



Combined Class Test (CCT) - 01

August 01, 2017

Test Code : 01

Time allowed : 45 minutes.

Maximum marks : 180.

Instructions

- There will be negative marking.
- For each correct answer 4 marks will be given.
- For each wrong answer 1 mark shall be deducted.
- Name, Batch and NTB I.D. must be written in the answer sheet.

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1. A species is reproductively isolated from the another species, The concept of reproductive isolation was given by
 (A) Linnaeus (B) Aristotle
 (C) E. Mayr (D) de Condolle.
2. The unique feature(s) of living organisms are
 (A) Metabolism
 (B) Ability of self-replicate
 (C) Self-organise
 (D) All of the above.
3. Which of the following statement is incorrect
 (A) Biodiversity refers to number and type of organisms present on earth
 (B) The process of naming of living organism is known as nomenclature
 (C) Scientific names are acceptable to biologists all over the world
 (D) The number of species that are known and described range between 1.7 to 1.8 billion.
4. Two individuals belongs to the same species if they
 (A) Are reproductively isolated
 (B) Are morphologically similar
 (C) Are intrebreding & produce infertile offspring
 (D) Are intrebreding & produce fertile offspring.
5. Which taxonomical aid serves as quick referral systems in taxonomic studies
 (A) Botanical garden (B) Herbarium
 (C) Keys (D) Museum.
6. Select the incorrect statement
 (A) The fungi, the filamentous algae, the protenema of mosses all easily multiple by regeneration
 (B) Fungi multiply and spread easily by millions of asexual spores
 (C) Yeast and *Hydra* reproduces by budding
 (D) In unicellular organism reproduction is synonymous with growth.
7. Binomial nomenclature was given by
 (A) Aristotle
 (B) Carolus Linnaeus
 (C) R.H. Whittaker
 (D) E. Mayr.
8. Match the following

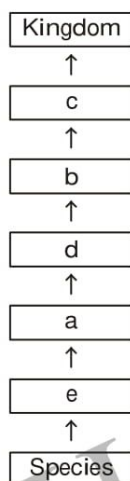
Column A	Column B
(a) Genus	(i) Muscidae
(b) Class	(ii) Diptera
(c) Family	(iii) Mammalia
(d) Order	(iv) <i>Solanum</i>
(A) a-ii, b-iv, c-i, d-iii	
(B) a-iv, b-iii, c-ii, d-i	
(C) a-iv, b-iii, c-i, d-ii	
(D) a-iii, b-iv, c-i, d-ii.	
9. Select the incorrect statements
 - (i) In case of plants, classes with a few similar characters are assigned to a higher category called division
 - (ii) Higher the taxa more are the characteristics that the members with in the taxon share
 - (iii) Order is higher category which is assemblage of families which exhibit more similar charcters
 - (iv) As we go down from kingdom to species the number of common characteristics goes on increasing

(A) i and ii	(B) ii and iii
(C) i and iv	(D) iv and iii.

10. The term 'biosystematics' was coined by

- (A) Bentham and Hooker
- (B) Linnaeus
- (C) Engler and Prantl
- (D) Camp and Gilly.

11. In the following flow diagram identify the correct categories



- (1) Wheat and mango belongs to same category 'b'.
- (2) Potato, brinjal and makoi belong to same category 'e'.
- (3) Muscidae, anacardiaceae and angiospermae belong to category 'a'.
- (4) Gorilla, gibbon and chimpanzee belongs to same category 'd'.
- (5) Dicotyledonae and monocotyledonae are included in the same category 'c'.

Select the correct statement :

- (A) 4, 2, 3 (B) 1, 3, 5
- (C) 2, 4 (D) 5, 2, 4.

12. Herbarium sheet carry a label providing information about

- (A) Date and place of collection
- (B) Local name and botanical name
- (C) Collector's name

(D) All of the above.

13. Order and other higher taxonomic categories are identified on the basis of

- (A) Vegetative characters
- (B) Aggregate of characters
- (C) Morphological characters
- (D) Similar characters.

14. Match the column A and B

Column A	Column B
(a) Family	(i) Sapindales
(b) Order	(ii) Angiospermae
(c) Class	(iii) Anacardiaceae
(d) Division	(iv) Dicotyledonae
(A) a-iii, b-i, c-ii, d-iv	
(B) a-i, b-ii, c-iii, d-iv	
(C) a-iii, b-i, c-iv, d-ii	
(D) a-iii, b-iv, c-ii, d-i.	

