DPP - Daily Practice Problems

Chapter-wise Sheets

Date : Start Time : End Time :

BIOLOGY CB02

SYLLABUS : Biological Classification

Max. Marks : 180 **Marking Scheme :** + 4 for correct & (–1) for incorrect **Time : 60 min.**

INSTRUCTIONS : This Daily Practice Problem Sheet contains 45 MCQs. For each question only one option is correct. Darken the correct circle/ bubble in the Response Grid provided on each page.

1. Which of the following processes are involved in the reproduction of protista?
(a) Binary fission and fragmentation
(b) Cell fusion and zygote formation
(c) Spore formation and fragmentation
(d) Budding and spore formation

2. In prokaryotes, the genetic material is
(a) linear DNA with histones
(b) circular DNA with histones
(c) linear DNA without histones
(d) circular DNA without histones

3. Which of the following bacteria carry out oxygenic photosynthesis by means of a photosynthetic apparatus similar to the eukaryotes?
(a) Purple sulphur bacteria
(b) Green sulphur bacteria
(c) Cyanobacteria
(d) More than one option is correct

4. Bacteria is a group of prokaryotic organisms which is characterised by
(a) 70 S ribosomes
(b) Peptidoglycan cell wall
(c) Simple structure and complex behaviour
(d) All of the above.

5. What may be a 'photosynthetic protistian' to one biologist may be 'a plant' to another? Which of the given below features of slime moulds shows linkage with plant?
(a) Presence of holozoic nutrition
(b) Presence of diverse sexual reproduction
(c) Slime moulds have cellulosic spore wall
(d) Formation of fruiting bodies

RESPONSE GRID	1. ⓐⓑⓒⓓ	2. ⓐⓑⓒⓓ	3. ⓐⓑⓒⓓ	4. ⓐⓑⓒⓓ	5. ⓐⓑⓒⓓ

Space for Rough Work

6. Choose the correct match
   (a) *Gonyaulax* – Red sea
   (b) *Euglena* – Chlorophyll a & c
   (c) Desmids – Chrysophytes
   (d) *Gymnodinium* – Hemicellulosic plates in wall
7. Nuclear dimorphism is shown by
   (a) *Paramecium* (b) *Amoeba*
   (c) *Plasmodium* (d) *Trypanosoma*
8. Most common type of genetic material present in bacteriophages is
   (a) ds RNA (b) ss RNA
   (c) ds DNA (d) ss DNA
9. Which of the following statement about Mycoplasma is true:
   (a) They are smallest, disease causing thin walled organisms
   (b) They differ from viruses in being cellular in organisation
   (c) Insensitive to several antibiotics as they have 70S ribosomes
   (d) They can survive without photosynthetic pigments and genetic material
10. Consider the following characters:
    Non-motile spores, saprophytic unicellular eukaryotes, transfer of gametes by wind currents, Differentiation of plasmodium under suitable conditions.
    How many of the characters given in box belong to slime moulds?
    (a) Four (b) One
    (c) Three (d) Two
11. Eubacteria can be differentiated from archaebacteria on the basis of
    (a) Ribosomes (b) Gene of tRNA
    (c) Cell wall (d) Nutrition
12. Select the pair that consists of plant or animal bacterial diseases.
    (a) Cholera and typhoid
    (b) Citrus canker and crown gall
    (c) Malaria and dengue
    (d) Both (a) and (b)
13. Cyanobacteria are classified under which of the following kingdoms?
    (a) Monera (b) Protista
    (c) Algae (d) Plantae
14. _____ are important decomposers that cause decay and decomposition of dead bodies of plants and animals.
    (a) Saprotrophic bacteria
    (b) Saprotrophic fungi
    (c) Plants, like *Sarracenia*
    (d) Both (a) and (b)
15. Chrysophytes are
    (a) planktons (b) nektons
    (c) benthic organisms (d) rooted submerged.
16. Eukaryotic, achlorophyllous and heterotrophic organisms are grouped under which of the following kingdoms?
    (a) Monera (b) Protista
    (c) Fungi (d) Plantae
17. Virion is
    (a) nulceic acid of virus
    (b) antiviral agent
    (c) protein of virus
    (d) completely assembled virus outside host.
18. In the five-kingdom system of classification, which single kingdom out of the following can include blue, green algae, nitrogen-fixing bacteria and methanogenic archaebacteria?
    (a) Fungi (b) Plantae
    (c) Protista (d) Monera
19. Viruses that infect bacteria, multiply and cause their lysis, are called
    (a) Lysozymes (b) Lipolytic
    (c) Lytic (d) Lysogenic
20. Phenetic classification of organisms is based on
    (a) Observable characteristics of existing organisms
    (b) The ancestral lineage of existing organisms
    (c) Dendogram based on DNA characteristics
    (d) Sexual characteristics
21. The practical purpose of classification of living organisms is to
    (a) explain the origin of living organisms
    (b) trace the evolution of living organisms
    (c) name the living organisms
    (d) facilitate identification of unknown organisms

