

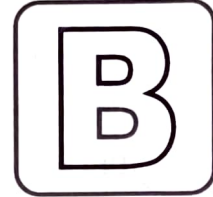
DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

Test Booklet No. :

02222

TEST BOOKLET
FORESTRY

Series



Time Allowed : 2 Hours

Full Marks : 200

Read the following instructions carefully before you begin to answer the questions :

1. The name of the Subject, Roll Number as mentioned in the Admission Certificate, Test Booklet No. and Series are to be written legibly and correctly in the space provided on the Answer-Sheet with Black/Blue ballpoint pen.
2. **Answer-Sheet without marking Series as mentioned above in the space provided for in the Answer-Sheet shall not be evaluated.**
3. All questions carry equal marks.
The Answer-Sheet should be submitted to the Invigilator.

Directions for giving the answers : Directions for answering questions have already been issued to the respective candidates in the 'Instructions for marking in the OMR Answer-Sheet' along with the Admit Card and Specimen Copy of the OMR Answer-Sheet.

Example :

Suppose the following question is asked :

The capital of Bangladesh is

- (A) Chennai
(B) London
(C) Dhaka
(D) Dhubri

You will have four alternatives in the Answer-Sheet for your response corresponding to each question of the Test Booklet as below :



In the above illustration, if your chosen response is alternative (C), i.e., Dhaka, then the same should be marked on the Answer-Sheet by blackening the relevant circle with a Black/Blue ballpoint pen only as below :



The example shown above is the only correct method of answering.

4. Use of eraser, blade, chemical whitener fluid to rectify any response is prohibited.
5. Please ensure that the Test Booklet has the required number of pages (16) immediately after opening the Booklet. In case any page(s) is/are missing, please report the same to the Invigilator.
6. No candidate shall be admitted to the Examination Hall/Room 20 minutes after the commencement of the examination.
7. **No candidate shall leave the Examination Hall/Room** without prior permission of the Supervisor/Invigilator. No candidate shall be permitted to hand over his/her Answer-Sheet and leave the Examination Hall/Room before expiry of the full time allotted for each paper.
8. No Mobile Phone, Electronic Communication Device, etc., are allowed to be carried inside the Examination Hall/Room by the candidates. Any Mobile Phone, Electronic Communication Device, etc., found in possession of the candidate inside the Examination Hall/Room, even if on off mode, shall be liable for confiscation.
9. No candidate shall have in his/her possession inside the Examination Hall/Room any book, notebook or loose paper, except his/her Admission Certificate and other connected papers permitted by the Commission.
10. Complete silence must be observed in the Examination Hall/Room. No candidate shall copy from the paper of any other candidate, or permit his/her own paper to be copied, or give, or attempt to give, or obtain, or attempt to obtain irregular assistance of any kind.
11. This Test Booklet can be carried with you after answering the questions in the prescribed Answer-Sheet.
12. Noncompliance with any of the above instructions will render a candidate liable to penalty as may be deemed fit.
13. No rough work is to be done on the OMR Answer-Sheet. You can do the rough work on the space provided in the Test Booklet.

N.B. : There will be negative marking @ 0.25 per 1 (one) mark against each wrong answer.

1. The economic part of Ashwagandha is
- (A) stem
 - (B) root
 - (C) leaves
 - (D) seed
2. The continuous circulation of water among the hydrosphere, atmosphere and lithosphere is called as
- (A) nutrient cycle
 - (B) water cycle
 - (C) watershed
 - (D) hydrological cycle
3. A written scheme of management aiming at continuity of policy, controlling the treatment of a forest is called
- (A) Forest Act
 - (B) Forest Policy
 - (C) Working Plan
 - (D) Working Circle
4. The study of tree rings regarding the information about the growth and environment in the past is known as
- (A) Dendrology
 - (B) Ecology
 - (C) Dendrochronology
 - (D) Archaeology
5. The decrease in diameter of the stem of a tree from the base upwards is known as
- (A) taper
 - (B) clean bole
 - (C) commercial bole
 - (D) None of the above
6. Diameter or 'girth at breast height' of a tree is taken at
- (A) 1.37 m from the base of the tree
 - (B) 1.57 m from the base of the tree
 - (C) 1.37 m from the top of the tree
 - (D) None of the above
7. Which instrument is used to determine the age of a tree?
- (A) Abney's level
 - (B) Pressler's borer
 - (C) Relascope
 - (D) Altimeter
8. 'Van Mahotsav' celebration in India was started in the year
- (A) 1950
 - (B) 1953
 - (C) 1960
 - (D) 1968

