

**ODISHA STAFF SELECTION COMMISSION**

Barrack No.1, Unit – V, Bhubaneswar – 751054

**NOTICE**

Pursuant to Advertisement No. **1367/OSSC** dt 23.05.2013, the commission has conducted the preliminary examination for the post of Field Assistant Examination On 23.02.2014 in two sittings. Correct answers to individual questions of General Studies and Technical paper of the said examination have been uploaded and available in the commission website [www.odishassc.in](http://www.odishassc.in) from 05<sup>th</sup> mar 2014 to 12<sup>th</sup> mar 2014 for information of candidates . Objections if any on the answers of the questions publish in the website are invited from the candidates in writing supported with documentary proof are to be receive at the commissions office by 13.03.2014. Objections received beyond the said date will not be entertained.

**Secretary**

## **TECHNICAL PAPER**

1. The symbionts of a cellular nature includes

- A) Chloroplasts & Ribosomes B) Chloroplasts & centrosomes C) centrosomes & Mitochondria D) Mitochondria & Chloroplasts E) None of these

**ANS – D) Mitochondria & Chloroplasts**

2. First person to state that plant cells are totipotent was

- A) Hidebrandt B) Haberlandt C) Vasil D) Steward E) None of these

**ANS – B) Haberlandt**

3. Histone protines are not associated with the chromosome of

- A) Bacteria B) Green algae C) All eukaryote D) Viruses E) None of these

**ANS – A) Bacteria**

4. Cell Membrane is mainly composed of lipids ,proteins and carbohydrates with respect to their mutual proportions ,which of the following statement is correct?

- A) All the three are in equal proportions B) Lipids are least in proportion C) Protein are least in proportion D) Carbohydrates are least in proportion E) None of these

**ANS – D) Carbohydrates are least in proportion**

5. Eukaryotic 80 ribosomes break into

- A) 40S &40S B) 60S & 40 S C) 60S &50S D) 50S &30S E) None of these

**ANS – B) 60S & 40 S**

6. Most of the organic compounds found in organisms are made of

- A) C,H,O,N B) C,H,O,P C) C,O,N,P D) C,H,N,P E) None of these

**ANS – A) C,H,O,N**

7. 'Hing' of commerce is obtained from

- A) Stomach of deer B) Waste petroleum products C) Resinous exudates from roots D) Diatoms E) None of these

**ANS – C) Resinous exudates from roots**

8. Which of the following statement is incorrect about DNA?

- A) Thymine is includes amongst the bases B) It is of one type only C) Pentose sugar is deoxyribose D) The number of nucleotides in DNA is same as RNA E) None of these

**ANS –B) It is of one type only**

9. Cristal helps in-

- A) Respiration B) Transpiration C) Photosynthesis D) Photo-oxidation E) None of these

**ANS –A) Respiration**

10. Lampbrush chromosomes are seen in which of the following stages?

- A) Meiotic prophase B) Meiotic metaphase C) Mitotic prophase D) Mitotic metaphase E) None of these

**ANS –A) Meiotic prophase**

11. Out of the total enzymes present in the cell ,mitochondria alone has

- A) 95% B) 20% C)64% D) 70% E) None of these

**ANS –A) 95%**

12. The crystal of calcium carbonate which appear like a bunch of grapes in the epidermal cells of the leaves of some plants are called?

- A) Cystoliths B) Otholiths C) Raphides D) Sphaeroraphides E) None of these

**ANS –A) Cystoliths**

13) For structure of nucleic acid,which of the following statements is wrong?

A) DNA can be single stranded in some viruses B) RNA can be doubled stranded occasionally C) There are as many as 12 bases per turn in Z-DNA D) The length of one helix is 45 Å in B-DNA & 34 Å in Z-DNA E) None of these

**ANS –D) The length of one helix is 45 Å in B-DNA & 34 Å in Z-DNA**

**14. Insulin is a**

A) Carbohydrate B) Fat C) Protein D) Enzyme E) None of these **ANS –C) Protein**

**15. Which is a typical example of feedback inhibition?**

A) Allosteric inhibition of hexokinase by glucose-6-phosphate B) Reaction between succinic dehydrogenase and succinic C) Cyanide and cytochrome reaction D) Sulpha drugs and folic acid synthesis bacteria E) None of these

