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**TERM I –EXAMINATION (2021-22)**

**CLASS XI BIOLOGY**

**BIOLOGY (SET 3)**

**Time: 90 Minutes**

**General Instructions:**

**1. The Question Paper contains three sections.**

**2. Section A has 24 questions. Attempt any 20 questions.**

**3. Section B has 24 questions. Attempt any 20 questions.**

**4. Section C has 12 questions. Attempt any 10 questions.**

**5. All questions carry equal marks (50 questions X0.7)**

**6. There is no negative marking.**

**SECTION - A**

**Section – A consists of 24 questions. Attempt any 20 questions from this section. The first attempted 20 questions would be evaluated.**

**1.** **The chief water conducting elements of xylem in gymnosperms are:**

**a) Fibres b) vessels c) tracheids d) transfusion tissue**

**2. Linnaeus devised a system of nomenclature called:**

**a) Mononomial b) Trinomial c) Binomial d) Polynomial**

**3.** **Floral features are generally used for identification of angiosperms because:**

**a) Reproductive parts are more conservative**

**b) Flowers are nice to work with**

**c) Flowers have various colours and scents**

**d) Flowers can be safely pressed**

**4.** **A taxon is:**

**a) A group of related plants and animals**

**b) A taxonomic group of any ranks**

**c) A type of living organism**

**d) A group of related families**

**5.** **Species is a group of organisms which:**

**a) Interbreed freely b) Do not interbreed c) Live together d) None of these**

**6. These organisms are mostly marine and photosynthetic.**

**a) Dinoflagellates b) Protozoans c) Slime moulds d) Lichens**

**7.** **The protists have:**

**a) Membrane bound nucleoproteins lying embedded in the cytoplasm**

**b) Only free nucleic acid aggregates**

**c) Gene containing nucleoproteins condensed together in loose mass**

**d) Nucleoprotein in direct contact with the rest of the cell substance.**

**8. Lichens are well known combination of an alga and a fungus, where fungus has:**

**a) a symbiotic relationship with the alga**

**b) a parasitic relationship with the alga**

**c) an epiphytic relationship with the alga**

**d) a saprophytic relationship with the alga**

**9.** **Cell theory is not applicable for:**

**a) bacteria b) fungus c) viruses d) algae**

**10.** **Algae differ from Bryophytes in possessing:**

**a) Chlorophyll α and β b) Aerobic respiration**

**c) Naked sex organs d) Sex organs covered with sterile covering**

**11.** **Fusion of two gametes which are dissimilar in size is termed as:**

**a) Isogamy b) Anisogamy c) Oogamy d) Zoogamy**

**12. Double fertilization is found without any exception in:**

**a) Bryophytes b) Pteridophytes c) Gymnosperms d) Angiosperms**

**13.** **Sea horse is an example of:**

**a) Pisces b) Reptilia c) Aves d) Mammalia**

**14.** **Blubber is a term for:**

**a) Artificial rubber b) Subcutaneous fat of Whale c) Irregular heart beat d) None of these**

**15.** **Which of the following statements is true?**

**a) All chordates are vertebrates**

**b) All vertebrates are chordates**

**c) Non-chordates have a vertebral column**

**d) Invertebrates possess a tubular nerve cord**

**16.** **A link between non-chordates and chordates is:**

**a) Tadpole larva b) Balanoglossus c) Sphenodon d) Crocodiles**

**17.** **Fibrous root system is mostly found in:**

**a) Dicot plants b) Monocot plants c) Pteridophytes d) Bryophytes**

**18. The development of fruit without fertilization is:**

**a) Parthenogenesis b) Parthenocarpy c) Apomixis d) Apogamy**

**19. Which one of the following roots contain nitrogen fixing bacteria Rhizobium?**

**a) Assimilatory roots b) Nodulated roots c) Napiform roots d) All roots**

**20.** **A flower which can be divided into equal vertical halves by more than one plane of division is: a) Actinomorphic b) Zygomorphic c) Heteromorphic d) Cyclic**