9. The Ramsar Convention, signed in 1971, was an international treaty for conservation of sustainable use of
- (A) wetlands
 - (B) hills
 - (C) evergreen forests
 - (D) arid region
10. The region that is defined as an area of uniform climatic conditions and having distinctly recognizable type of vegetation is known as
- (A) Biodiversity Hotspot
 - (B) Phytogeographical Region
 - (C) Climatic Zone
 - (D) Seismic Zone
11. Which of the following are the two Biosphere Reserves in Assam?
- (A) Kaziranga and Dibru-Saikhowa
 - (B) Manas and Dibru-Saikhowa
 - (C) Kaziranga and Manas
 - (D) Manas and Orang
12. Out of the following, which one is **not** a greenhouse gas?
- (A) Water vapour (H_2O)
 - (B) Methane (CH_4)
 - (C) Argon (Ar)
 - (D) Nitrogen oxide (N_2O)
13. The National Tiger Conservation Authority has been made a statutory authority by amending the Wildlife (Protection) Act, 1972 during the year
- (A) 2004
 - (B) 2005
 - (C) 2006
 - (D) 2007
14. The branch of Zoology, concerned with the study of amphibians and reptiles, is known as
- (A) Herpetology
 - (B) Anthrozoology
 - (C) Catology
 - (D) Entomology
15. World Wetland Day is celebrated on
- (A) 2nd February
 - (B) 2nd April
 - (C) 2nd July
 - (D) 2nd October

16. Which one of the following has been declared as a World Heritage Site by the UNESCO?
- (A) Majuli
(B) Manas
(C) Sivasagar
(D) Charaideo
17. The ecological state of a species being unique to define geographic location such as an island, State, country or other defined zones or habitat types is referred to as
- (A) exotic
(B) indigenous
(C) endemism
(D) rare
18. A group or cluster of flowers arranged on a stem that is composed of a main branch or a complicated arrangement of branches is known as
- (A) inflorescence
(B) phyllotaxy
(C) corolla
(D) placentation
19. Chlorosis in plants occurs due to
- (A) high sunlight intensity
(B) low sunlight intensity
(C) absorption of yellow pigment from soil
(D) deficiency of Mg and Fe in the soil
20. The arrangement of leaves on the branches of plants is known as
- (A) phyllotaxy
(B) vernation
(C) venation
(D) phytotaxy
21. Plants that grow in or on the rock are known as
- (A) hydrophytes
(B) mesophytes
(C) lithophytes
(D) parasites
22. Which one is the State animal of Meghalaya?
- (A) Tiger
(B) Serow
(C) Hoolock gibbon
(D) Clouded leopard

23. The entire earth as an ecosystem is called as
- (A) geosphere
 - (B) hydrosphere
 - (C) biosphere
 - (D) lithosphere
24. As per the IUCN Red List, the Indian one-horned rhino falls under the category of
- (A) critically endangered
 - (B) endangered
 - (C) vulnerable
 - (D) near threatened
25. Which one of the following is a strictly herbivorous marine mammal?
- (A) Dugong
 - (B) Gangetic dolphin
 - (C) Sea lion
 - (D) Whale
26. Which one of the following primates is found in Assam?
- (A) Nilgiri langur
 - (B) Bonnet macaque
 - (C) Phayre's leaf monkey
 - (D) Slender loris
27. Which one of the following areas is a Ramsar Site?
- (A) Deepor Beel
 - (B) Joysagar Tank
 - (C) Maguri Beel
 - (D) Chandubi Lake
28. The development responses of plants to the relative lengths of light and dark period are defined as
- (A) photosynthesis
 - (B) photoperiodism
 - (C) photointerpretation
 - (D) photostimulation
29. CITES stands for
- (A) Conservation of Internationally Threatened Endemic Species
 - (B) Convention on International Trade in Endangered Species
 - (C) Convention of Internationally Threatened Economic Species
 - (D) Conservation, Interpretation, Trade of Economically Sustainable Species