**ANS –A) Allosteric inhibition of hexokinase by glucose-6-phosphate**

**16. 'Karyokinesis' means divisions of**

A) Nucleus into two B) Cytoplasm into two C) Protoplasm into two D) Both "cytoplasm into two" and "Protoplasm into two" E) None of these

**ANS -) Nucleus into two**

**17. Quinine, important in the treatment of malaria is extracted from**

A) Bark of Cinchona B) Bark of cinnamon C) Bark of Herea D) Leaves of Ocimum E) None of these

**ANS –A) Bark of Cinchona**

**18. According to "Histogen theory", the pleurone gives rise to-**

A. Epidermis B. Hypodermis C. Vascular bundles D. External hairs E. None of these

**ANS –C) Vascular bundles**

**19. Arrangement of vascular bundles in a root is described as-**

A) Conjoint B) Collateral C) Radical D) Concentric E) None of these

**ANS –C) Radical**

**20. In primary tissue of the stem, the cambium separating the xylem and phloem is called**

A) Procambium B) Fascicular cambium C) Cork cambium D) Interfascicular cambium E) None of these

**ANS –B) Fascicular cambium**

**21. Adventitious roots differ from tap roots because**

A) Of their place of origin B) They arise from radical C) Of stage of food D) Their lateral branches are endogenous in origin E) None of these

**ANS –A) Of their place of origin**

**22. The axis of inflorescence is known as-**

A) Thalamus B) Peduncle C) Pedicel D) Petiole E) None of these

**ANS – B) Peduncle**

**23. Entomophily is the pollination by-**

A) Bird B) Bats C) Wind D) Insects E) None of these

**ANS –D) Insects**

**24. How many meiotic divisions are necessary for formation of 100 grains of wheat?**

A) 125 B) 100 C) 50 D) 5 E) None of these

**ANS –A) 125**

**25. "Double fertilization" means?**

A) Fusion of two eggs B) Fusion of two eggs and pollen nuclei of two grains C) Fusion of one male gamete the egg and the other with secondary nucleus D) Fusion of one male gamete the egg and the other with the synergids E) None of these

**ANS –C) Fusion of one male gamete the egg and the other with secondary nucleus**

**26.** The most important foods are delivered from-

- A) Roots    B) Fruits    C) Stem    D) Leaves    E) None of these

**ANS –B) Fruits**

**27.** In bacteriophage, genetic material is

- A) RNA    B) DNA    C) Both RNA & DNA    D) Neither RNA nor DNA    E) None of these

**ANS –B) DNA**

**28.** Antiviral substance produced by many vertebrates in response to viral infection for arresting multiplication of virus is known as-

- A) Virion    B) Interferon    C) Antivirin    D) Antigen    E) None of these

**ANS –B) Interferon**

**29.** Bacteria are considered to be plants because they

- A) Have rigid cell wall    B) Cannot move    C) Are present anywhere    D) Can multiply by fission    E) None of these

**ANS – A) Have rigid cell wall**

**30.** Water bloom is generally caused by

- A) Green algae    B) Blue-green algae    C) Bacteria    D) Hydrilla    E) None of these

**ANS – B) Blue-green algae**

**31.** DNA was first discovered by-

- A) Beadle & Tatum    B) Watson & Crick    C) Friedrich Miescher    D) A Kornberg    E) None of these

**ANS –C) Friedrich Miescher**

**32.** A nucleoside is

- A) Base + sugar    B) Base + phosphate    C) sugar + phosphate    D) Base + sugar + phosphate    E) None of these

**ANS –A) Base + sugar**

**33.** Which of the following states is the leading producer of “Basmati Rice” in our country?

- A) Andhra Pradesh    B) Karnataka    C) Kerela    D) UP    E) None of these

**ANS –D) UP**

**34.** Etiology includes the study of

- A) Host    B) Pathogen    C) Parasite    D) Disease    E) None of these

**ANS –B) Pathogen**

**35.** Leaves of pea show white powdery patches due to growth of fungal mycelium with conidia and conidiophores. These are the symptoms of

- A) Blight    B) Damping off    C) Mildew    D) Rust    E) None of these

**ANS –A) Blight**

**36.** Deforestation may reduce the chances of

- A) Rainfall    B) Frequent cyclones    C) Errosion of soil surface    D) Frequent land slides    E) None of these

**ANS –A) Rainfall**

**37.** Plasmids are used in genetic engineering because

- A) They are easily available    B) Can replicate    C) Can inert    D) None of the above    E) Can integrate with host's chromosome