15. Who pioneered the currently accepted definition of a biological species

- (A) E. Mayr
- (B) J. Ray
- (C) Hutchinson
- (D) Benthum & Hooker.

16. Select the incorrect statement

- (A) There are many organisms which do not reproduce
- (B) Reproduction is characteristics of living organism
- (C) Reproduction can be an all-inclusive defining characteristics of living organism
- (D) No non-living object is capable of reproducing or replicating by itself.

17. System of providing a name with two component is known as

- (A) Systematics
- (B) Taxonomy
- (C) Binomial nomenclature

- (D) Classification.
18. Select the incorrect statements
- (A) The sum total of all chemicals reactions occurring in our body is known as metabolism
- (B) No non-living object exhibit metabolism
- (C) Metabolic reactions cannot be demonstrated outside body in a cell-free system
- (D) Metabolism is defining characteristic of living organisms.
19. Which taxonomic aid has collections of living plants for reference
- (A) Museum
- (B) Herbarium
- (C) Botanical garden
- (D) Zoological parks.
20. Select the incorrect statement-
- (A) Cat & Dog are included in same order
- (B) Cat & Tiger are included in same family
- (C) Gorilla & Gibbon are place in same class
- (D) Petunia & Datura are place in same genus.
21. Which is incorrect about rules of nomenclature
- (A) Biological names are generally in Latin and written in italics
- (B) The first word in biological name represents genetic name
- (C) Both the words in biological name, when handwritten are simultaneously underlined
- (D) The first word denoting the genus starts with capital letter.
22. Convolvulaceae & Solanaceae are included in the order polymaniales mainly on the basis of
- (A) Vegetative characters
- (B) Morphological characters
- (C) Floral characters
- (D) Both (A) and (B).
23. The most obvious and technically complicated feature of all living organism is
- (A) Conciousness (B) Metabolism
- (C) Growth (D) Reproduction.
24. Select the incorrect statement
- (A) The word systematics is derived from the Greek word 'Systema' which means systematic arrangement of organisms
- (B) Systematics takes into account evolutionary relationships between organisms
- (C) Each taxon or rank represents unit of classification
- (D) The taxonomic groups/categories are distinct biological entities and not merely morphological aggregates.
25. Families are characterised on the basis of
- (A) Morphological differences
- (B) Vegetative feature
- (C) Reproductive feature
- (D) Both (C) and (B).
26. Dog and cat will have maximum similarity or will share maximum character at which taxon
- (A) Order (B) Genus
- (C) Family (D) Class.
27. Select the correct options
- (i) Cellular organisation of the body is the defining feature of life forms
- (ii) Photoperiod affects reproduction in seasonal breeders both plants and animals
- (iii) The growth exhibited by living organism is by accumulation of material on the surface
- (iv) The interaction result in a emergent property at a higher level of organisation
- (A) i and ii (B) iii and iv
- (C) ii and iv only (D) i, ii and iv.
28. All organisms, including those in plant and animal kingdom have which taxon as lowest category
- (A) Genus (B) Family
- (C) Species (D) Subspecies.
29. Select the correct statements

- (i) All organisms from the prokaryotes to most complex eukaryotes can sense and respond to environmental cues
- (ii) Biology is story of evolution of living organism
- (iii) All living organisms - present, past and future are linked to one another by the sharing of the common genetic material of same degree

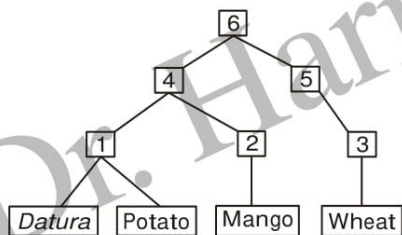
(iv) Microbes do not exhibit metabolism

- (A) i and iii (B) i and ii
(C) ii and iii (D) i, ii and iv.

30. Dog, cat and tiger are placed together in which taxon

- (A) Genus (B) Order
(C) Species (D) Family.

