COMMON P. G. ENTRANCE TEST – 2024 (CPET-2024)

Test Booklet No. : 00003

Subject Code : 46 **Hall Ticket No. :**

Subject : WILDLIFE AND BIODIVERSITY CONSERVATION

TEST BOOKLET

*Time Allowed : **60** Minutes* *Full Marks : **80***

: INSTRUCTIONS TO CANDIDATES :

1. The Test Booklet contains **15** pages including the cover page and **80** (Question Nos. 1 to 80) multiple choice questions.
2. DO NOT break open the seal of the Test Booklet until the invigilator instructs to do so.
3. The candidates must check discrepancy, if any (like up-printed or torn or missing pages or missing questions) in the Test Booklet immediately after breaking the seal of the Test Booklet. If detected, the invigilator may be requested to replace the same.
4. Candidates are required to fill up and darken the **Hall Ticket No., Test Booklet Serial No.** and OMR Answer Sheet Serial No. in attendance sheet carefully. Wrongly filled in OMR Answer Sheet is liable for rejection.
5. Each question has four choices / answers marked (A), (B), (C), (D). Candidate has to select the most appropriate choice / answer to each question and darken the oval completely against the question number provided in the OMR Answer Sheet.
6. Indicate only one choice / answer from the options provided by darkening the appropriate oval in the OMR Answer Sheet. More than one response to a question shall be treated as a wrong answer.
7. Use only **Black Ball Point Pen** for darkening the oval for answering.
8. All the questions are compulsory and they carry equal marks. The total marks scored by a candidate depends on the number of correct choices / answers darkened in the OMR Answer Sheet. There will be no negative marking for wrong answers.
9. No candidate shall be allowed to leave the Examination Hall / Room till all OMR Answer Sheets have been collected by the invigilator.
10. On completion of the entrance test, the original OMR Answer Sheet be handed over to the invigilator. Candidates are allowed to take the second copy of the OMR Answer Sheet along with the used Test Booklet for reference.
11. Candidates are not allowed to carry any personal belongings including electronic devices such as scientific calculator, cell phones, headphones, earbuds, or any other type of devices that allow communication of any kind inside the Examination Room / Hall.
12. The candidates are advised not to scribble or make any mark on the OMR Answer Sheet except marking the answers at the appropriate places and filling up the details required Rough work, if any, may be done in the blank sheet(s) provided at the end of the Test Booklet.
13. Any malpractice / use of unfair means will lead to your disqualification from the entrance test / admission process and may also lead to appropriate legal action as deemed fit.

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

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1. Artificial systems gave equal weightage to vegetative and sexual characteristics. This is not acceptable because often _____ characters are more easily affected by environment.

(A) Vegetative (B) Sexual

(C) Anatomical (D) Physiological

2. Natural systems of classification differs from artificial system in :

(A) Employing only one floral trait

(B) Employing only one vegetative trait

(C) Bringing out similarities and dissimilarities

(D) Developing evolutionary traits

3. *Batrachospermum* is a :

(A) Red algae of sea (B) Brown algae

(C) Blue algae (D) Red algae of fresh water

4. Phycoerythrin, Chlorophyll *a* and Chlorophyll *d* are characteristics of :

(A) Phaeophyceae (B) Xanthophyceae

(C) Chlorophyceae (D) Rhodophyceae

5. Seed plants are all :

(A) Heterosprous (B) Dioecious

(C) Monoecious (D) Homosporous

6. Megasporophyll of gymnosperm is homologous to :

(A) Stamen (B) Carpel

(C) Sepal (D) Petal

7. Stinging capsules (nematocysts) are found in :

(A) Wasp and honeybee (B) Scorpion and Cobra

(C) Sea pen and sea fan (D) Cactus and Venus fly trap

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8. What is common among silver fish, scorpion, crab and honey bee ?

(A) Jointed legs (B) Metamorphosis

(C) Compound eyes (D) Poison glands

9. Which of the following statements is correct for sponges without exception ?

(A) They all have calcareous spicules

(B) They have high regenerative power

(C) They have found only in marine water

(D) They are all radially symmetrical

10. Among the following organisms which is a completely non parasitic form ?

(A) Sea anemone (B) Tapeworm

(C) Leech (D) Mosquito

11. Ribosome is synthesised in :

(A) Nucleolus (B) Cytoplasm

(C) Mitochondria (D) Golgi complex

12. Cell organelle extracted from endosperm of germinating Castor beans are :

(A) Glyoxysomes (B) Peroxisomes

(C) Mitochondria (D) Chloroplast

13. Water reaches the top of a plant due to :

(A) Root pressure (B) Capillarity

(C) Transpiration (D) Diffusion

14. In which of the following plants there will be no transpiration ?

(A) Aquatic submerged plants

(B) Plants living in deserts

(C) Aquatic plants with floating leaves

(D) Plants growing in hilly regions

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15. Number of thylakoids in a granum is :

