NEW TREND BIOLOGY™

success without stress

Combined Class Test (CCT) - 02

August 19, 2017

Test Code : 02

Time allowed : 50 minutes.
Maximum marks : 180.

Dr. Hariom Gangwar
NEW TREND BIOLOGY

Instructions

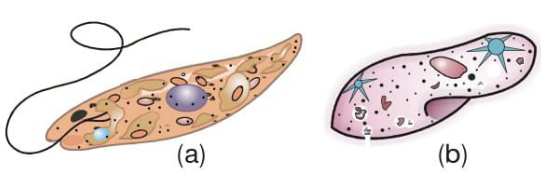
- There will be negative marking.
- For each correct answer 4 marks will be given.
- For each wrong answer 1 mark shall be deducted.
- Name, Batch and NTB I.D. must be written in the answer sheet.

Dr. Hariom Gangwar
MBBS (KGMC)

1. Heterotrophic bacteria are helpful in
   (A) Making curd from milk
   (B) Production of antibiotics
   (C) Fixing nitrogen in legume roots
   (D) All of the above.
2. Select the correct statements.
   (i) A multicellular organism grows by cell division
   (ii) In plants, growth by cell division occurs only upto a certain age
   (iii) In animals, the growth by cell division occurs continuously throughout their life span
   (iv) Cell division occurs in certain tissue to replace lost cells in animals
   (A) i and ii (B) ii and iii
   (C) ii and iv (D) i and iv.
3. Golden algae and diatoms belong to which group
   (A) Euglenoids (B) Dinoflagellates
   (C) Chrysophytes (D) Slime moulds.
4. Select the incorrect statement
   (A) Cyanobacteria are unicellular, colonial or filamentous, freshwater / marine or terrestrial algae
   (B) Cyanobacteria often forms blooms in polluted water bodies
   (C) Some of cyanobacteria can fix atmospheric nitrogen in specialised cells called heterocysts
   (D) Photosynthetic autotrophic bacteria play a great role in recycling nutrients like nitrogen, phosphorus, iron and sulphur.
5. Match the following

Column A	Column B
(a) Purple sulphur bacteria	(i) *Rhodospirillum*
(b) Green non-sulphur bacteria	(ii) *Chlorobium*
(c) Green sulphur bacteria	(iii) *Chloronema*
(d) Purple non-sulphur bacteria	(iv) *Chromatium*

   (A) a-ii, b-i, c-iv, d-iii
   (B) a-ii, b-iv, c-i, d-iii
   (C) a-iv, b-iii, c-ii, d-i
   (D) a-iii, b-iv, c-ii, d-i.
6. Mountains, boulders and sand mounds also grow
   (A) If we take increase in number as a criterion for growth
   (B) If we take increase in body mass as criterion for growth
   (C) By cell division
   (D) If we take both increase in body mass and number as a criterion for growth.
7. The branch of knowledge dealing with rules and principles for identification, nomenclature and classification is referred as
   (A) Nomenclature (B) Taxonomy
   (C) Systematics (D) Characterisation.
8. Select the incorrect statement
   (A) Euglenoids have two flagella, a short and a long
   (B) Under unfavourable conditions, slime moulds form and aggregration called plasmodium which may grow and spread over several feet
   (C) During unfavourable conditions, the plasmodium differentiates and forms fruiting bodies bearing spores at their tips
   (D) Euglenoids are photosynthetic in the presence of sunlight but in absence of light they behave like heterotrophic by predating on other smaller organisms.
9. Recognise the figure and find suitable matching



   (A) 'b' posses the character of both plants and animals so it is connecting link between plants and animals
   (B) 'a' are fresh water organisms found in stagnant water and has two flagella of equal length

Dr. Hariom Gangwar
New Trend Biology

(C) 'b' have two types of nuclei (nuclear dimorphism) smaller micronucleus or vegetative nucleus and larger macronucleus /reproductive nucleus

(D) During unfavourable (dessication) condition, 'a' forms cyst which is made of carbohydrate.

10. Who was the earliest to attempt a more scientific basis for classification

(A) Linnaeus (B) Whittaker

(C) Aristotle (D) E. Mayr.

11. Which classification system has included bacteria, blue green algae, fungi and mosses in the same kingdom

(A) Two kingdom classification

(B) Four kingdom classification

(C) Three kingdom classification

(D) Five kingdom classification.

12. Match the following

Column A	Column B
(a) Traditional concept of species	(i) Lotsy
(b) Typological concept of species	(ii) E. Mayr
(c) Genetic species concept	(iii) Linnaeus
(d) Biological concept of species	(iv) Aristotle

(A) a-iv, b-iii, c-i, d-ii

(B) a-iii, b-iv, c-i, d-ii

(C) a-ii, b-iii, c-iv, d-i

(D) a-iii, b-i, c-iv, d-i.

