucelles
(4) Pollinium

32. **Resin** and **trupentine** are obtained form :
(1) Cycas
(2) Pinus
(3) Cedrus
(4) Gnetum

33. The germiantion of seed in pinus is :
(1) Hypogeal
(2) Epigeal
(3) Both
(4) None

34. If the haploid no. of chromosomes in gymnosperm is 12, what will be the no. of chromosomes in its root and endosperm :
(1) 12, 12 (2) 12, 24
(3) 24, 12 (4) 24, 036

35. 'Naked seed' of gymnosperm means
(1) Seed without seed coats
(2) Seed without tegmen
(3) Seeds not enclosed in ovary wall
(4) All of the above

36. In which plant "chilgoza" is the name of seed of :
(1) ***P.longifolia***
(2) ***P.gerardiana***
(3) ***Cycas circinalis***
(4) ***P.insularis***

37. The charateristic of ovule of Pinus presence of :
(1) Integument
(2) Vascular supply
(3) Pollen chamber
(4) Nucellus

38. Endosperm in Pinus is :
(1) Post fertilization tissue
(2) Pre and post fertilization tissue
(3) Pre fertilization tissue
(4) None of the above

39. Pollination of Pinus is exclusively by :
(1) Wind (2) Insect
(3) Water (4) Birds

40. **Compact** and **hard wood** of Pinus is known as :
(1) Porous
(2) Pycnoxylic
(3) Manoxylic
(4) Soft and loose

41. Pinus differs from mango in having :
(1) Presence of wood
(2) Ovules not enclosed in ovary
(3) Tree habit
(4) Green leaves

42. Pinus has :
(1) Motile male gametes
(2) Ciliated male gametes
(3) Non motile male gametes
(4) All of the above

43. The interval between pollination of fertilization in Pinus is :
(1) One day (2) One week
(3) One month (4) One year

44. Number of the cotledons in embryo of Pinus is:
(1) One (2) two
(3) 3 - 18 (4) 3 - 10

45. Wings in Pinus seeds develop from :
(1) Bract scale
(2) Ovuliferous scale
(3) Cone axis
(4) Seed coat

46. In Pinus male and female reproductive structure occur :
(1) One same branch of plant
(2) On different plant
(3) On different branches of same plant
(4) None of above

47. Pinus is a Gymnosperm because :
(1) It is a large tree
(2) It is pollinated by wind
(3) It has exposed naked ovule
(4) It produces seeds and it has narrow leaves

48. In which of the following fertilization/reproduction is possible without water :
(1) **Ulothrix**
(2) **Funaria**
(3) **Dryopteris**
(4) **Pinus**

49. Turpentine is obtained from :
(1) Angiosperm wood
(2) Angiospermic flowers
(3) Gymnosperm wood
(4) Fern

50. In microsporophylls of **Pinus** microsporangium are present on :
(1) Abaxial side
(2) Adaxial side
(3) Along the margins
(4) In the axils

51. What is the habit of **Pinus** plant –
[BHU 84 Delhi PMT 85]
(1) Decurrent (2) Excurrent
(3) Recurrent (4) Dichotomous

52. The excurrent/conical habit of Pinus tree is caused by - **[AIIMS 85 CPMT 85 EMCET 86]**
(1) Auxin effect on the growth of stem tip & axilary branches
(2) Competition of neighbouring pine tree for sun light
(3) Mutual compoetition of branches
(4) Efficienty of water movement in plants

53. The mycorrhizal relationship between fungi & roots of **Pinus** plant is - **[CPMT 73 BHU 82]**
(1) Parasitic relationship
(2) Sarphophytic relationship
(3) Symbiotic relationship
(4) Epiphytic relationship

54. Pine wood comprise of **[CPMT 85]**
(1) Vessels only
(2) Tracheids only
(3) Both equally
(4) More vessels & less tracheids

55. Male gametophyte of **Pinus** is - **[AIPMT 90]**
(1) Male cone
(2) Microsporophyll
(3) Pollen grain
(4) Megasporophyll

56. In **Pinus** the third distal tier of its pre-embryo form below is - **[Delhi PMT 82]**
(1) **Pinus**
(2) **Selaginella**
(3) Maize
(4) Groundnut

58. Winged seeds are found in - **[BHU 1985]**
(1) **Fern**
(2) **Pinus**
(3) China rose
(4) **Cycas**

59. In the number of chromosomes in the pollen grains of **Pinus** is 12 i.e. e., n = 12, the number of chromosomes in its endosperm cells should be **[Delhi PMT 81, MPPMT 2000]**
(1) 36 (2) 24
(3) 12 (4) 6

