FINAL ANSWER KEY

Question Paper Code: 45/2017/OL Category Code: 355/2016 Exam: HSSt(Jr) Botany (SR for ST only) Medium of Question: English Date of Test 05-06-2017 Department Higher Secondary Education Alphacode A Question1:-The Basel Evangelical Mission opened a primary school at Kallai in A:-1799 B:-1802 C:-1832 D:-1848 Correct Answer:- Option-D Question2:-In 1959, who was given the title Bharata Kesari by the President of India ? A:-V.T. Bhattathiripad B:-Chattampi Swamikal C:-Mannath Padmanabhan D:-Pattom Thanupillai Correct Answer:- Option-C Question3:-Prabhatham a newspaper started at Shornur in 1934 under the guidelines of A:-K.G. Sankar **B:-EMS Namboothiripad** C:-Kunhunni Achan D:-A. K. Pillai Correct Answer:- Option-B Question4:-The first woman judge of Kerala high Court A:-Annachandi B:-Sujatha Manohar C:-L. Omanakunhamma D:-J. Fathima Beevi Correct Answer:- Option-A Question5:-Travancore Muslim Mahajana Sabha was founded by A:-Muhammad Abdurahiman B:-Vakkam Abdul Khadar Maulavi C:-E. Moidu Maulavi D:-Kattilasseri Muhammed Maulavi Correct Answer:- Option-B Question6:-Kochi port is situated at the head of which lake ? A:-Sasthamkotta B:-Ashtamudi C:-Vembanadu D:-Punnamada Correct Answer:- Option-C Question7:-In which year fidel castro wins revolution in Cuba and becomes Prime Minister ? A:-1959 B:-1962 C:-1976 D:-2006 Correct Answer:- Option-A Question8:-India's first LNG powered bus was launched at Thiruvananthapuram by Chief Minister Sri Pinarayi Vijayan and Central Minister for petrolium and natural gas A:-Rajnath Singh B:-Venkaiha Naidu C:-Sadananda Gauda D:-Dharmendra Pradhan Correct Answer:- Option-D

Question9:-Which Indian won the men's single title at the 2016 Chinese Tai Pei open badminton championship ?

A:-Sourabh Verma B:-Sameer Verma C:-Ng Ka Lang Angus D:-K. Srikanth Correct Answer:- Option-A Question10:-Newly elect, secretary general of UNO, Autonio Gutres was Prime Minister of A:-Spain **B:-Portugal** C:-Italy D:-France Correct Answer:- Option-B Question11:-The most important indicator of quality of education in a school is A:-Text books and teaching learning materials B:-Infrastructural facilities of a school C:-Fluency in English communication D:-Student achievement level Correct Answer:- Option-D Question12:-Science education system in India at the school level should be best described as being A:-Value oriented **B:-Teacher centered** C:-Textbook centered D:-Activity centered Correct Answer:- Option-D Question13:-If you have been given the additional responsibility of the student scholarships, you think that A:-It is the duty of all students to enquire about the scholarship details B:-It is the right of the deserved students to get it and you need to direct the students to make avail of it C:-Financial support must go to students who are giving favours to teachers D:-Other teachers have escaped by making a burden on me Correct Answer:- Option-B Question14:-Learning implies A:-Acquired by B:-Absorbed by C:-Occurring within D:-Implicit what is explicit Correct Answer:- Option-C Question15:-For a meaningful learning to takes place, learner should have A:-Opportunities **B:-Motivation only** C:-Ability to learn only D:-Desired level of ability and motivation Correct Answer:- Option-D Question16:-One which is not the characteristic of research is A:-Art of scientific investigation B:-Solutions are arrived through revealed knowledge C:-Exploring new knowledge D:-A movement from the known to unknown Correct Answer:- Option-B Question17:-Choose a wrong statement related with experimental method in research A:-Observation under controlled condition is experiment B:-It is the laboratory method of research and has borrowed from pure science C:-Law of single variable is the fundamental assumption of experimental method D:-Residual group is a type of experimental design Correct Answer:- Option-D Question18:-The aim of workshop in research is A:-To refresh the knowledge on research methodology B:-To explore the possibilities of applied aspects of the research C:-To express the views of speakers and audience regarding the research problem

