## **FINAL ANSWER KEY**

**Question Paper Code:** 30/2017/OL Category Code: 274/2015 Exam: Overseer/Draftsman Gr II Medium of Question: English Date of Test 17-04-2017 Department **Public Works Irrigation** Alphacode Α Question1:-The Chairman of the fourteenth Finance Commission of India is A:-Dr.Y.V. Reddy **B:-Urjit Patel** C:-Dr.S.R. Reddy D:-L.N. Reddy Correct Answer:- Option-A Question2:-The book 'Poverty and Progress' is authored by A:-Proudhon B:-Karl Marx C:-Deepak Chandra D:-Deepak Lal Correct Answer:- Option-D Question3:-"They may call me Hitler, they may call me a Supper-Hitler" Whose words are this A:-Subhash Chandra Bose B:-Vallabhai Patel C:-Mussolini D:-Indira Gandhi Correct Answer:- Option-B Question4:-The total number of domestic passengers handled at the Indian airports during 2014 - 15 was A:-125.53 Million B:-201.43 Million C:-101.34 Million D:-151.34 Million Correct Answer:- Option-C Question5:-The total number of Post Offices in India is about A:-200050 B:-155015 C:-300000 D:-100012 Correct Answer:- Option-B Question6:-Who called 'Volga' as "The Queen of our rivers" A:-Alexandre Dumas **B:-Stalin** C:-Lenin D:-Maxim Gorky Correct Answer:- Option-A Question7:-"His spirit will always prevail in India" was a famous remark made on `15^(th)` December, 1950 at London by A:-Lord Mountbatten **B:-Jawaharlal Nehru C:-Winston Churchill** D:-Dr. Raiendra Prasad Correct Answer:- Option-A Question8:-The famous remark that John F. Kennedy and Richard M. Nixon lacked 'Political brains' was made in a speech delivered at United Nations by A:-Fulgencio Batista **B:-Khrushchev** C:-Jawaharlal Nehru **D:-Fidel Castro** Correct Answer:- Option-D

Question9:-Jati Nasini Sabha was founded by A:-Brahmananda Sivayogi B:-Swami Ananda Theerthan C:-Vagbhadananda D:-Sree Narayana Guru Correct Answer:- Option-B Question10:-The boook, Of Fortunes and War : Clare Hollingworth is authored by A:-Clare Hollingworth **B:-Jim Mc Curry** C:-Pessy Hull **D:-Patrick Garret** Correct Answer:- Option-D Question11:-The first Secretary of the Punjab Naujawan Bharat Sabha was A:-Bhagat Singh B:-Chandrashekar Azad C:-Sury Sen D:-Jatin Das Correct Answer:- Option-A Question12:-"A day will come when India also remember her and cherish her" was the words of Jawaharlal Nehru about A:-Kamala Nehru B:-Saroiin Naidu C:-Rani Gaidilieu D:-Captain Lakshmi Correct Answer:- Option-C Question13:-Who declared that "Political freedom is the life breath of a Nation" ? A:-Aurobindo Ghosh B:-Subhash Chandra Bose C:-Sury Sen D:-Bhagat Singh Correct Answer:- Option-A Question14:-Mangal Pande was hanged to death on A:-20, March 1858 B:-20, March 1857 C:-29, March 1857 D:-29, March 1858 Correct Answer:- Option-C Question15:-Lord Dufferin ridiculed the Congress as "a microscopic minority of the people" in a public speech delivered in A:-1885 B:-1887 C:-1888 D:-1886 Correct Answer:- Option-B Question16:-The newspaper Al Hilal was started in A:-1910 B:-1912 C:-1920 D:-1940 Correct Answer:- Option-B Question17:-The present Chairman of Kerala Public Service Commission is A:-Dr. K.S. Radhakrishnan B:-M.K. Sakeer C:-K. Radhakrishnan D:-Salahuddin Correct Answer:- Option-B Question18:-Mahatma Gandhi founded the All India Harijan Sangh in A:-1930 B:-1931 C:-1932 D:-1940