60. If the number of chromosome in the nucellus of **Cycas** or **Pinus** us 24 number in their endospoerm should be - **CPMT 1989]**
(1) 12 (2) 24
(3) 36 (4) 48

61. The edible part of **Pinus** chilogoza seed in - **[CPMT 1989]**
(1) Pericarp
(2) Female gametophyte
(3) Diploid perisperm
(4) Triploid endosperm

62. Microsporangia of cyas are present on the leaves **[RPMT 2000]**
(1) Marginal
(2) Adaxial
(3) Abaxial
(4) Lateral

63. Transverse section of Rachis of **Cycas** at middle shows - **[RPMT 2000]**
(1) Endacrh Xylem
(2) Centripetal xylem
(3) Centrifugal xylem
(4) Cetrifugal and centripetal xylem

64. Cycas have two cotyledons but it is not included in Angiosperms because of - **[AIPMT 01]**
(1) Naked ovule
(2) Seems like monocot
(3) Circinate Ptyxis
(4) Compound leaves

65. Which of the following plants produces seeds but not flowers - **[AIPMT 2002]**
(1) Maice
(2) Mint
(3) Peepal
(4) Pinus

66. Pinus is - **[MP PMT 1999]**
(1) Deciduous
(2) Dioecious
(3) Monoecious
(4) None of these

67. The wood of pinus is - **[MP PMT 2000]**
(1) Pycnoxylic & Homoxylous
(2) Pyconoxylic & Heteroxylous
(3) Manoxylic & Homoxylous
(4) Manoxylic & Heteroxylous

68. Winged pollen grains are formed in **[MP PMT 2002]**
(1) ***Pinus***
(2) ***Cycas***
(3) ***Triticum***
(4) ***Solanum***

69. Endosper : in pinus - **[MP PMT 2002]**
(1) Haploid (2) Diploid
(3) Priploid (4) Polyloid

70. Conifers differ from grases in the **[AIPMT 2006]**
(1) absence of pollen tubes
(2) formation of endosperm before feritilization
(3) productioin of seeds from ovules
(4) lackof xylem trachieds

71. If number of chromosomes in pollengrain of any species of Pinus is 8, then after fertilization what will be the number of chromosomes in Endosperm : **[RPMT 2006**
(1) 24 (2) 16
(3) 08 (4) 32

72. Flagellated male gametes re present in all the three of which one of the following sets ? **[AIPMT 2007]**
(1) **Anthoceros, Funaria** and **Spirogyra**
(2) **Zygnema, Saprolegnia** and **Hydrilla**
(3) **Fucus, Marsilea** and **Calotropis**
(4) **Riccia, Dryoptres** and **Cycas**

73. In gymnosperms the **pollen chamber** represents **[AIPMT 2007]**
(1) a cell in the pollen grain in which the sperms are formed
(2) a cavity in the ovule in which pollen grains are stored after pollination
(3) an opening in the megagametophyte through which the pollen tube approaches the egg.
(4) the microsporangium in which pollen grains develop.

74. Select one of the following pairs of important features distinguishing Gnetum from Cycas and Pinus and showing affinities with angiosperms : **[AIPMT 2008]**
(1) Presence of vessel elements and absence of archegonia
(2) Perianth and two integuments
(3) Embryo development and apical meristem
(4) Absence of resin duct and leaf vention

75. I which one of the following, male and female gametophytes do not have free living independent existence ? **[AIPMT 2008]**
(1) Funaria (2) Polytrichum
(3) Cedrus (4) pteris

PINUS EXERCISE

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	**3**	**4**	**4**	**2**	**1**	**3**	**1**	**3**	**1**	**2**	**2**	**1**	**4**	**4**	**2**
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	**1**	**1**	**3**	**4**	**2**	**4**	**3**	**3**	**3**	**2**	**2**	**3**	**2**	**1**	**4**
Que.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	**3**	**2**	**2**	**3**	**3**	**2**	**3**	**3**	**1**	**2**	**2**	**3**	**4**	**3**	**2**
Que.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	**3**	**3**	**4**	**3**	**1**	**2**	**1**	**3**	**2**	**3**	**3**	**1**	**2**	**3**	**1**
Que.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ans.	**2**	**3**	**4**	**1**	**4**	**3**	**1**	**1**	**1**	**2**	**3**	**4**	**2**	**1**	**3**