**21.** **Which one of the following is not a connective tissue?**

**a) Bone b) Cartilage c) Blood d) Muscles**

**22.** **The vacuole is lined by a membrane called:**

**a) tonoplast b) jacket c) cell membrane d) tonoplasm**

**23.** **Cell theory was put forward by:**

**a) Schleiden and Schwann b) Sutton and Boveri**

**c) Watson and Crick d) Darwin and Wallace**

**24.** **The ciliated columnar epithelial cells in humans are known to occur in:**

**a) Eustachian tube and stomach lining b) Bronchioles and fallopian tube**

**c) Bile duct and oesophagus d) Fallopian tube and urethra**

**SECTION - B**

**Section - B consists of 24 questions (Q. No.25 to 48). Attempt any 20 questions from this section. The first attempted 20 questions would be evaluated**

**Question No. 25 to 28 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:**

**A. Both A and R are true and R is the correct explanation of A**

**B. Both A and R are true and R is not the correct explanation of A**

**C. A is true but R is false**

**D. A is False but R is true E. Both A & R are false**

**25. Assertion: Lysosomes are called suicide bags of the cell.**

**Reason: Lysosomes carry on autolysis (autophagy) in the cell.**

**26.** **Assertion: Hemoglobin is a quaternary protein.**

**Reason: It consists of 4 amino acid units.**

**27.** **Assertion: There is no mechanism in a cell to control enzyme action.**

**Reason: Enzymes do not require any control mechanism.**

**28.** **Assertion: Mitochondria are known as the power houses of the cell.**

**Reason: Mitochondria generate biologically useful energy (ATP) for the cell’s activities by oxidation of fuel.**

**29. Solanum, Panthera, Homo are examples of  
(a) Family (b) Division (c) Genera (d) Species epithet**

**30. Bacteria that live in hot springs are called  
(a) Halophiles (b) Thermoacidophiles (c) Methanogens (d) None of the above**

**31. Scientific name of plants are given by  
(a) International code for Botanical nomenclature  
(b) International code for biological plants  
(c) Indian code for Botanical nomenclature  
(d) International code for zoological nomenclature**

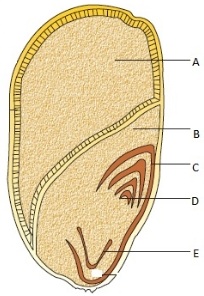
**32. Potato spindle tuber disease is caused by  
(a) Phycobionts (b) Virus (c) Bacteria (d) Viroids**

**33. Which of the followings plant material is an efficient water imbibant?  
(a) Agar (b) Cellulose (c) Lignin (d) Pectin**

**34. Choose the correct pair.  
(a) Hippocampus – 3-chambered heart  
(b) Rana – 2-chambered heart  
(c) Crocodilus – 4-chambered heart  
(d) Pavo – 3-chambered heart**

**35. Which of the following is a pseudocoelomate?  
(a) Platyhelminthes (b) Aschelminthes (c) Mollusca (d) Hemi-chordates**

**36. Rhodophyceae is called red algae because of the pigment  
(a) Fucoxanthin (b) Phycoerythrin (c) Carotenoids (d) Chlorophyll c**

**37.** **Label the parts of a monocot seed.**

(**a) A.Endosperm, B. Scutellum, C. Radicle, D. Coleoptile, E. Plumule  
(b) A.Endosperm, B. Coleoptile, C. Scutellum, D. Radicle, E. Plumule  
(c) A.Endosperm, B. Scutellum, C. Coleoptile, D. Radicle, E. Plumule  
(d) A.Endosperm, B. Scutellum, C. Coleoptile, D. Plumule, E. Radicle**

**38. Fats are richly found in  
(a) alveolar tissue (b) lymph glands (c) adipose tissue (d) liver cells**

**39. Tendons connect the following:  
(a) bone to bone (b) muscle to muscle (c) cartilage to muscle (d) bone to muscle**

**40. Centrosome is found in-  
(a) Cytoplasm (b) Nucleus (c) Chromosomes (d) Nucleolus**

**41. Middle lamella is made up of \_\_\_\_\_\_\_\_\_\_\_.  
(a) Calcium sulphide (b) calcium pectate (c) calcium carbonate (d) calcium chloride**