Correct Answer:- Option-C Question19:-C. Kesavan was arrested and jailed on account his seditious speech delivered at Kozhenchery on A:-11, May 1935 B:-11, June 1936 C:-20, May 1936 D:-25, March 193 Correct Answer:- Option-A Question20:-Mokshapradipam is a famous work of A:-Brahmananda Sivayogi B:-Chattampi Swamikal C:-Vaikunda Swamikal D:-Neelakantan Namboothiripad Correct Answer:- Option-A Question21:-In a safety sign, It's shape is circular, red border and cross bar black signal in white background the sign is A:-Prohibition sign **B:-Mandatory sign** C:-Warning sign D:-Information sign Correct Answer:- Option-A Question22:-Three phase two element watt meter method is best suited for the measurement of power in A:-Three phase balanced load B:-Three phase unbalanced load C:-Three phase balanced and unbalanced load D:-None of the above Correct Answer:- Option-C Question23:-Polarisation is the problem of type of cell. A:-Lead acid cell B:-Nickel iron cell C:-Dry cell D:-Voltaic cell Correct Answer:- Option-D Question24:-Fusing factor of HRC fuse is A:-1.4 B:-1.2 C:-1.1 D:-1.3 Correct Answer:- Option-C Question25:-The yoke of large DC machine is made of A:-cast iron B:-wrought iron C:-cast steel D:-soft iron Correct Answer:- Option-C Question26:-The process by which isolate the supply of oxygen to the fire is known as A:-smothering **B:-cooling** C:-starving D:-extinguishing Correct Answer:- Option-A Question27:-Valancy of aluminum atom is A:-3 B:-4 C:-2 D:-1 Correct Answer:- Option-A Question28:-When capacitor testing with ohm meter, the ohm meter shows infinite resistance, the capacitor is A:-Good B:-Open C:-Leakey

D:-Shorted Correct Answer:- Option-B Question29:-Among them which motor has highest starting torque A:-Shaded pole motor **B:-Universal motor** C:-Capacitor start induction run motor D:-Permanent capacitor motor Correct Answer:- Option-B Ouestion 30:-The cells of 2 volt and each having an internal resistance of 0.2  $\Omega$  are jointed in series. If 10  $\Omega$  external resistance is connected accross the circuit, what will be the current flowing through the A:-1.5A B:-1.8A C:-2A D:-1.67A Correct Answer:-Question Cancelled Question31:-Composition of plumbers solder is \_\_\_\_\_ % Tin and \_\_\_\_\_ % Lead. A:-35 and 65 B:-60 and 40 C:-65 and 35 D:-50 and 60 Correct Answer:- Option-A Question32:-The speed control method used in domestic mixer grinder is A:-voltage control method B:-tapped field control method C:-adding series resistance D:-all of the above Correct Answer:- Option-B Question33:-A moving coil volt meter shows 220 volt when it is connected across an AC supply. What will be the voltage shows when it is measured using CRO? A:-220 V B:-380 V C:-244 V D:-311 V Correct Answer:- Option-D Question34:-Copper loss of a transformer is 120 watt at it's 1/4th load watt will be the copper loss 1/8th full load A:-30 watt B:-64 watt C:-240 watt D:-192 watt Correct Answer:- Option-A Question35:-To change DOR of Repulsion motor A:-change the supply terminal of motor B:-change the brush position of motor C:-change the motor terminals D:-all of the above Correct Answer:- Option-B Question36:-The type DC generator used for electoplating is A:-series generator B:-long shunt compound generator C:-shunt generator D:-cumulative compound generator Correct Answer:- Option-C Question37:-The type of DC compound generator used for arc welding is A:-Over compound generator B:-Under compound generator C:-Differential compound generator D:-Level compound generator Correct Answer:- Option-C Question 38:-A circuit contain R and L in series,  $R = 8'\Omega$  and L = 0.02 henry, what will be the power factor of the circuit when is connected across 50 Hz, 50 volt ac supply