30. Who is known as the father of Indian Forestry?

- (A) O'Connolly
- (B) Dietrich Brandis
- (C) Voelcker
- (D) Gadgil

31. The Center for International Forestry Research (CIFOR) is in

- (A) Nairobi, Kenya
- (B) Vienna, Austria
- (C) Bogor, Indonesia
- (D) Ibadan, Nigeria

32. When is the Wildlife Week celebrated in India?

- (A) First week of June
- (B) First week of October
- (C) First week of March
- (D) First week of August

33. A large terrestrial ecosystem characterized by distinctive kinds of plants and animals and maintained by a distinct climate and soil conditions is known as

- (A) biome
- (B) community
- (C) resources
- (D) biodiversity

34. Which one of the following is soluble in alcohol but does not dissolve in water?

- (A) Gum
- (B) Resin
- (C) Tannin
- (D) Oleoresin

35. Animal adaptation to climbing is

- (A) scansorial
- (B) fossorial
- (C) cursorial
- (D) volant

36. The 'Project Tiger' scheme was launched in the year

- (A) 1973
- (B) 1974
- (C) 1976
- (D) 1972

37. The dropping of carnivores is called as

- (A) dung
- (B) pellet
- (C) bolus
- (D) scat

38. Neapanagar, famous for India's first newsprint paper mill, is located in which State?

- (A) Gujarat
- (B) Maharashtra
- ✓ (C) Madhya Pradesh
- (D) Karnataka

39. Calculate the number of plants/ha when teak is planted at 2 m × 3 m spacing.

- (A) 666
- ✓ (B) 1666
- (C) 2000
- (D) 2666

$$\frac{10000 \text{ m}^2}{2 \text{ m} \times 3 \text{ m}} = \frac{10000}{6} = 1666 \frac{2}{3}$$

40. Which of the following is the basic unit of ecology?

- (A) Ecosystem
- ✓ (B) Species
- (C) Biodiversity
- (D) Homeostasis

41. Which one of the following is an exotic tree species in India?

- (A) Eucalyptus ✗
- (B) Sal
- (C) Teak ✗
- ✓ (D) Deodar

42. Azadirachtin is obtained from which tree species?

- (A) Sal
- ✓ (B) Neem
- (C) Semul
- (D) Teak

43. Which is the only ape found in India?

- ✓ (A) Hoolock gibbon
- (B) Lion-tailed macaque
- (C) Slender loris
- (D) Nilgiri langur

44. What is CITES?

- (A) A treaty banning barrier in island development
- ✓ (B) A treaty banning trade in endangered species
- (C) A treaty banning dumping plastic in the ocean
- (D) A treaty banning overfishing

45. The sustainable land use system involving trees combined with agriculture crops on the same unit of land is termed as

- ✓ (A) agroforestry
- (B) sustainable forest management
- (C) social forestry
- (D) farm forestry

46. Cutch and Kattha are obtained from
- (A) *Acacia senegal*
 - (B) *Acacia arabica*
 - (C) *Acacia catechu*
 - (D) *Acacia nilotica*
47. *Ex-situ* conservation is carried out in
- (A) Sanctuary
 - (B) National Park
 - (C) Biosphere Reserve
 - (D) Zoo
48. Which one of the following institutes is situated in Assam?
- (A) Tropical Forest Research Institute
 - (B) Institute of Forest Productivity
 - (C) Rain Forest Research Institute
 - (D) Institute of Forest Biodiversity
49. Which of the following is the State tree of Assam?
- (A) *Dipterocarpus retusus*
 - (B) *Gmelina arborea*
 - (C) *Alnus nepalensis*
 - (D) *Shorea robusta*
50. A tree sprout arising from the root is called
- (A) slash
 - (B) bole
 - (C) sucker
 - (D) sapling
51. Which are the main constituents of wood?
- (A) Fats and protein
 - (B) Vitamins and minerals
 - (C) Cellulose and lignin
 - (D) Chlorophyll and chloroplasts
52. The Forest Survey of India (FSI) conducts forest survey once in every
- (A) five years
 - (B) two years
 - (C) ten years
 - (D) None of the above
53. Forest and wildlife were brought under the Concurrent List as per the
- (A) 40th Amendment
 - (B) 42nd Amendment
 - (C) 44th Amendment
 - (D) 48th Amendment