13. Select the incorrect statements.

(A) The fungi, the filamentous algae, the protonema 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.

14. Who divided animals into two groups those which had red blood and those that did not

(A) R. H. Whittaker (B) Linnaeus

(C) Aristotle (D) John Hutchinson.

15. Limitations or drawbacks of two kingdom classification are

(A) The system did not distinguish between the eukaryotes and prokaryotes

(B) Unicellular and multicellular organisms were placed together

(C) Photosynthetic and non-photosynthetic organisms were not distinguished

(D) All of the above.

16. Select the incorrect statement about dinoflagellates

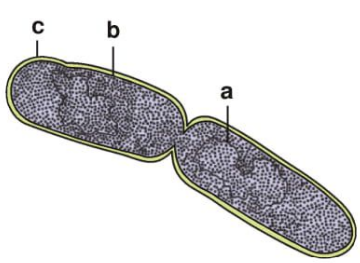
(A) Dinoflagellates appear yellow, green, brown, blue or red depending on the main pigments present in their cells

(B) Toxin released by diatoms may even kill other marine animals such as fishes

(C) Most of them have two flagella ; one lies longitudinally and the other transversely in a furrow between the wall plates

(D) *Gonyaulax* undergo rapid multiplication that they make the sea appear red.

17. Recognise the figure and find the suitable matching



(A) a-Nucleus, b-cell membrane, c-capsule

(B) a-DNA, b-cell membrane, c-cell wall

(C) a-DNA, b-cell wall, c-capsule

(D) a-Nucleus, b-cell membrane, c-cell wall.

18. R.H. Whittaker is related to

(A) Two kingdom classification

(B) Three kingdom classification

Dr. Hariom Gangwar
New Trend Biology

(C) Four kingdom classification

(D) Phylogenetic classification.

19. Five kingdom classification system was proposed in which year

(A) 1869 (B) 1864

(C) 1969 (D) 1984.

20. Select the incorrect statement

(A) Archaebacteria differ from other bacteria in having different cell wall structure

(B) Methanogens are present in gut of ruminants

(C) Methanogens are responsible for the production of methane from the dung of ruminant animals

(D) Archaebacteria cannot live in some of the harsh habitats.

21. Match the following

Column A	Column B
(a) Cocci	(i) Comma shaped
(b) Bacilli	(ii) Spherical
(c) Vibrio	(iii) Rod shaped
(d) Spirilla	(iv) Spiral

(A) a-iv, b-iii, c-i, d-ii

(B) a-ii, b-iii, c-iv, d-i

(C) a-iii, b-iii, c-i, d-iv

(D) a-ii, b-iii, c-i, d-iv.

22. Members of which group have infectious spore-like stage in their life cycle

(A) Sporozoans

(B) Chrysophytes

(C) Slime moulds

(D) Ciliated protozoans.

23. Linnaeus is related to

(A) Binomial nomenclature

(B) Systema Naturae

(C) Two kingdom system of classification

(D) All of the above.

24. In *E.coli* conjugation was discovered by

(A) Zinder and Tatum (1946)

(B) Lederberg and Zinder (1952)

(C) Lederberg and Tatum (1928)

(D) Tatum and Lederberg (1946).

25. Choose the incorrect statement regarding the given figure

(A) It is a store house of collected plant specimens that are dried, pressed and preserved on sheets

(B) It serves as quick referral systems in taxonomical studies

(C) It has collection of preserved plant and animal specimens for study and reference

(D) It represents a taxonomical aid.

26. Aristotle classification systems for plant was based on

(A) Evolutionary relationship

(B) Simple morphological characters

(C) Reproductive features

(D) All of the above.

27. Match the following

Column A	Column B
(a) Halophiles	(i) Hot springs
(b) Methanogens	(ii) Extreme salty areas
(c) Thermoacidophiles	(iii) Marshy areas

(A) a-ii, b-i, c-iii

(B) a-ii, b-iii, c-i

(C) a-i, b-iii, c-ii

(D) a-iii, b-ii, c-i.

28. Select the incorrect statement

(i) Cell wall of both gram +ve and gram –ve bacteria have peptidoglycan or murein

(ii) The difference in gram +ve and gram –ve bacteria is due to cell membrane

Dr. Hariom Gangwar New Trend Biology

(iii) Bacteria are diploid (never haploid) and lack alternation of generation because there is neither syngamy nor meiosis

(iv) Bacteria reproduce by a sort of asexual reproduction by adopting a primitive type of DNA transfer from one bacterium to the other

(v) Endospore are thick walled spores formed in unfavourable condition in *Clostridium* and bacilli type of bacteria.

(A) i, ii and iv (B) ii, iii and iv

(C) ii, iii and v (D) i, iv and v.

29. The standard size of herbarium sheet is

(A) 11.5 cm × 16.5 cm

(B) 11.5' × 16.5'

(C) 12.5' × 16.5'

(D) 11.5" × 16.5".