**ANS –E) Can integrate with host's chromosome**

**38.** Genomic library can be prepared by

- A) PCR technique    B) Shot gun experiment    C) Colony hybridization    D) All of these    E. None of these

**ANS –B) Shot gun experiment**

**39.** Restriction endonucleases are utilized in genetic engineering are

- A) Molecular degradation to DNA breakup    B) Molecular buildup at nucleotides  
C) Molecular scalpels for cutting DNA at specific sites    D) Molecular cements for combining DNA bits into long chains    E) None of these

**ANS – C) Molecular scalpels for cutting DNA at specific sites**

**40.** Transcription begins when one of the following enzymes binds to a promoter site

- A) DNA Polymerase    B) RNA Polymerase    C) Helicase    D) Gyrase    E) None of these

**ANS –B) RNA Polymerase**

**41.** The gene that function in production of repressor molecule is

- A. Structural gene    B. Regulator gene    C. Operator gene    D. Operon    E. None of these

**ANS –B) Regulator gene**

**42.** Pomology is a branch of horticulture that deals with

- A) Fruits    B) Vegetables    C) Ornamental Plants    D) Flowers    E) None of these

**ANS – A) Fruits**

**43.** Olericulture is a science which deals with

- A) Fruits    B) Vegetables    C) Cereals    D) Agriculture    E) None of these

**ANS –B) Vegetables**

**44.** Auxin is a-

- A) Weedicide    B) Fungicide    C) Pesticide    D) Growth Regulator    E) None of these

**ANS –D) Growth Regulator**

**45.** Lycupene is found in

- A) Brinjal    B) Chilly    C) Tomato    D) Greens    E) None of these

**ANS – C) Tomato**

**46.** Greens contain high quality of-

- A) Vitamins    B) Carbohydrates    C) Fats    D) Minerals    E) None of these

**ANS –D) Minerals**

**47.** Sesamum is a

- A) Fiber crop    B) Cereal crop    C) Pulse crop    D) Oil crop    E) None of these

**ANS – D) Oil crop**

**48.** Drumstick is a

- A) Herb vegetable crop    B) Shrub vegetable crop    C) Tree vegetable crop    D) Pulse crop    E. None of these

**ANS –C) Tree vegetable crop**

**49.** Phenyl mercuric acetate(PMA) is a

- A) Anti-Transpirant    B) Plant hormone    C) Organic chemical    D) Weedicide    E) None of these

**ANS –A) Anti-Transpirant**

**50.** Salvia is a

- A) Fruit    B) Flower    C) Vegetables    D) Medicinal Plant    E) None of these

**ANS –B) Flower**

**51.** Alternate bearing is observed in

- A) Banana    B) Jackfruit    C) Mango    D) Guava    E) None of these

**ANS –C) Mango**

**52.** Capcinin is found in:-

- A) Brinjal    B) Chilly    C) Tamato    D) Arhar    E) None of these

**ANS –B) Chilly**

**53.** Evapotranspiration occurs in

- A) Branch    B) Lateral branch    C) Leaves    D) Roots    E) None of these

**ANS –C) Leaves**

**54.** Soil Moisture is measured by—

- A) Calorimeter    B) Thermometer    C) Tensiometer    D) Barometer    E) None of these

**ANS – B) Tensiometer**

**55.** Sex expression is common factor in

- A. Solaraceous crops    B. Malvacea crops    C. Cucurbitaceous crops    D. Greens    E. None of these

**ANS –C) Cucurbitaceous crops**

**56.** What type of food is given to developing queen by the worker bees

- A) Pollen    B) Royal jelly    C) Fruit jelly    D) Nectar    E) None of these

**ANS – D) Nectar**

**57.** Malaria in Odisha is

- A) Endzemic    B) Epidemic    C) Epizootic    D) Contagious    E) None of these

**ANS –A) Endzemic**

**58.** During which year national family planning program came into operation in India

- A) 1972    B) 1948    C) 1952    D) 1989    E) None of these

**ANS –C) 1952**

**59.** Which pathogenic form of influenza- A virus causes bird flu in human too

- A) H6 N1 Strain    B) H6 N5 Strain    C) H5 N3 Strain    D) H5 N1 Strain    E) None of these

**ANS –D) H5 N1 Strain**

**60.** Which vitamin is found only in animal food products but not in vegetable food products?

- A) Vitamin – A    B) Vitamin – C    C) Vitamin – K    D) Vitamin – B12    E) None of these