D:-To seek the advice of the experts in the area

Correct Answer:- Option-B Question19:-Cross-sectional research studies are basically linked with A:-Sample **B:-Control group** C:-Statistics D:-Census Correct Answer:- Option-A Question20:-Arrange the following steps of research in correct sequence a) Results and discussion b) Data analysis c) Identification of research problem d) Listing of research objectives e) Collection of data f) Tool construction A:-c-d-f-e-b-a B:-c-d-e-f-b-a C:-c-f-d-e-b-a D:-d-c-f-e-a-b Correct Answer:- Option-A Question21:-Biofortification improves A:-Fruit production **B:-Micronutrient and mineral contents** C:-Environmental conditions D:-The nutritional quality of breeding crops Correct Answer:- Option-D Question22:-A banana herb is virus infected mention the technique that will help in obtaining healthy banana plants from this diseased plant is A:-Tissue culture B:-Anther culture C:-Meristematic culture D:-Ovary culture Correct Answer:- Option-C Question23:-Name the fungus used in organ transplant treatment A:-Trichoderma **B:-Polysporum** C:-Aspergillus D:-Pencillium Correct Answer:- Option-A Question24:-Name the type of biodiversity represented by 50,000 different strains of rice in India A:-Genetic diversity **B:-Ecological diversity** C:-Species diversity D:-Molecular diversity Correct Answer:- Option-A Question25:-Phytophagous insects feed on A:-Plant **B:-Bacteria** C:-Virus D:-Bacteriophage Correct Answer:- Option-A Question26:-Name the types of association that the genus glomus exhibits with higher plants A:-Symbiosis **B:-Commensalism** C:-Parasitism D:-All the above Correct Answer:- Option-A Question27:-Percentage of PAR captured by plants ranges from A:-2-10 B:-10-20 C:-40-50

D:-.5-1 Correct Answer:- Option-A Question28:-The thermostable DNA polymerase which is isolated from a bacterium Thermus aquaticus A:-Taq polymerase **B:-DNA polymerase-I** C:-Hind I D:-Hind II Correct Answer:- Option-A Question29:-Name the common ancestor of the great apes and man A:-Dryopithecus **B:-Australiopethecus** C:-Homeosapiens D:-Homohabilis Correct Answer:- Option-A Question30:-World Forest Day is on A:-March 22 B:-March 25 C:-March 21 D:-March 31 Correct Answer:- Option-C Question31:-Lamp brush chromosomes occur at A:-Pachetene stage **B:-Zygotene stage** C:-Diplotene stage D:-Leptotene stage Correct Answer:- Option-C Question32:-Tag polymerase is involved in A:-PCR **B:-PAGE** C:-RAPD D:-VNTR Correct Answer:- Option-A Question33:-R.Q. value in Opuntia A:-Less than 1 B:-Greater than 1 C:-Negative value D:-Zero Correct Answer:- Option-D Question34:-Colchicum autumnale is a member of A:-Rubiaceae **B:-Liliaceae** C:-Asteraceae D:-Poaceae Correct Answer:- Option-B Question35:-A condition of air pollution that results when sulfur dioxide and other gases and particles emitted by an erupting volcano react with oxygen and moisture in the presence of sunlight. A:-Photochemical smog B:-Smoke C:-Vog D:-None of the above Correct Answer:- Option-C Question36:-The Nobel Prize in Chemistry 2009 was awarded to Venkatraman Ramakrishnan, Thomas A. Steitz and Ada E. Yonath for A:-Determining the detailed structure and mechanism of the ribosome **B:-For cell signaling** C:-For cell wall composition D:-Protein structure Correct Answer:- Option-A Question37:-Vegetative propagation in lemon