54. The Census method which involves the estimation of total population in the entire area of the forest or protected areas is known as
- (A) sample count method
 (B) total count method
 (C) aerial survey
 (D) transect method
55. The gradual replacement of one plant community by another in the development of vegetation towards climax is referred to as
- (A) vegetation
 (B) succession
 (C) aggregation
 (D) regression
56. Which testing method is used as the quick method for determination of seed viability?
- (A) Iodine test
 (B) Lactophenol test
 (C) Tetrazolium test
 (D) Potassium iodide test
57. The process of cycling of nutrients from soil to the plant and back to the soil is called as
- (A) nutrient cycle
 (B) nutrient enrichment
 (C) nitrogen pumping
 (D) biogas chemical cycling
58. The succession beginning in water is called
- (A) xerarch
 (B) hydrarch
 (C) aggregation
 (D) regression
59. Who developed the idea and theory of plant succession?
- (A) Thoreau
 (B) Clements
 (C) Cowles
 (D) Dawson
60. Vivipary germination is found in which kind of trees?
- (A) Evergreen trees
 (B) Mangroves
 (C) Palms
 (D) Gymnosperms
61. How many Schedules are there in the Wildlife (Protection) Act, 1972?
- (A) 5
 (B) 4
 (C) 7
 (D) 6

62. *Nepenthes khasiana* is listed under which Schedule of the Wildlife (Protection) Act, 1972?
- (A) Schedule I
 (B) Schedule IV
 (C) Schedule V
 (D) Schedule VI
63. Trees which are characterized by having flowers of both sexes on the same tree are called
- (A) coniferous
 (B) deciduous
 (C) dioecious
 (D) monoecious
64. Edaphic factor is related to
- (A) temperature
 (B) wind
 (C) soil
 (D) rainfall
65. The quarter girth formula to calculate volume of log is
- (A) $g^2 \times \frac{L}{4}$
 (B) $\frac{4}{g^2} \times L$
 (C) $g^2 \times \frac{L}{16}$
 (D) $\frac{16}{g^2} \times L$
66. Which is the smallest functional territorial unit of administration of forest administration/department?
- (A) Beat
 (B) Range
 (C) Circle
 (D) Block
67. Veneer is utilized for the manufacture of
- (A) plywood
 (B) block board
 (C) compregnated wood
 (D) All of the above
68. Ecotone means
- (A) ecosystems
 (B) a zone of an ecosystem
 (C) an ecological study
 (D) a zone between two ecosystems
69. Pygmy hogs are found in
- (A) Chandoli National Park
 (B) Kanha National Park
 (C) Manas National Park
 (D) Nanda Devi National Park

70. The CVP (Climate, Vegetation and Productivity) index was developed by

- (A) Egler
- (B) Shelford
- (C) Clements
- (D) Paterson

71. The National Green Tribunal Act was enacted in the year

- (A) 2004
- (B) 2006
- (C) 2008
- (D) 2010

72. Peoples' Biodiversity Register is prepared by the

- (A) National Biodiversity Authority
- (B) Biodiversity Management Committee
- (C) State Biodiversity Board
- (D) District Biodiversity Council

73. Which among the following is a strong coppicer?

- (A) *Casuarina equisetifolia*
- (B) *Cedrus deodara*
- (C) *Madhuca latifolia*
- (D) *Tectona grandis*

74. Miyawaki method of raising tree involves

- (A) planting superior exotic trees of different values
- (B) planting fast-growing trees
- (C) planting multipurpose tree species
- (D) close planting of native trees

75. Carbon sequestration is

- (A) removal of oxygen and carbon from atmosphere and storage in a long-term store or pool
- (B) addition of carbon dioxide by different agents to atmosphere
- (C) removal of carbon from the atmosphere and storage in a long-term store or pool
- (D) None of the above

76. Among the following, which is known as a living fossil tree?

- (A) *Ginkgo biloba*
- (B) *Sequoia sempervirens*
- (C) *Ficus sp.*
- (D) *Pterocarpus santalinus*