A:-0.821 B:-0.752 C:-0.886 D:-0.786 Correct Answer:- Option-D Question39:-Over load coil of 3 point DC motor starter is connected A:-in series with shunt field B:-in parallel with shunt field C:-in series with armature coil D:-in parallel with series field Correct Answer:- Option-C Question40:-The speed of DC shunt motor is drops slightly from no load to full load is due to A:-Increase in back emf B:-Decrease in field flux C:-laRa drop in armature D:-Increase in field flux Correct Answer:- Option-C Question 41:-Resistance above  $\Omega$  is called high resistance. Α:-100000 Ω Β:-10000 Ω C:-10000000 Ω D:-1000000 Ω Correct Answer:- Option-A Question42:-Regenerative braking is possible when the speed of the motor is A:-Bellow synchronous speed B:-Above synchronous speed C:-Same as synchronous speed D:-All of the above Correct Answer:- Option-B Question43:-V-curve of a synchronous motor is the relation between A:-supply voltage and current B:-armature current and field current C:-armature voltage and armature current D:-field voltage and field current Correct Answer:- Option-B Question44:-Series type ohm meter is best suited for measuring A:-medium resistance **B:-high resistance** C:-low resistance D:-all of the above Correct Answer:- Option-A Question45:-Fourth colour band of a resistance is brown in four colour band system, the tolerance of the resistance is A:-2% B:-5% C:-1% D:-3% Correct Answer:- Option-C Question46:-A semiconducting material numbered as BC 149, the device is A:-Germanium transistor **B:-Silicon diode** C:-Silicon transistor D:-Silicon photo diode Correct Answer:- Option-C Question47:-The capacity of cells are usually expressed in A:-Watt-hour B:-Kilo volt ampere C:- Kilo watt hour D:-Ampere hour Correct Answer:- Option-D

Question48:-Melting point of copper is A:-1083° C B:-660° C C:-2200° C D:-490° C Correct Answer:- Option-A Question49:-Efficiency of full wave rectifier is about A:-40.80 % B:-82.10 % C:-81.20 % D:-83.10 % Correct Answer:- Option-C Question50:-The maximum safe temperature can with stand class H insulating material is A:-200° C B:-180° C C:-155° C D:-120° C Correct Answer:- Option-B Question51:-Pitch factor of a winding is the ratio of A:-No of slote/pole pitch B:-Winding pitch/pole pitch C:-Pole pitch/winding pitch D:-None of the above Correct Answer:- Option-B Question52:-The type of motor used in vacuum cleaner is A:-Capacitor start induction run motor B:-Capacitor start capacitor run motor C:-Induction run motor D:-Universal motor Correct Answer:- Option-D Question53:-Fluorescent lamp is a A:-High pressure sodium vapour lamp B:-Low pressure mercury vapour lamp C:-Arc lamp D:-High pressure mercury vapour lamp Correct Answer:- Option-B Question54:-G series MCB's are used for protecting A:-Inductive load **B:-Resistive load** C:-Capacitive load D:-All of the above Correct Answer:- Option-A Question55:-Nickel iron cell is also known as A:-Primary cell **B:-Junger cell** C:-Voltaic cell D:-Edison cell Correct Answer:- Option-D Question56:-Nickel Iron cell are widly used in Aircraft engineering because of its A:-Heavy rate discharging capacity **B:-High voltage** C:-High efficiency D:-Good mechanical strength Correct Answer:- Option-D Question57:-Widly used semiconducting material is A:-Carbon **B:-Germanium** C:-Bismuth D:-Silicon