A:-Stem cuttings **B:-Root cuttings** C:-Asexual reproduction D:-None of the above Correct Answer:- Option-A Question38:-Sweet potato and potato is a result of convergent evolution in A:-Homologus organ **B:-Analogus organ** C:-Cladistic structures D:-Morphological structures Correct Answer:- Option-B Question 39:-Which of the following plants is characterized by the presence of cortical vascular bundles ? A:-Chenopodium **B:-Nyctanthes** C:-Tecoma D:-Boerhaavia Correct Answer:- Option-B Question40:-Knots are formed in woods A:-Branches fall off and leaves scares B:-Injuries caused by animals C:-Of insects bites D:-Branches get buried embedded in the stem Correct Answer:- Option-D Question41:-Lenticels do not occur in A:-Root B:-Fruit C:-Stem D:-Leaf Correct Answer:- Option-D Question42:-P-protein is found in A:-Collenchymas B:-Phloem parenchyma C:-Sieve tube D:-Xylem vessels Correct Answer:- Option-C Question43:-The lacunae in the vascular bundles of monocot stem is A:-A large sized vessel **B:-Mucilage canal** C:-Lysigenous water cavity D:-Metaxylem Correct Answer:- Option-C Question44:-Which of the following is grown by transplanting ? A:-Maize B:-Sorghum C:-Onion D:-Soyabeen Correct Answer:- Option-A Ouestion45:-Cobalt is associated with A:-Growth hormone **B:-Vitamin B12** C:-Haemoglobin D:-Intestinal enzymes Correct Answer:- Option-B Question46:-Who among the following is considered as father of genetic engineering ? A:-Philip Drinker **B:-Paul Berg** C:-Thomas Addison D:-Alpheus S. Packard Correct Answer:- Option-B

Question47:-Which of the following is not a gaseous air pollutant ? A:-Oxides of sulphur **B:-Oxides of nitrogen** C:-Hydrocarbon D:-Smoke Correct Answer:- Option-D Question48:-Which one of the following agricultural practices is eco-friendly ? A:-Organic farming **B:-Shifting cultivation** C:-Cultivation of high yielding varieties D:-Glass house farming Correct Answer:- Option-A Question49:-Name the plant which is known as Terror of Bengal A:-Agave **B:-Ginger** C:-Bryophyllum D:-Water hyacinth Correct Answer:- Option-D Question50:-Angiosperm seeds with perisperm A:-Castor **B:-Black pepper** C:-Barley D:-Wheat Correct Answer:- Option-B Question51:-Plant propagation technique practiced in pomograte A:-Air layering B:-Gootee C:-Gastra D:-Oegium Correct Answer:- Option-B Question52:-Name the stage of cell division where segregation of independent pair of chromosomes occur A:-Anaphase -1 B:-Prophase-1 C:-Meiosis-2 D:-Telophase-1 Correct Answer:- Option-A Question53:-Name the enzyme responsible for the transcription of tRNA A:-RNA polymerase III **B:-RNA** polymerase II C:-Polymerase D:-RNA polymerase-I Correct Answer:- Option-A Question54:-The maximum number of genes is present in human chromosome A:-Chromosome No. 7 B:-Chromosome No. 3 C:-Chromosome No. 5 D:-Chromosome No. 1 Correct Answer:- Option-D Question55:-A marine angiosperm is A:-Wolffia B:-Lemna C:-Valliseneria D:-Zostera Correct Answer:- Option-D Question56:-The colour tag of breeder seed is A:-Yellow **B:-White** C:-Purple D:-Blue

Correct Answer:- Option-D Question57:-The fruit crop that can be propagated by apomictic embryo is A:-Citrus B:-Banana C:-Apple D:-Mango Correct Answer:- Option-A Question58:-An endangered carnivorous plant is A:-Fly trap **B:-Utricularia** C:-Roridula **D:-Nepenthes** Correct Answer:- Option-D Question59:-What is called nature's supermarket ? A:-Mango tree B:-Coconut palm C:-Thulsi D:-Neem tree Correct Answer:- Option-B Question60:-Non-specific type of defence acquired by the body at the time of birth A:-Acquired immunity **B:-Innate immunity** C:-Antibodies D:-Interferons Correct Answer:- Option-B Question61:-The primary goal of bioinformatics is to increase the understanding of biological processes. Which sets it apart from other approaches, is its focus on developing and applying computationally intensive techniques to achieve various goal includes A:-Genetic studies B:-Drug study C:-Protein analysis D:-The modeling of evolution and cell division/mitosis Correct Answer:- Option-D Question62:-A collaborative data collection of the functional elements of the human genome that uses next-generation DNA-sequencing technologies and genomic tiling arrays, technologies able to generate automatically large amounts of data with lower research costs but with the same quality and viability A:-Encode project **B:-Genome project** C:-Databases D:-Genebase Correct Answer:- Option-A Question63:-A bioinformatics tool which can be used to characterize the Pan Genome A:-FDA B:-BPGA C:-NRCS D:-PCR Correct Answer:- Option-B Question64:-A specimen later selected to serve as the single type specimen when an original holotype has been lost or destroyed or where the original author never cited a specimen A:-Paratype **B:-Lectotype** C:-Neotype D:-Syntype Correct Answer:- Option-C Question65:-The standard size of herbarium sheet is A:-16 ½ `xx` 11½ inches B:-41.25 `xx` 28.75 inches C:-24.75`xx` 48.75 inches D:-14`xx` 12 inches Correct Answer:- Option-A