**42. Which of the following does not have cell wall?  
(a) Mycoplasma (b) Bacteria (c) PPLO (d) Blue green algae**

**43. The main site for synthesis of lipids is  
(a) vacuoles (b) RER (c) SER (d) Golgi body**

**44. The arrangement of sepals or petals in floral bud is called  
(a) Placentation (b) Aestivation (c) Bracteate (d) Phyllotaxy**

**45. Which of the following is not a pyrimidine?  
(a) Uracil (b) Cytosine (c) Guanine (d) Thymine**

**46. Enzymes increase the rate of reaction by  
(a) lowering activation energy  
(b) increasing activation energy  
(c) increasing temperature and pH  
(d) decreasing temperature and pH**

**47. Which of the following is not a polysaccharide?  
(a) Lactose (b) Starch (c) Glycogen (d) Dextrin**

**48. Inhibitor binds to the active site of the enzyme. Hence blocking the reaction. This is an example of  
(a) allosteric inhibition (b) feedback inhibition**

**(c) uncompetitive inhibition (d) competitive inhibition**

**SECTION-C**

**SECTION - C consists of one case followed by 5 questions (Q. No.49-56) linked to this case. Besides this, few questions consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:**

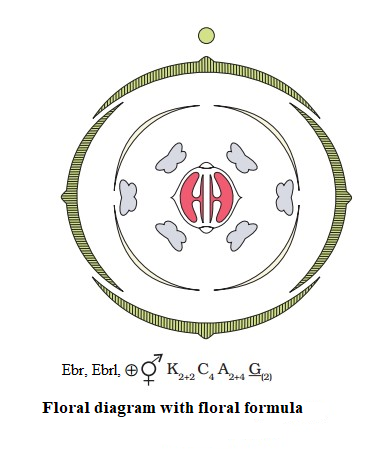
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**B. Both A and R are true and R is not the correct explanation of A**

**C. A is true but R is false**

**D. A is False but R is true E. Both A & R are false**

**Study the given figure represent the floral diagram of the *plant B*rassica compestris(mustard) and answer the following questions:-**

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**Attempt any 10 questions in this section. The first attempted 10 questions would be evaluated.**

**49. The given flower is-**

**(a) gamosepalous, polypetalous, zygomorphic**

**(b)polysepalous, gamopetalous, zygomorphic**

**(c ). gamosepalous, polypetalous, actinomorphic**

**(d) polysepalous, polypetalous, actinomorphic**

**50. The number and type of stamens in the flower is**

**(a) 4, monadelphous (b) 6, diadelphous (c) 4, Polyandrous (d) 6, Polyandrous**

**51. Flower is –**

**(a) Epigynous (b) Hypogynous (c ). Perigynous (d) Exogynous**

**52. Identify the type of placentation**

**(a) Marginal (b) Parietal (c ) Axile (d) Free central**

**53. Ovary of the flower shows**

**(a) Bicarpellary, syncarpus (b) Bicarpellary, apocarpus**

**(c). Monocarpellary, apocarpus (d) Monocarpellary, syncarpus**

**54. Aestivation in Corolla is-**

**(a) Valvate (b)Twisted (c )Imbricate (d)vaxillary**

**55. Anthers are-**

**(a) Dithecus, Bisporangiate (b)monothecous, Bisporangiate**

**(c )Dithecus, tetrasporangiate (d)Monothecous, tetrasporangiate**

**56. Number of bracts is-**

**(a) 0 (b)2 (c )4 (d)1**

**57. Assertion: Bacteria, Cyanobacteria and Mycoplasmas are prokaryotes.**

**Reason: Prokaryotes possess true nuclei having definite nuclear membranes.**

**58. Assertion: Algal blooms deplete dissolved oxygen levels in polluted water bodies.**

**Reason: The bio productivity of water bodies increases due to algal blooms**

**59. Assertion: Gymnosperms do not produce fruits.**

**Reason: The ovules of gymnosperms are not enclosed within the ovaries.**

**60. Assertion: Linnaeus is regarded as the father of taxonomy.**

**Reason: He gave a scheme of classification which, with a few additions, is still used**