(A) 5-10 (B) 2-100

(C) 100-150 (D) 150-200

16. NH_3 releases from :

(A) Photorespiration (B) Dark respiration

(C) CAM (D) Light reaction

17. The ultimate electron acceptor of respiration in an aerobic organic organism is :

(A) Cytochrome (B) Oxygen

(C) Hydrogen (D) Glucose

18. A gland not associated with the alimentary canal is :

(A) Pancreas (B) Adrenal

(C) Liver (D) Salivary glands

19. Brunner's gland is present in :

(A) Liver (B) Duodenum

(C) Oesophagus (D) Stomach

20. In the stomach, gastric acid is secreted by the :

(A) Parietal cells (B) Peptic cells

(C) Acidic cells (D) Gastrin secreting cells

21. Prostaglandins are :

(A) Amino acid (B) Steroid

(C) Fatty acid (D) Carbohydrate

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22. The effectiveness of an enzyme is affected least by :

(A) Temperature

(B) Concentration of the substrate

(C) Original activation energy of the system

(D) Concentration of the enzyme

23. During gamete formation the enzyme recombinase participates during :

(A) Metaphase – I (B) Anaphase – II

(C) Prophase – I (D) Prophase – II

24. Zygotic meiosis is characteristic of :

(A) *Fucus* (B) *Funaria*

(C) *Chlamydomonas* (D) *Marchantia*

25. In Humberger's phenomenon, which ion is transported ?

(A) Mg^+ (B) Na^+

(C) Cl^- (D) K^+

26. Pollen grains are well preserved as fossils because of presence of :

(A) Sporopollenin (B) Cellulose

(C) Lignocellulose (D) Pectocellulose

27. Which is the following is a 3n structure ?

(A) Zygote (B) Apodals

(C) Egg apparatus (D) Primary endosperm nucleus

28. Persistent nucellus in the seed is known as :

(A) Tegmen (B) Chalaza

(C) Perisperm (D) Hilum

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29. Identical twins arise from :

(A) Single egg

(B) Two eggs

(C) Either from one egg or two eggs

(D) Neither from one egg nor from two eggs

30. The secretions of one of the following are rich in fructose, calcium and some enzymes :

(A) Male accessory glands (B) Female accessory glands

(C) Salivary glands (D) Liver

31. Hangul project was started by Govt. to save Hangul (*Cervus hangul*) in 1970. The sanctuary where it is started in :

(A) National Chambal Sanctuary (B) Dachigam Sanctuary

(C) Corbett National Park (D) Bandipur National Park

32. Which group of vertebrates comprises highest number of endangered species ?

(A) Mammals (B) Fishes

(C) Reptiles (D) Birds

33. Recently extinct bird is :

(A) Carolina para keet (B) Peacock

(C) Kirtland webier (D) Reed bunting

34. Arboretum is :

(A) A forest patch

(B) A piece of social forestry

(C) Botanical garden with trees and shrubs

(D) Botanical garden with cacti and herbs

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35. Rare animal Hispid hare (*Caprologous hispidus*) is found in :

(A) Dachigam National Park (B) Kaziranga National Park

(C) Manas National Park (D) Kanha National Park

36. Silent Valley has been preserved as it has :

(A) Rare plants and animals (B) Valuable timber plants

(C) Recreational value (D) Natural forests

37. The Convention on Biological diversity consists of :

(A) 45 articles (B) 42 articles

(C) 52 articles (D) 75 articles

38. Which animal is the symbol of the world wildlife fund ?

(A) Tiger (B) Hornbill

(C) Giant panda (D) White bear

39. Bishnoi tribe of Rajasthan is known for the protection of which animal ?

(A) Great Indian Bustard (B) Black buck

(C) Wild ass (D) Hungul

40. Main criteria for determining a hotspot are :

(A) Rich species diversity and endemic species

(B) Rich species diversity and genetic diversity

(C) Number of endemic species and increased aforestation

(D) Rich species diversity and increased aforestation

41. Rate of replacement of species along a gradient of habitats / communities is called :

(A) Alpha diversity (B) Beta diversity

(C) Gamma diversity (D) Omega diversity

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42. Ovary is obliquely placed in family :

(A) Asteraceae (B) Ranunculaceae

(C) Solanaceae (D) Brassicaceae

43. The flowers in a cyathium resemble the ray florets of sunflower are being :

(A) Sessile (B) Imperfect

(C) Neuter (D) Bisexual

44. Ivan Pavlov carried out experiments which were mainly concerned with :

(A) Cardian reflexes (B) Simple reflexes

(C) Conditional reflexes (D) Origin of life

45. Which of the following is a postzygotic mechanism to prevent hybridization ?

(A) Temporal isolation (B) Behavioural isolation

(C) Mechanical isolation (D) Hybrid sterility

46. Insight learning is commonly seen in :

(A) Invertebrate (B) Reptiles

(C) Birds (D) Mammals

47. The animals having notochord throughout life is :

(A) Fish (B) Amphioxus

(C) Snakes (D) Birds

48. Insects have :

(A) 2 pairs of legs (B) 3 pairs of legs

(C) 4 pairs of legs (D) 1 pair of legs

49. Isinglass is prepared from :

(A) Ichthyophis (B) Lungs

(C) Fishes (D) Lizards

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50. Connecting link between Annelida and Mollusca :