Question66:-The term primarily used today to refer to the discipline of finding, describing and naming taxa, particularly

A:-Omega taxonomy B:-Beta taxonomy C:-Alpha taxonomy D:-Taxonomy Correct Answer:- Option-C Question67:-The ripening of fruit and loss of leaves in the winter are controlled in part by the production of a gas by the plant A:-Ethylene B:-Carbon dioxide C:-Oxygen D:-ABA Correct Answer:- Option-A Question68:-A frond which is a vegetative leaf analogous to the typical green leaves of seed plants that does not produce spores, instead only producing sugars by photosynthesis can be called as A:-Trophophyll **B:-Sporophyll** C:-Phycophyll D:-Sphenophyll Correct Answer:- Option-A Question69:-An ion involved in phosphorylation of ADP to ATP A:-`Ca^(2+)` B:-`Mn^(2+)` C:-`Mg^(2+)` $D:-Cu^{(2+)}$ Correct Answer:- Option-C Question70:-Nucleotide proteins involved in phospholipid synthesis A:-ATP B:-CTP C:-GTP D:-UTP Correct Answer:- Option-B Question71:-The type of bonding in the branch points of amylopectin is A:-1-4 glycosidic B:-1-6 glycosidic C:-1-2 glycosidic D:-1-3 glycosidic Correct Answer:- Option-B Question72:-Antimicrobial phytochemicals which can help plants to resist infection and invasions A:-Alkaloids **B:-Terpenes** C:-Phytoalexins **D:-Flavanoids** Correct Answer:- Option-C Question73:-Evolutionarily conserved protein involved in folding of proteins is A:-Chaperons **B:-Lectins** C:-Ferritin D:-Hormonal protein Correct Answer:- Option-A Question74:-A known protein aminoacid is A:-Lysine **B:-Histidine** C:-Taurine D:-Arginine Correct Answer:- Option-C Question75:-An adaptive structure in plants for the elimination of surplus water is A:-Hydathodes **B:-Stomata**

C:-Transpiration D:-Guttation Correct Answer:- Option-A Question76:-A second messenger molecule in cells which plays a pivotal role in hormone action is A:-Kinase B:-c GMP C:-AMP D:-c AMP Correct Answer:- Option-D Question77:-Viola and oxalis produce two types of flowers one is chasmogamous flower name the other type A:-Monoecious **B:-Dioecious** C:-Closed flowers **D:**-Polyecious Correct Answer:- Option-C Question78:-Suggest a method to remove oil from seeds based on the techniques in biotechnology A:-r DNA technology B:-RAPD C:-RSTP D:-VNTR Correct Answer:- Option-A Question79:-SCID is caused by A:-A defect in gene B:-A nucleotide C:-Nitrogen base D:-Protein Correct Answer:- Option-A Question80:-Name the interaction between a whale and the barnacles growing on its back A:-Symbiosis **B:-Commensalism** C:-Parasitism D:-Proto-co-operation Correct Answer:- Option-B Question81:-The plant that catches its prey with leaf fibre. A:-Genlisia **B:-Roridula** C:-Nepenthes D:-Venus fly trap Correct Answer:- Option-B Question82:-Single leaf plant is A:-Amorphophalus **B:-Opuntia** C:-Bryophylum D:-Bigonia Correct Answer:- Option-A Question83:-Which Indian forest region has maximum diversity in wild life ? A:-Tropical forest B:-Ever green forest C:-Western ghats D:-Temperate deciduous Correct Answer:- Option-C Question84:-The photosynthetic pigment which is blue green in pure state A:-Chlorophyll-a B:-Chlorophyll-b C:-Chlorophyll-c D:-Chlorophyll-d Correct Answer:- Option-A Question85:-The plant part showing negatively traumatropic movement is A:-Leaf lamina