RESPONSE GRID					
	6. (a)(b)(c)(d)	7. (a)(b)(c)(d)	8. (a)(b)(c)(d)	9. (a)(b)(c)(d)	10. (a)(b)(c)(d)
	11. (a)(b)(c)(d)	12. (a)(b)(c)(d)	13. (a)(b)(c)(d)	14. (a)(b)(c)(d)	15. (a)(b)(c)(d)
	16. (a)(b)(c)(d)	17. (a)(b)(c)(d)	18. (a)(b)(c)(d)	19. (a)(b)(c)(d)	20. (a)(b)(c)(d)
	21. (a)(b)(c)(d)				

Space for Rough Work

22. A system of classification in which a large number of traits are considered, is
(a) artificial system (b) synthetic system
(c) natural system (d) phylogenetic system

23. In five kingdom system, the main basis of classification is
(a) structure of nucleus (b) mode of nutrition
(c) structure of cell wall (d) asexual reproduction

24. Phenetic classification is based on
(a) Sexual characteristics
(b) The ancestral lineage of existing organisms
(c) Observable characteristics of existing organisms
(d) Dendograms based on DNA characteristics

25. In which kingdom would you classify the archaebecteria and nitrogen-fixing organisms. If the five-kingdom system of classification is used ?
(a) Monera (b) Plantae
(c) Fungi (d) Protista

26. Which of the following statements is not true for retroviruses?
(a) DNA is not present at any stage in the life cycle of retroviruses
(b) Retroviruses carry gene for RNA-dependent DNA polymerase
(c) The genetic material in mature retroviruses is RNA
(d) Retroviruses are causative agents for certain kinds of cancer in man

27. On how many criteria living organisms have been classified into five kingdoms ?
(a) Two (b) Four
(c) Five (d) Three

28. First true phylogenetic system of classification was given by
(a) Eichler (b) Engler and Prantl
(c) de Jussiaeu (d) de Candolle

29. Which of the following is not a protist ?
(a) *Taenia* (b) *Amoeba*
(c) *Paramecium* (d) *Euglena*

30. Which of the following is not correctly matched?
(a) Root knot disease - *Meloidogyne javanica*
(b) Smut of bajra - *Tolysporium penicillariae*
(c) Covered smut of barley - *Ustilago nuda*
(d) Late blight of potato - *Phytophthora infestans*

31. Which one of the following character was not used by R.H. Whittaker for biological classification ?
(a) Cell structure
(b) Physiological characters
(c) Thallus organisation
(d) Phylogenetic relationships

32. The first organisms to appear on earth were
(a) photoautotrophs (b) chemoautotrophs
(c) chemoheterotrophs (d) heterotrophs

33. 'Comma' shaped bacteria are known as
(a) coccus (b) spiral
(c) spirillum (d) vibrio

34. Slime moulds in the division myxomycota (true slime moulds) have
(a) pseudoplasmodia.
(b) spores that develop into free living amoeboid cells.
(c) spores that develop into flagellated gametes.
(d) feeding stages consisting of solitary individual cells.

35. Which one of the following statements about Mycoplasma is wrong ?
(a) They are pleomorphic.
(b) They are sensitive to penicillin.
(c) They cause diseases in plants.
(d) They are also called (Pleuro pneumonia like organisms) PPLO.