31. Recognise the following flow diagram and the find correct option according to taxonomic hierarchy



- (A) 1-Polymoniales, 2-Sapindales, 3-Poales, 4-Angiospermae, 5- Monocotyledonae, 6-Dicotyledonae
- (B) 1-Solanaceae, 2- Anacardiaceae, 3- Poaceae, 4- Polymoniales, 5-Poales, 6-Angiospermae
- (C) 1-Solanum, 2-*Mangifera*, 3-*Triticum*, 4-Dicotyledonae, 5- Monocotyledonae, 6- Plantae
- (D) 1-Polymonidles, 2- Sapindales, 3- Poales, 4- Dicotyledonae, 5- Monocotyledonae, 6- Plantae.

32. In fish *Catla catla* the specific name is identical with the generic name, thus it is an example of

- (A) Autonym (B) Tautonym
(C) Synonym (D) Homonym.

33. Match the column A and B

Column A

Column B

- | | |
|-----------------------------|---------------|
| (a) Indica | (i) Order |
| (b) Macardiaceae | (ii) Family |
| (c) Sapindales | (iii) Species |
| (d) Angiospermae | (iv) Class |
| (e) Dicotyledonae | (v) Division |
| (A) a-iii, b-i, c-ii, d-iv | |
| (B) a-i, b- ii, c-iii, d-iv | |
| (C) a-iii, b-i, c-iv, d-ii | |
| (D) a-iii, b-iv, c-ii, d-i. | |

34. One should be able to distinguish one species from the other closely related species on the basis of

- (A) Morphological differences
(B) Cytological differences
(C) Morphological similarities
(D) Evolutionary relationship.

35. Which of the following is incorrect

- (A) Living organisms are self-replicating, self-evolving and self-regulating interactive systems capable of responding to external stimuli
- (B) In single celled organisms we are not very clear about usage of the two terms - growth and reproduction
- (C) Human being is the only organism who is aware of himself
- (D) Properties of tissues are present in the constituent cells.

36. The species (man, housefly, mango, wheat, dog, cat, lion, tiger, potato, brinjal, makoi and leopard) given here belong to how many different orders

- (A) 4 (B) 7
(C) 5 (D) 6.

37. In relation to the biological or scientific names which is wrong

- (A) Scientific names are generally in Latin and printed in Italics
- (B) Scientific names ensure that one organism has only one name

- (C) Scientific names are used all over the world
(D) One scientific name can be used for two related species.
38. The division and class of wheat is
- (A) Dicotyledonae and angiospermae respectively
(B) Monocotyledonae and angiospermae respectively
(C) Angiospermae and dicotyledonae respectively
(D) Angiospermae and monocotyledonae respectively.
39. Select the incorrect statement
- (A) Families are characterised on the basis of both vegetative and reproductive features of plant species
(B) Genera *Solanum*, *Petunia* and *Datura* are placed in the family solanaceae
(C) Genus comprises group of related families
(D) Each genus may have one or more than one specific epithet representing different organism but having morphological similarities.
40. Categories like species, genus and families are based on a number of
- (A) Vegetative characters
(B) Morphological characters
(C) Similar characters
(D) All of the above.
41. The division and class of wheat is
- (A) Dicotyledonae and angiospermae respectively
(B) Monocotyledonae and angiospermae respectively
(C) Angiospermae and dicotyledonae respectively
(D) Angiospermae and monocotyledonae respectively.

Read the assertion and reason carefully to mark the correct option in question.

- (A) If both assertion and reason are true and the reason is the correct explanation of the assertion
(B) If both assertion and reason are true but reason is not the correct explanation of the assertion
(C) If assertion is true but reason is false.
(D) If both assertion and reason are false.
42. Assertion : Genus comprises a group of related species
Reason : Taxon represents a taxonomic group of any ranking
43. Assertion : For placing organisms in various categories, the basic requirement is the knowledge of characters of an individual or group of organisms
Reason : Knowledge of characters helps in identifying similarities and dissimilarities among the individuals of the same kind of organisms as well as other kinds of organisms.
44. Assertion : An phylum includes related classes
Reason : Families like convolvulaceae and solonaceae are included in the order polymoniales mainly based on the floral characters.
45. Assertion : In early days, human beings needed to find sources for their basic needs of food, clothing and shelter.
Reason : The earliest classifications were based on the 'uses' of various organisms