B:-Root tip C:-Stem tip D:-Flower bud Correct Answer:- Option-B Question86:-Metabolically advantageous sugar is A:-Glucose **B:-Sucrose** C:-Fructose D:-Galactose Correct Answer:- Option-B Question87:-Auxins are indole derivatives synthesized from A:-Aminoacids **B:-Tryptophan** C:-Lysine D:-Agrinine Correct Answer:- Option-B Question88:-Replenishing or filling up reactions are called A:-Inter-mediatory metabolisms **B:-Amphibolic pathways** C:-Energy metabolisms **D:-Anaplerotic reactions** Correct Answer:- Option-D Question89:-Free living nitrogen fixing cyano bacteria includes A:-Calothrix **B:-Azotobacter** C:-Clostridium D:-Chromatium Correct Answer:- Option-A Question90:-First aminoacid discovered in protein is A:-Threonine **B:-Glycine** C:-Asparagine D:-Leucine Correct Answer:- Option-C Question91:-Which principle is enunciated by Supreme Court in M.C. Mehta Vs Kamalnath by upholding that natural resources are meant for public use and enjoyment, the state is under duty to protect it ? A:-Polluter pay principle **B:-Precautionary principle** C:-Public trust principle D:-No fault liability principle Correct Answer:- Option-C Question92:-Where a public authority received an application for information pertaining to a subject matter held by another public authority, the application shall be transferred to the concerned authority within of the receipt of the application. A:-30 days B:-5 days C:-10 days D:-48 hours Correct Answer:- Option-B Question93:-Who among the following can donate organ to the recipient without the permission from government? A:-Wife **B:-Uncle** C:-Friends D:-All the above Correct Answer:- Option-A Question94:-Under Food Security Act, the Food grains given to the house hold covered under Antyodaya Annayogana is A:-25kg/month B:-30 kg/month C:-32 kg/month D:-35 kg/month

Correct Answer:- Option-D

Question95:-Article 51 of Indian Constitution speaks about the

A:-Separation Judiciary from Executive

B:-Promotion of International Peace and Security

C:-Promotion of Welfare of Workers

D:-Childhood protection and education to children below the age 6 years

Correct Answer:- Option-B

Question96:-In which of the following case Supreme Court declared that judicial review is a basic structure of constitution so it could not be taken away by the parliament through amendment.

A:-A. K. Gopalan Vs State of Madras

B:-Menaka Gandhi Vs Union of India

C:-Minerva Mills Limited Vs Union of India

D:-Golak Nath Vs State of Punjab

Correct Answer:- Option-C

Question97:-Which of the following Amendment Act makes the Right to Education as the Fundamental Right to all children of age of 6-14 years by inserting Article 21A to the Constitution.

A:-`86^(th)` Amendment Act

B:-`87^(th)` Amendment Act

C:-`84^(th)` Amendment Act

D:-`85^(th)` Amendment Act

Correct Answer:- Option-A

Question98:-Article 75(1A) provides that the size of the council of ministers of center shall not exceeds

A:-15% of the total number of members in Lok Sabha

B:-15% of the total number of members in Lok Sabha and Rajya Sabha

C:-12% of the total number of members in Lok Sabha and Rajya Sabha

D:-12% of the total number of members in Lok Sabha

Correct Answer:- Option-A

Question99:-Under the Criminal Law (Amendment) Act 2013, the offense of trafficking does not include

A:-Abducting a woman for sexual exploitation

B:-Abducting a child with an intention of removal of organs

C:-Follows a woman and contacts her to foster personal interaction against her will

D:-Receive any person through deception to engage in hazardous work for a meager wage Correct Answer:- Option-C

Question100:-Who among the following are excluded from the scope of Article 311 ?

A:-Members of Civil Services of Union and States

B:-Members of All India Service

C:-Persons holding Civil Post under Union or States

D:-Members of Defense Services

Correct Answer:- Option-D