36. African sleeping sickness is due to
(a) *Plasmodium vivax* transmitted by Tse-tse fly
(b) *Trypanosoma lewsii* transmitted by Bed Bug
(c) *Trypanosoma gambiense* transmitted by *Glossina palpalis*
(d) *Entamoeba gingivalis* spread by Housefly

RESPONSE GRID					
	22. ⓐⓑⓒⓓ	**23.** ⓐⓑⓒⓓ	**24.** ⓐⓑⓒⓓ	**25.** ⓐⓑⓒⓓ	**26.** ⓐⓑⓒⓓ
	27. ⓐⓑⓒⓓ	**28.** ⓐⓑⓒⓓ	**29.** ⓐⓑⓒⓓ	**30.** ⓐⓑⓒⓓ	**31.** ⓐⓑⓒⓓ
	32. ⓐⓑⓒⓓ	**33.** ⓐⓑⓒⓓ	**34.** ⓐⓑⓒⓓ	**35.** ⓐⓑⓒⓓ	**36.** ⓐⓑⓒⓓ

Space for Rough Work

37. Which one single organism or the pair of organisms is **correctly** assigned to its taxonomic group?
(a) *Paramecium* and *Plasmodium* belong to the same kingdom as that of *Penicillium*
(b) Lichen is a composite organism formed from the symbiotic association of an algae and a protozoan
(c) Yeast used in making bread and beer is a fungus
(d) *Nostoc* and *Anabaena* are examples of protista

38. Two animals which are the members of the same order must also be the members of the same :
(a) Class (b) Family
(c) Genus (d) Species

39. Bacteria lack alternation of generation because there is
(a) neither syngamy nor reduction division.
(b) distinct chromosomes are absent.
(c) no conjugation.
(d) no exchange of genetic material.

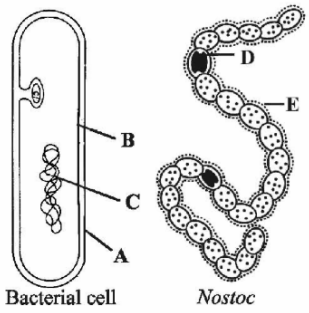
40. Capsid is
(a) genetic material of virus
(b) protein cover of virus
(c) extra genetic material of bacterium
(d) house keeping genome of bacterium

41. A group of fungi with septate mycelium in which sexual reproduction is either unknown or lacking are classified under
(a) phycomycetes (b) deuteromycetes
(c) ascomycetes (d) basidiomycetes

42. A few organisms are known to grow and multiply at temperatures of 100–105°C. They belong to
(a) marine archaebacteria
(b) thermophilic sulphur bacteria
(c) blue-green algae (cyanobacteria)
(d) thermophilic, subaerial fungi

43. Mycoplasma is pleuromorphic due to
(a) absence of cell wall
(b) presence of three layered cell membrane
(c) the presence of sterol
(d) None of these

44. Refer to the given figures of bacteria cell and *Nostoc* and choose the option which shows correct label for the structures marked as A, B, C, D and E ?



(a) A – Cell wall, B – Cell membrane, C – Heterocyst, D – DNA, E – Mucilagenous sheath
(b) A – Cell wall, B – Cell membrane, C – DNA, D – Heterocyst, E – Mucilagenous sheath
(c) A – Mucilagenous sheath, B – Cell membrane, C – DNA, D – Heterocyst, E – Cell wall
(d) A – Cell membrane, B – Cell wall, C – DNA, D – Heterocyst, E – Mucilagenous sheath

45. Choose the correct names of the different bacteria given below according to their shapes.

(a) A – Cocci, B – Bacilli, C – Spirilla, D – Vibrio
(b) A – Bacilli, B – Cocci, C – Spirilla, D – Vibrio
(c) A – Spirilla, B – Bacilli, C – Cocci, D – Vibrio
(d) A – Spirilla, B – Vibrio, C – Cocci, D – Bacilli

RESPONSE GRID					
	37. ⓐⓑⓒⓓ	38. ⓐⓑⓒⓓ	39. ⓐⓑⓒⓓ	40. ⓐⓑⓒⓓ	41. ⓐⓑⓒⓓ
	42. ⓐⓑⓒⓓ	43. ⓐⓑⓒⓓ	44. ⓐⓑⓒⓓ	45. ⓐⓑⓒⓓ	

Space for Rough Work

DAILY PRACTICE PROBLEM DPP CHAPTERWISE 2 - BIOLOGY			
Total Questions	45	Total Marks	180
Attempted		Correct	
Incorrect		Net Score	
Cut-off Score	45	Qualifying Score	60
Success Gap = Net Score – Qualifying Score			
Net Score = (Correct × 4) – (Incorrect × 1)			