Correct Answer:- Option-D Question58:-The out put of harmonic oscillators is A:-Square wave **B:-Triangular wave** C:-Sine wave D:-All of the above Correct Answer:- Option-C Question59:-In a winding the number of coils/pole/phase is one, the winding is called A:-Distributed winding **B:-Concentrated winding** C:-Whole coil winding D:-Balanced winding Correct Answer:- Option-B Question60:-The type of file used in ordinary filing purpose is A:-Bastard **B:-Rough** C:-Smooth D:-Second cut Correct Answer:- Option-A Question61:-The joint used in over head line where for increasing the length of conductor where considerable tensile stress acted is A:-T-loint **B:-Brittania** Joint C:-Married Joint **D:-Western Union Joint** Correct Answer:- Option-D Question62:-Double squirrel cage Induction rotors are used in Induction motors for getting A:-High starting torgue **B:-Smooth operation** C:-High power D:-Avoid magnetic locking Correct Answer:- Option-A Question63:-The main purpose Twin Tube connections in a industries to A:-Avoid glair B:-Avoid stroboscopic effect C:-Get more light D:-All of the above Correct Answer:- Option-B Question64:-The frequency equation of Hartley oscillator is A:-1/2`pi` √`LC (T)` B:-1/2`pi` √`CL (T)` C:-1/2`pi` √`6RC` D:-1/2`pi` √`L\_(T)C\_(T)` Correct Answer:- Option-B Question65:-Buchholz relay is a A:-Thermal relay **B:-Electronic relay** C:-Gas operated relay D:-Phenumatic relay Correct Answer:- Option-C Question66:-In semi direct lighting system \_\_\_\_\_\_% of light reaches to the working plane. A:-90 - 100 % B:-50 - 90 % C:-10 - 40 % D:-60 - 90 % Correct Answer:- Option-D Question67:-In EHT line the maximum permissible voltage drop is A:-5 % B:-3 %

C:-12.50 % D:-10 % Correct Answer:- Option-C Question68:-Solar cell is a A:-Photo resistor **B:-Photo diode** C:-Varactor diode D:-Thermister Correct Answer:- Option-B Question69:-To get different colour in same LED different fixed voltage want to be applied across it. To get red colour in LED the fixed voltage want to applied across it is A:-2.1 V B:-2 V C:-2.2 V D:-1.8 V Correct Answer:- Option-D Question70:-XLPE cable is a type of cable. XLPE stands for A:-Cross-Linked Poly Ester Cable B:-Cross-Linked Poly Ethylene Cable C:-Cable-Linked Poly Ester Cable D:-Cable-Linked Poly Ethylene Cable Correct Answer:- Option-B Question71:-When Induction motor are started with star-delta starter the voltage applied across the winding when put in star position is A:-57.70 % B:-50 % C:-67.70 % D:-75 % Correct Answer:- Option-A Question72:-The minimum horizontal clearance between when the line passing through adjesent building is A:-1.112 M B:-1.713 M C:-1.219 M D:-3.962 M Correct Answer:- Option-C Ouestion73:-Unit of inductive reactance is A:-Coloumb **B:-Fared** C:-Henry D:-Ohm Correct Answer:- Option-D Question74:-The type of capacitor used in capacitor start induction run motor is A:-Paper Capacitor **B:-Mica Capacitor C:-Ceramic Capacitor D:-Air Capacitor** Correct Answer:- Option-A Question75:-The commercial method of making Permanent Magnet is A:-Induction method B:-Single touch method C:-Double touch method D:-Divider touch method Correct Answer:- Option-A Question76:-Most efficient and effective damping method is A:-Air friction damping B:-Eddy current damping C:-Fluid friction damping D:-All of the above Correct Answer:- Option-B