**ANS –D) Vitamin – B12**

**61.** Conduction of nerve impulse is a

- A) Electrical phenomenon    B) Biophysical phenomenon    C) Biochemical phenomenon    D) Electro chemical phenomenon    E) None of these

**ANS –D) Electro chemical phenomenon**

**62.** Which of the following is known as the “Grave Yard” of RBCs

- A) Liver    B) Spleen    C) Gall bladder    D) Bone marrow    E) None of these

**ANS –B) Spleen**

**63.** Muscles which do not get fatigued are-

- A) Cardiac muscles    B) Voluntary muscles    C) Biceps muscles    D) Jaw muscles    E) None of these

**ANS – A) Cardiac muscles**

**64.** Which of the following illness is not caused by bacteria

- A) Anthrax    B) Syphilis    C) Influenza    D) Leprosy    E) None of these

**ANS –C) Influenza**

**65.** Antibodies are present in –

- A) Plazma    B) RBCs    C) WBCs    D) Platelets    E) None of these

**ANS –A) Plazma**

**66.** Who is called as the “father of Genetics”?

- A) Erasmus Darwin    B) Charles Darwin    C) Gregor Mendel    D) Hugo devries    E) None of these

**ANS –C) Gregor Mendel**

**67.** The sex of a human foetus is determined during fertilization by the

- A) Sperm bearing ‘Y’ Chromosome from the father    B) Sperm bearing ‘X’ Chromosome from the father    C) Sperm bearing either ‘X’ or ‘Y’ Chromosome from the father    D) Ovum bearing ‘X’ Chromosome of the mother    E. None of these

**ANS –C) Sperm bearing either ‘X’ or ‘Y’ Chromosome from the father**

**68.** Genetic variation in sexually reproducing organisms occurs due to

- A) Mitosis    B) Meiosis    C) Amitosis    D) Parthenogenesis    E) None of these

**ANS –B) Meiosis**

**69.** How many molar teeth are present in adult human being

- A) 2    B) 3    C) 4    D) 6    E) None of these

**ANS –D) 6**

**70.** The joint between human skull bones is called

- A) Ball and socket joint    B) Saddle joint    C) Fibrous joint    D) Hinge joint    E) None of these

**ANS -C-) Fibrous joint**

**71.** Corals are formed by the activities of organisms belonging to

- A) Protozoa    B) Protifera    C) Coelenterata    D) Anthropoda    E) None of these

**ANS –C) Coelenterata**

**72.** Ribozomes in a cell play significant role in

- A) Protein Synthesis    B) Lipid Synthesis    C) Photosynthesis    D) ATP Synthesis    E) None of these

**ANS –A) Protein Synthesis**

**73.** Which gland is call the “master gland” of the human body

- A) Liver    B) Pancreas    C) Pituitary    D) Thyroid    E) None of these

**ANS –C) Pituitary**

**74.** During initial stage of fasting which gland plays important role in providing energy to the body

- A) Pancrease    B) Liver    C) Pituitary    D) Spleen    E) None of these

**ANS –B) Liver**

**75.** Dengue fever is caused by –

- A) Virus    B) Bacteria    C) Protozoan Parasite    D) Helminth Parasite    E) None of these

**ANS –A) Virus**

**76.** Which of the following vitamins promotes healthy functioning of eyes

- A) Vitamin – A    B) Vitamin – D    C) Vitamin – E    D) Vitamin – K    E) None of thease

**ANS –A) Vitamin – A**

**77.** Which vitamin inhibits sterility

- A) Vitamin – A    B) Vitamin - B12    C) Vitamin – E    D) Vitamin – K    E) None of these

**ANS – C) Vitamin – E**

**78.** Which among the following hormones aids in the process of child birth

- A) Oxytocin    B) Prolactin    C) Estrogen    D) Progesterone    E) None of these

**ANS –A) Oxytocin**

**79.** Which among the following stores oxygen in muscles

- A) Haemoglobin    B) Prothrombin    C) Haemocyanin    D) Myoglobin    E) None of these

**ANS –D) Myoglobin**

**80.** Which vitamin stops "Bleeding Gum" disease ?

- A) Vitamin – D    B) Vitamin - C    C) Vitamin - K    D) Vitamin - A    E) None of these