(A) *Peripatus* (B) *Neopilina*

(C) *Proterospongia* (D) *Archaeopteryx*

51. Bio-energy is obtained from :

(A) Petroleum (B) Natural gas

(C) Biomass (D) Synthetic fuel

52. Geometric representation of age structure is a characteristic of :

(A) Biotic community (B) Population

(C) Landscape (D) Ecosystem

53. The factor which does not determine the population size is :

(A) Mortality (B) Emigration

(C) Migration (D) Immigration

54. Montreal Protocol is associated with :

(A) Control of emission of ozone depleting substances

(B) Control of radioactive wastes

(C) Control of desertification

(D) Protection and management of forests

55. Which of the following is the most stable ecosystem ?

(A) Mountain (B) Forest

(C) Desert (D) Ocean

56. Mass of living matter at a trophic level in an area at any time is called :

(A) Detritus (B) Humus

(C) Standing state (D) Standing crop

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57. Which step is required for better survival of human being ?

(A) Conservation of wildlife
(B) Afforestation
(C) Ban on mining
(D) Reduced utilisation of resources

58. Rare endangered and endemic taxa can be found intact and flourishing in :

(A) Sacred groves
(B) Buffer zone
(C) Tropical forests
(D) Temperate forests

59. Endemic plants are those plants which are :

(A) Cosmopolitan in distribution
(B) Restricted to certain area
(C) Arctic region
(D) Grigarious in habit

60. In wildlife Forensics, identification of animals done by :

(A) Grouping
(B) Feathers
(C) Twigs
(D) Pug marks

61. To produce 400 seeds, the number of meiotic divisions required will be :

(A) 400
(B) 200
(C) 500
(D) 800

62. X-linked recessive gene is :

(A) Always expressed in male
(B) Always expressed in female
(C) Lethal
(D) Sub-lethal

63. Choose the chromosome, in a human that possesses least number of genes :

(A) 21st chromosome
(B) Autosome
(C) X-chromosome
(D) Y-chromosome

64. A couple has two daughters. What is the probability that the third child will also be a female ?

(A) 25%
(B) 50%
(C) 75%
(D) 100%

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65. The term genome denotes :

(A) Haploid set of chromosomes (B) Bivalent

(C) Monovalent (D) Diploid chromosomal set

66. The basis of DNA finger printing is :

(A) The double helix (B) Errors in base sequence

(C) Polymorphism in sequence (D) DNA replication

67. PCR and Restriction Fragment Length Polymorphism are the methods for :

(A) Study of enzymes (B) Genetic transformation

(C) DNA sequencing (D) Genetic fingerprinting

68. DNA replication in bacteria occurs :

(A) Within nucleolus (B) Prior to fission

(C) Just before transcription (D) During S-phase

69. Commonly used vectors for human genome sequencing are :

(A) T-DNA (B) BAC and YAC

(C) Expression Vectors (D) T/A cloning vectors

70. The association of histone H_1 with a nucleosome indicates that :

(A) DNA replication is occurring

(B) The DNA is condensed into a chromatin fibre

(C) The DNA double helix is exposed

(D) Transcription is occurring

71. Which of the following crops are not infected by *Agrobacterium tumefaciens* ?

(A) Cereals (B) Tomato

(C) Soyabean (D) Cotton

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72. Which bacterium is known as "natural genetic engineer ?

(A) *E. coli*
(B) *Bacillus globigli*
(C) *Arthrobacterium luteus*
(D) *Agrobacterium tumefaciens*

73. In PCR, annealing is done at :

(A) 94°C
(B) 40-60°C
(C) 72°C
(D) 4°C

74. Agarose, a chemical used in gel electrophoresis is extracted from :

(A) *E. coli* bacterium
(B) *Bacillus thuringensis*
(C) *Agrobacterium tumifaciens*
(D) Sea weeds

75. Formicarium is the term used for nest in which of the following ?

(A) Ants
(B) Termites
(C) Honey bees
(D) Birds

76. The genetically adapted local populations of a species which differ from each other on the basis of morphological and physiological characters, are termed :

(A) Ecotypes
(B) Ecotones
(C) Demes
(D) Ecolines

77. Vehulst-Pearl logistic curve is also known as :

(A) J-shaped curve
(B) S-shaped curve
(C) Both for J and S shaped curves
(D) Neither for J-shaped nor for S-shaped curves

78. The relationship between gross primary productivity (P_g) and net primary productivity (P_n) is represented by the equation :

(A) $P_n = P_g - R$
(B) $P_g = P_n - R$
(C) $P_n = P_g + R$
(D) $P_g = P_n \times R$

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79. Which of the following are termed 'key industry" animals ?

(A) Producers

(B) Primary consumers

(C) Secondary consumers

(D) Decomposers

80. Which is always present in photochemical smog ?

(A) Ozone

(B) CO_2

(C) SO_2

(D) CH_4

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