77. 'Pneumatophores', specialized root structures, are commonly found in

- (A) dry deciduous forests
- ✓(B) mangrove forests
- (C) open forests
- (D) shola forests

78. The National Board for Wildlife (NBWL) has

- ✓(A) the Prime Minister as Chairperson
- (B) the Minister in-charge of Forest and Wildlife as Chairman
- (C) the Director of Wildlife Institute of India as Chairman
- (D) None of the above

79. Group of elephants is called

- ✓(A) herd
- (B) pride
- (C) pack
- (D) batch

80. The pyramid of energy in forest ecosystem is

- (A) always inverted
- ✓(B) always upright
- (C) spindle shaped
- (D) Both (A) and (B)

81. Ecological niche of an organism denotes

- (A) habitat of the organism
- (B) on whom the organism feeds
- (C) the status of an organism within a particular community
- ✓(D) All of the above

82. Tobacco flakes are commonly wrapped in leaves of which species to make bidi?

- (A) *Tectona grandis*
- ✓(B) *Diospyros melanoxylon*
- (C) *Terminalia tomentosa*
- (D) *Dillenia indica*

83. Pakke Tiger Reserve is situated in

- (A) Assam
- ✓(B) Arunachal Pradesh
- (C) Manipur
- (D) Nagaland

84. Which one of the following is the State flower of Assam?

- ✓(A) *Rhynchostylis retusa*
- (B) *Dendrobium primulinum*
- (C) *Lilium mackliniae*
- (D) *Rhododendron arboreum*

85. As per the IUCN Red List criteria, the taxon having population size of less than 2500 matured individuals is listed as

(A) critically endangered

✓(B) endangered

(C) vulnerable

(D) near threatened

86. Soil organic matter

(A) increases water holding capacity

(B) maintains soil temperature

(C) increases nutrients in soil

✓(D) All of the above

87. Forest pathology is the study of

(A) forest ecosystems

(B) forest insects

✓(C) tree diseases

(D) tree identification

88. Agarwood oil is extracted from

✓(A) *Aquilaria malaccensis*

(B) *Santalum album*

(C) *Pterocarpus santalinus*

(D) *Cedrus deodara*

89. Conservation in natural habitat is known as

(A) *ex-situ* conservation

✓(B) *in-situ* conservation

(C) *in-vitro* conservation

(D) *in-vivo* conservation

90. The direction towards which the slope faces is known as

✓(A) aspect

(B) slope

(C) exposure

(D) albedo

91. Sal (*Shorea robusta*) belongs to the family

(A) Verbenaceae

(B) Simaroubaceae

✓(C) Dipterocarpaceae

(D) Ebenaceae

92. Abney's level used to measure the angle of elevation or depression while measuring the height of tree is based on

(A) geometric principle

✓(B) trigonometric principle

(C) optical principle

(D) All of the above

93. Tree growth can be determined by
- (A) stump analysis
 - (B) stem analysis
 - (C) increment borings
 - (D) All of the above
94. Kyoto Protocol is related to
- (A) wildlife
 - (B) international peace
 - (C) deforestation
 - (D) climate change
95. In India, social forestry was first adopted successfully in
- (A) Gujarat
 - (B) Tamil Nadu
 - (C) Kerala
 - (D) Rajasthan
96. The smallest permanent working plan unit of management is
- (A) block
 - (B) compartment
 - (C) annual coupe
 - (D) periodic block
97. Menthol is prepared by using which of the following plants?
- (A) Mint
 - (B) Patchouli
 - (C) Geranium
 - (D) Ocimum
98. The conservation of ecological fragile ecosystem and preservation of biological diversity in terms of flora and fauna was emphasized in the
- (A) Forest Policy, 1894
 - (B) Forest Policy, 1952
 - (C) Forest Policy, 1988
 - (D) Forest Policy, 2002
99. Large-scale photograph has the scale of
- (A) 1 : 40000 to 1 : 70000
 - (B) 1 : 20000 to 1 : 40000
 - (C) 1 : 5000 to 1 : 20000
 - (D) 1 : 50000 to 1 : 100000
100. Which one of the following animals is **not** vermin?
- (A) Common crow
 - (B) Fruit bat
 - (C) Field cat
 - (D) Wildcat