**ANS –B) Vitamin - C**

**81.** Which of the following group of diseases are transmitted by mosquitoes

- A) Sleeping sickness, yellow fever, Filariasis    B) Sleeping sickness, Ascariasis, Filariasis  
C) Yellow fever, Malaria, AIDS    D) Yellow fever, Sleeping sickness, AIDS    E) None of these

**ANS –A) Sleeping sickness, yellow fever, Filariasis**

**82.** Which of the following mammals ruminate ?

- A) Hippopotamus    B) Horse    C) Sheep    D) Rhinoceros    E) None of these

**ANS – C) Sheep**

**83.** Which of the following is non –communicable disease

- A) Amoebiasis    B) Sickle- cell anaemia    C) Poliomyelitis    D) Fileria    E) None of these

**ANS – B) Sickle- cell anaemia**

**84.** Digestion of Starch Starts in

- A) Mouth    B) Oesophagus    C) Duodenum    D) Stomach    E) None of these

**ANS –A) Mouth**

**85.** Surgical removal of which part of the alimentary canal doesnot affect its normal function

- A) Appendix    B) Oesophagus    C) Small intestine    D) Rectum    E) None of these

**ANS – A) Appendix**

**86.** The movement of the eye balls in human beings is controlled by a set of

- A) 4 muscles    B) 6 muscles    C) 8 muscles    D) 10 muscles    E) None of these

**ANS - B) 6 muscles**

**87.** The haeamoglobin in RBC has more affinity for

- A) O<sub>2</sub>    B) CO<sub>2</sub>    C) CO    D) SO<sub>2</sub>    E) None of these

**ANS –C) CO**

**88.** The breathing rate in normal human beings is

- A) 5 times / min    B) 16 times / min    C) 25 times / min    D) 72 times / min    E) None of these

**ANS – B) 16 times / min**

**89.** The three primary colors which cone cells of retina can differentiate are -

- A) Red, Green, Yellow    B) Red, Yellow, Blue    C) Red, Green, Blue    D) Red, Green, White  
E) None of these

**ANS – C) Red, Green, Blue**

**90.** Which of the following hormones is released in excess quatities during Flight/Flight/Fear?



A) Insulin    B) Thyroxine    C) Serotonin    D) Adrenalin    E) None of these

**ANS –D) Adrenalin**

**91.** The increase in the concentration of which of the gases in the atmosphere interact with the water molecule causing acid rain ?

A) SO<sub>2</sub> and NO<sub>2</sub>    B) CO and CO<sub>2</sub>    C) CO<sub>2</sub> and NH<sub>3</sub>    D) CO and SO<sub>3</sub>    E) None of these

**ANS –A) SO<sub>2</sub> and NO<sub>2</sub>**

**92.** A person of which blood can receive the blood of a AB Group donor ?

A) A    B) B    C) AB    D) O    E. None of these

**ANS –C) AB**

**93.** BCG vaccine is used to produce immunity against

A) Small pox    B) Chicken pox    C) Whooping cough    D) Tuberculosis    E) None of these

**ANS –D) Tuberculosis**

**94.** How many national parks are there in Odisha

A) One    B) Two    C) Three    D. Four    E. None of these

**ANS –B) Two**

**95.** Blood doesnot coagulate inside the body due to presence of \_\_\_\_\_ in the blood ?

A) Haemoglobin    B) Heparin    C) Fibrin    D) Plasma    E) None of these

**ANS –B) Heparin**

**96.** Which of the following constitutes the main components of bones and teeth

A) Calcium carbonate    B) Calcium sulphate    C) Calcium sulphide    D) Calcium nitrate    E) None of these

**ANS –C) Calcium sulphide**

**97.** Which nitrogenous base is not present in RNA molecules

A) Adenine    B) Guanine    C) Cytosine    D) Thyamine    E) None of these

**ANS –D) Thyamine**

**98.** Which cell organelle takes an active part during cell division ?

A) Ribosomes    B) Centrioles    C) Endoplasmic reticulum    D) Lysosomes    E) None of these

**ANS –B) Centrioles**

**99.** Who advocated the theory of "Natural Selection"

A) Lamarck    B) Charles Darwin    C) Erasmus Darwin    D) Weisemann    E) None of these

**ANS – B) Charles Darwin**

**100.** Strongest muscles in human body are found in

A) Thighs    B) Hands    C) Jaws    D) Foot    E) None of these

**ANS – C) Jaws**