30. Which of the following is the correct date of publication of the book entitled "Species Plantarum" authored by Carolus Linnaeus? This date is starting point date for modern plant nomenclature

(A) 1st May 1753 (B) 1st January 1935

(C) 1st January 1856 (D) 1st May 1953.

31. According to two kingdom classification *Chlamydomonas* & *Spirogyra* were placed in

(A) Animali (B) Plantae

(C) Protista (D) Monera.

32. Match the following

Column A	Column B
(a) Diatoms	(i) Protozoan
(b) *Gonyaulax*	(ii) Chrysophytes
(c) *Euglena*	(iii) Dinoflagellates
(d) *Amoeba*	(iv) Euglenoids

(A) a-iii, b-iv, c-ii, d-i

(B) a-iii, b-i, c-iv, d-ii

(C) a-ii, b-iii, c-iv, d-i

(D) a-iv, b-iii, c-i, d-ii.

33. Select the incorrect statement

(i) Instead of cell wall, euglenoids have a protein rich layer called pellicle which makes their body hard

(ii) Majority of the euglenoids are fresh water organisms found in stagnant water

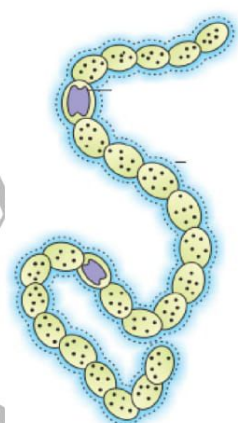
(iii) Pigments of euglenoids are identical to those present in higher plants

(iv) *Euglena* shows only heterotrophic nutrition

(A) i and ii (B) ii and iii

(C) iii and iv (D) i and iv.

34. Recognise the figure and find incorrect option



(A) It can fix atmospheric nitrogen in legumes

(B) It has chlorophyll 'a' similar to green plants and photosynthetic autotrophic

(C) This is a filamentous blue-green alga included in kingdom monera

(D) Nitrogen fixation done in specialised cells called heterocysts.

35. Which kingdom has brought together *Chlorella* with *Paramoecium* and *Amoeba*

(A) Monera (B) Plantae

(C) Protista (D) Animalia.

36. Match the following

Column A	Column B
(a) *Plasmodium*	(i) Amoeboids
(b) *Trypanosoma*	(ii) Ciliates
(c) *Entamoeba*	(iii) Sporozoans
(d) *Paramoecium*	(iv) Flagellates

(A) a-iii, b-i, c-iv, d-ii

Dr. Hariom Gangwar New Trend Biology

(B) a-iii, b-iv, c-i, d-ii

(C) a-ii, b-i, c-iv, d-ii

(D) a-iii, b-iii, c-iv, d-i.

37. Which bacteria oxidise various inorganic substances such as nitrates, nitrites and ammonia and use the released energy for their ATP production

(A) Archaebacteria

(B) Photosynthetic autotrophs

(C) Chemosynthetic autotrophs

(D) Heterotorph.

38. Select the incorrect statement

(A) Bacteria as a group show the most extensive metabolic diversity

(B) Bacterial structure is very complex but they are very simple in behaviour

(C) All prokaryotic organisms were grouped together under kingdom monera

(D) The vast majority of bacteria are heterotrophic.

39. Match the following

Column A		Column B
Kingdom		Level of organisation
(a) Monera	(i)	Tissue/organ
(b) Protista	(ii)	Tissue/organ/organ system
(c) Fungi	(iii)	Cellular
(d) Animalia	(iv)	Multicellular/loose tissue

(A) a-iii, b-i, c-iv, d-ii

(B) a-iii, b-iii, c-iv, d-ii

(C) a-iii, b-ii, c-iv, d-i

(D) a-ii, b-iii, c-iv, d-i.

40. Which disease is caused by bacteria in plant

(A) Late blight of potato

(B) Mosaic disease of tobacco

(C) Citrus canker

(D) Potato spindle tuber disease.

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.

41. Assertion : Members of chrysophytes are called plankton

Reason : Chrysophtyes are microscopic and float passively in water current.

42. Assertion : Slime moulds are saphrophytic protists.

Reason : The body of slime moulds moves along decaying twings and leaves engulfing organic material.

43. Assertion : All organisms including those in the plant and animal kingdoms have species as the lowest category

Reason : Taxonomic studies consider a group of individual organisms with fundamental similarities as a species.

44. Assertion : Whittaker's classification has put together organism like *Amoeba* and *Chlamydomonas* which were placed in different kingdoms in earlier classifications.

Reason : Criteria for Whittaker's classification is changed from earlier system.

45. Assertion : The boundaries of the kingdom protista are not well-defined.

Reason : What may be 'a photosynthetic protistan' to one biologist may be 'a plant' to another.

Dr. Hariom Gangwar
New Trend Biology