Question77:-The purpose of bedding provided in cable is A:-Protect the cable from mechanical injury B:-Protect the cable from atmosphere C:-Protect metallic sheet from mechanical injury D:-Prevent entering moisture to the cable Correct Answer:- Option-C Question78:-Silver plated mica capacitors are best suited for application. A:-High frequency application **B:-High voltage application** C:-Radio frequency application D:-Power factor correction Correct Answer:- Option-A Question79:-When Dynamo meter type meters are used as watt meters, the fixed and movable coils are A:-Fixed coil is pressure coil and moving coil is current coil B:-Fixed coil is current coil and moving coil is pressure coil C:-Both coils are movable D:-Can be arranged as either current coil is fixed and pressure coil movable and vice-versa Correct Answer:- Option-B Question 80:-A 50 volt meter want to be extend to measure 250 volt meter. The resistance of the meter is 5000  $\Omega$ , what will be the value of multiplier required A:-40000 Ω B:-20000 Ω C:-50000 Ω D:-25000 Ω Correct Answer:- Option-B Question81:-The instrument used for measuring insulation resistance of equipments is A:-Contact resistance meter **B:-Earth tester** C:-Ohm meter D:-Megger Correct Answer:- Option-D Question82:-Among the following which cable is used for Railway signaling purpose A:-PVC cable B:-Lead sheet cable C:-Torpodure cable D:-Armed cable Correct Answer:- Option-C Question83:-In Geyser the type of insulation provided in between the inner and outer chamber is A:-Mica **B:-Rubber** C:-Glass wool D:-Asbestose Correct Answer:- Option-C Question84:-Among them which material is shows strong Dia magnetism A:-Copper **B:-Silver** C:-Bismuth D:-Aluminum Correct Answer:- Option-C Question85:-Ear to Ear resistance of wet human body is about A:-100 ohm B:-150 ohm C:-400 ohm D:-300 ohm Correct Answer:- Option-A Question86:-The major cause of creeping error in induct in type energy meter is A:-Over voltage **B:-Over compensation friction** C:-Stray magnetic field

D:-Vibration Correct Answer:- Option-B Question87:-The frequency of electricity supply in India is A:-60 Hz B:-45 Hz C:-55 Hz D:-50 Hz Correct Answer:- Option-D Question88:-The size of copper plate used in plate earthing system is A:-60 cm × 60 cm × 3.15 mm B:-60 cm × 60 cm × 6.3 mm C:-30 cm × 30 cm × 3.15 mm D:-60 cm × 60 cm × 3.3 mm Correct Answer:- Option-A Question89:-One Webber is equal to \_\_\_\_\_ Maxwell. A:-10000 B:-100000 C:-10000000 D:-1000000 Correct Answer:- Option-C Question90:-The standard secondary out put of a current transformer is A:-10A B:-5A C:-7A D:-3A Correct Answer:- Option-B Question91:-In two watt meter method of power measurement one watt meter shows negative reading the power factor of the load is A:-unity B:-bellow 0.5 lagging C:-0.8 lagging D:-in between 0.5 and 0.8 lagging Correct Answer:- Option-B Question92:-The working principle of earth tester is A:-Fall of potential method B:-Wheatstone bridge principle C:-Voltage divider method D:-Meter bridge principle Correct Answer:- Option-A Question93:-The polarity of interpole is in the case of DC generator and motor is A:-same as next main pole ahead in the case of motor and generator in the direction of rotation B:-same as the next main pole behind in the case of motor and generator in the direction of rotation of motor and generator C:-same as next main pole behind in the case of generator and next main pole ahead in the motor in the direction of rotation D:-same as next main pole behind in the case of motor and same as next main pole ahead in the generator in the direction of rotation Correct Answer:- Option-D Question94:-The distance between earth electrode and adjacent building should not less than A:-2 m B:-1 m C:-5 m D:-1.5 m Correct Answer:- Option-D Question95:-Type of cooling used in Distribution transformer is A:-AN B:-AN, OFN C:-OB, AB D:-AN, ON Correct Answer:- Option-D

Question96:-In a transistor both collector base junction and emitter base junction is reverse bias the transistor is said to be

A:-Saturation state B:-Active state C:-Cut off state D:-None of the above Correct Answer:- Option-C Question97:-The most commonly used AC motor is A:-Slip ring induction motor **B:-Universal motor** C:-Repulsion motor D:-Squirrelcage induction motor Correct Answer:- Option-D Question98:-Barrier voltage of silicon crystal is A:-0.7 v B:-0.3 v C:-1.1 v D:-0.9 v Correct Answer:- Option-A Question99:-FET is a A:-current controlled device B:-bipolar device C:-power control device D:-voltage control device Correct Answer:- Option-D Question100:-For getting maximum efficiency in a sodium vapour lamp the lamp temperature to be maintained about A:-380'c B:-320'c C:-150'c D:-220'c Correct Answer:-Question Cancelled